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Contents

Federal Register

Vol. 81, No. 218

Thursday, November 10, 2016

Separate Parts In This Issue

Reader Aids

Consult the Reader Aids section at the end of this issue for phone numbers, online resources, finding aids, and notice of recently enacted public laws.

To subscribe to the Federal Register Table of Contents electronic mailing list, go to https://public.govdelivery.com/accounts/USGPOOFR/subscriber/new, enter your e-mail address, then follow the instructions to join, leave, or manage your subscription.

CFR PARTS AFFECTED IN THIS ISSUE

A cumulative list of the parts affected this month can be found in the Reader Aids section at the end of this issue.

Rules and Regulations

Federal Register
Vol. 81, No. 218
Thursday, November 10, 2016

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2015–3985; Directorate Identifier 2014–NM–182–AD; Amendment 39–18708; AD 2016–23–01]

RIN 2120–AA64

Airworthiness Directives; Airbus Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: We are superseding Airworthiness Directive (AD) 2010–04–03 for all Airbus Model A310 series airplanes. AD 2010–04–03 required accomplishing repetitive detailed inspections for cracking around the fastener holes in certain wing top skin panels between the front and rear spars on the left- and right-hand sides of the fuselage, and repair if necessary. This new AD continues to require the repetitive detailed inspections, and also requires supplemental repetitive ultrasonic inspections for cracking around the fastener holes in wing top skin panels 1 and 2 at ribs 2 and 3, and repair if necessary. This AD was prompted by development of an ultrasonic inspection program to allow for earlier crack detection and extended repetitive inspection intervals. We are issuing this AD to detect and correct fatigue cracking around the fastener holes, which could result in reduced structural integrity of the airplane.

DATES: This AD is effective December 15, 2016.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of December 15, 2016.

ADDRESSES: For service information identified in this final rule, contact Airbus SAS, Airworthiness Office—EAW, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 44 51; email *account.airworth-eas@airbus.com;* Internet *http://www.airbus.com.* You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425–227–1221. It is also available on the Internet at *http://www.regulations.gov* by searching for and locating Docket No. FAA–2015–3985.

Examining the AD Docket

You may examine the AD docket on the Internet at *http://www.regulations.gov* by searching for and locating Docket No. FAA–2015–3985; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (telephone 800–647–5527) is Docket Management Facility, U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Dan Rodina, Aerospace Engineer, International Branch, ANM–116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057–3356; telephone 425–227–2125; fax 425–227–1149.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a supplemental notice of proposed rulemaking (SNPRM) to amend 14 CFR part 39 to supersede AD 2010–04–03, Amendment 39–16196 (75 FR 6852, February 12, 2010) (''AD 2010–04–03''). AD 2010–04–03 applied to all Airbus Model A310 series airplanes. The SNPRM published in the **Federal Register** on July 11, 2016 (81 FR 44812) (''the SNPRM''). We preceded the SNPRM with a notice of proposed rulemaking (NPRM) that published in the **Federal Register** on October 13, 2015 (80 FR 61327) (''the NPRM''). The NPRM was prompted by development of an ultrasonic inspection program to allow for earlier crack detection and extended repetitive inspection intervals. The NPRM proposed to retain the requirements of AD 2010–04–03, and proposed to require supplemental repetitive ultrasonic inspections for cracking around the fastener holes in wing top skin panels 1 and 2 at rib 2, and repair if necessary. The SNPRM proposed to expand the inspection area to include rib 3 due to widespread fatigue damage. We are issuing this AD to detect and correct fatigue cracking around the fastener holes, which could result in reduced structural integrity of the airplane.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA Airworthiness Directive 2016–0005, dated January 7, 2016 (referred to after this as the Mandatory Continuing Airworthiness Information, or ''the MCAI''), to correct an unsafe condition on all Airbus Model A310 series airplanes. The MCAI states:

> Following scheduled maintenance, cracks were found around the wing top skin panels fastener holes at Rib 2, between Stringer (STG) 2 and STG14.
>
> This condition, if not detected and corrected, could affect the structural integrity of the aeroplane. The General Visual Inspection required by the existing applicable Airworthiness Limitation Items (ALI) tasks may not be adequate to detect these cracks.
>
> To address this issue, Airbus developed an inspection programme based on repetitive detailed inspections (DET) to ensure that any visible cracks in the wing top skin panels 1 and 2 along Rib 2 are detected in time and repaired appropriately. EASA issued AD 2008–0211 to require implementation of this inspection programme.
>
> After that [EASA] AD was issued, Airbus improved the inspection programme with an ultrasonic inspection to allow earlier crack detection, to subsequently reduce the scope of potential repair action, and to extend the intervals of the repetitive inspections.
>
> Consequently, EASA issued AD 2014–0200 (later revised), superseding [EASA] AD 2008–0211, retaining its requirements, and to require supplementary repetitive ultrasonic inspections [for cracking] of the wing top skin panel 1 and 2 between STG2 and STG10 at Rib 2 [and repair if needed].
>
> Since EASA AD 2014–0020R1 was issued, a widespread fatigue damage analysis concluded that the inspection programme has to be extended to include the wing top skin panels at Rib 3 attachments. For the reasons described above, this [EASA] AD

retains the requirements of EASA AD 2014–0200R1, which is superseded, and extends the inspection area to include Rib 3.

You may examine the MCAI in the AD docket on the Internet at *http://www.regulations.gov* by searching for and locating Docket No. FAA–2015–3985.

Comments

We gave the public the opportunity to participate in developing this AD. We received no comments on the SNPRM or on the determination of the cost to the public.

Clarification of Requirements

We have clarified the terminating action sentence in paragraph (k) of this AD by adding a reference to paragraph (g) of this AD.

We have clarified the average flight time in paragraph (l)(3) of this AD for subsequent inspections after the second inspection interval.

Conclusion

We reviewed the relevant data and determined that air safety and the public interest require adopting this AD with the changes described previously and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the SNPRM for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the SNPRM.

Related Service Information Under 1 CFR part 51

Airbus has issued Service Bulletin A310–57–2096, Revision 03, dated June 30, 2015. This service information describes procedures for detailed and ultrasonic inspections for cracking around the fastener holes of wing top skin panels 1 and 2, at ribs 2 and 3, on the left- and right-hand sides of the fuselage. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the **ADDRESSES** section.

Costs of Compliance

We estimate that this AD affects 28 airplanes of U.S. registry.

We also estimate that it takes about 8 work-hours per product to comply with the basic requirements of this AD. The average labor rate is $85 per work-hour. Based on these figures, we estimate the cost of this AD on U.S. operators to be $19,040, or $680 per product.

We estimate that it takes about 15 work-hours per product to do any necessary on-condition actions that are required based on the results of the inspections. Required parts will cost about $10,000 per product. We have no way of determining the number of aircraft that might need these actions.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. 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.

We are issuing this rulemaking under the authority described in ''Subtitle VII, Part A, Subpart III, Section 44701: General requirements.'' Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect 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.

For the reasons discussed above, I certify that this AD:

1. Is not a ''significant regulatory action'' under Executive Order 12866;

2. Is not a ''significant rule'' under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);

3. Will not affect intrastate aviation in Alaska; and

4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

■ 1. The authority citation for part 39 continues to read as follows:

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

§ 39.13 [Amended]

■ 2. The FAA amends § 39.13 by removing Airworthiness Directive (AD) 2010–04–03, Amendment 39–16196 (75 FR 6852, February 12, 2010), and adding the following new AD:

2016–23–01 Airbus: Amendment 39–18708; Docket No. FAA–2015–3985; Directorate Identifier 2014–NM–182–AD.

(a) Effective Date

This AD is effective December 15, 2016.

(b) Affected ADs

This AD replaces AD 2010–04–03, Amendment 39–16196 (75 FR 6852, February 12, 2010) (''AD 2010–04–03'').

(c) Applicability

This AD applies to all Airbus Model A310–203, –204, –221, –222, –304, –322, –324, and –325 airplanes, certificated in any category, all manufacturer serial numbers.

(d) Subject

Air Transport Association (ATA) of America Code 57, Wings.

(e) Reason

This AD was prompted by the development of an ultrasonic inspection program to allow for earlier crack detection and extended repetitive inspection intervals. We are issuing this AD to detect and correct fatigue cracking around the fastener holes in certain wing top skin panels between the front and rear spars on the left- and right-hand sides of the fuselage, which could result in reduced structural integrity of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Repetitive Inspections

Except as required by paragraph (i) of this AD: Within the initial compliance time and thereafter at the repetitive intervals specified in paragraphs (h)(1) through (h)(3) of this AD, as applicable, accomplish the actions specified in paragraphs (g)(1) and (g)(2) of this AD concurrently and in sequence, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A310–57–2096, Revision 03, dated June 30, 2015, except as provided by paragraph (j) of this AD.

(1) Accomplish a detailed inspection for cracking around the fastener holes in the wing top skin panels 1 and 2, along ribs 2 and 3, between the front and rear spars on the left- and right-hand sides of the fuselage.

(2) Accomplish an ultrasonic inspection for cracking around the fastener holes in the wing top skin panels 1 and 2, along ribs 2 and 3, between stringer (STG) 2 and STG10

on the left- and right-hand sides of the fuselage.

(h) Compliance Times for Airplanes Not Previously Inspected

(1) For Model A310–203, –204, –221, and –222 airplanes: Do the actions required by paragraphs (g)(1) and (g)(2) of this AD at the later of the times specified in paragraphs (h)(1)(i) and (h)(1)(ii) of this AD. Repeat the inspections specified in paragraphs (g)(1) and (g)(2) of this AD thereafter at intervals not to exceed 2,000 flight cycles or 4,100 flight hours, whichever occurs first.

(i) Prior to the accumulation of 18,700 flight cycles or 37,400 flight hours since first flight of the airplane, whichever occurs first.

(ii) Within 30 days after the effective date of this AD.

(2) For Model A310–304, –322, –324, and –325 airplanes having an average flight time (AFT) of less than 4 hours: Do the actions required by paragraphs (g)(1) and (g)(2) of this AD at the later of the times specified in paragraphs (h)(2)(i) and (h)(2)(ii) of this AD. Repeat the inspections specified in paragraphs (g)(1) and (g)(2) of this AD thereafter at intervals not to exceed 2,000 flight cycles or 5,600 flight hours, whichever occurs first.

(i) Prior to the accumulation of 17,300 flight cycles or 48,400 flight hours since first flight of the airplane, whichever occurs first.

(ii) Within 30 days after the effective date of this AD.

(3) For Model A310–304, –322, –324, and –325 airplanes having an AFT of equal to or more than 4 hours: Do the actions required by paragraphs (g)(1) and (g)(2) of this AD at the later of the times specified in paragraphs (h)(3)(i) and (h)(3)(ii) of this AD. Repeat the inspections specified in paragraphs (g)(1) and (g)(2) of this AD thereafter at intervals not to exceed 1,500 flight cycles or 7,500 flight hours, whichever occurs first.

(i) Prior to the accumulation of 12,800 flight cycles or 64,300 flight hours since first flight of the airplane, whichever occurs first.

(ii) Within 30 days after the effective date of this AD.

(i) Compliance Times for Airplanes Previously Inspected

For airplanes previously inspected before the effective date of this AD using Airbus Service Bulletin A310–57–2096, dated May 6, 2008; Airbus Service Bulletin A310–57–2096, Revision 01, dated August 5, 2010; or Airbus Service Bulletin A310–57–2096, Revision 02, dated March 5, 2014: At the applicable compliance times specified in paragraphs (i)(1), (i)(2), and (i)(3) of this AD, accomplish the actions specified in paragraphs (g)(1) and (g)(2) concurrently and in sequence, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A310–57–2096, Revision 03, dated June 30, 2015. Repeat the inspections specified in paragraphs (g)(1) and (g)(2) of this AD thereafter at the repetitive intervals specified in paragraphs (h)(1), (h)(2), and (h)(3) of this AD, as applicable.

(1) For Model A310–203, –204, –221, and –222 airplanes: Do the actions required by paragraphs (g)(1) and (g)(2) of this AD within 3,500 flight hours or 1,700 flight cycles, whichever occurs first since the most recent inspection.

(2) For Model A310–304, –322, –324, and –325 airplanes having an AFT of less than 4 hours: Do the actions required by paragraphs (g)(1) and (g)(2) of this AD within 4,600 flight hours or 1,600 flight cycles, whichever occurs first since the most recent inspection.

(3) For Model A310–304, –322, –324, and –325 airplanes having an AFT of equal to or more than 4 hours: Do the actions required by paragraphs (g)(1) and (g)(2) of this AD within 6,100 flight hours or 1,200 flight cycles, whichever occurs first since the most recent inspection.

(j) Compliance Times if No Ultrasonic Equipment is Available

If no ultrasonic equipment is available for the initial or second inspection required by paragraph (g) or (h) of this AD, accomplish the detailed inspection specified in paragraph (g)(1) of this AD within the applicable compliance times specified in paragraphs (j)(1) and (j)(2) of this AD. After accomplishing the detailed inspection, do the inspections specified in paragraphs (g)(1) and (g)(2) of this AD at the applicable compliance times specified by paragraphs (i)(1), (i)(2), and (i)(3) of this AD. Subsequently, repeat the inspections specified in paragraphs (g)(1) and (g)(2) of this AD thereafter at the applicable repetitive intervals specified in paragraphs (h)(1), (h)(2), and (h)(3) of this AD.

(1) For airplanes not previously inspected before the effective date of this AD using the service information identified in paragraph (j)(2)(i), (j)(2)(ii), or (j)(2)(iii) of this AD: Do the actions required by paragraph (g)(1) of this AD within the initial compliance time specified by paragraphs (h)(1), (h)(2), and (h)(3) of this AD, as applicable.

(2) For airplanes previously inspected before the effective date of this AD using the service information identified in paragraph (j)(2)(i), (j)(2)(ii), or (j)(2)(iii) of this AD: Do the actions required by paragraph (g)(1) of this AD within the applicable compliance times specified in paragraphs (i)(1), (i)(2), and (i)(3) of this AD.

(i) Airbus Service Bulletin A310–57–2096, dated May 6, 2008.

(ii) Airbus Service Bulletin A310–57–2096, Revision 01, dated August 5, 2010.

(iii) Airbus Service Bulletin A310–57–2096, Revision 02, dated March 5, 2014.

(k) Repair of Cracking

If any cracking is found during any inspection required by paragraph (g), (h), (i), or (j) of this AD, before further flight, repair the cracking using a method approved by the Manager, International Branch, ANM–116, Transport Airplane Directorate, FAA; or the European Aviation Safety Agency (EASA); or Airbus's EASA Design Organization Approval (DOA). Accomplishing the repair specified in this paragraph terminates the repetitive inspections required by paragraph (g), (h), (i), or (j) of this AD, as applicable, for the repaired area only.

(l) Definition of Average Flight Time (AFT)

For the purposes of this AD, the AFT should be established as specified in paragraphs (l)(1), (l)(2), and (l)(3) of this AD for the determination of the compliance times.

(1) The inspection threshold is defined as the total flight hours accumulated (counted from take-off to touch-down), divided by the total number of flight cycles accumulated at the effective date of this AD.

(2) The initial inspection interval is defined as the total flight hours accumulated divided by the total number of flight cycles accumulated at the time of the initial inspection threshold.

(3) The second inspection interval is defined as the total flight hours accumulated divided by the total number of flight cycles accumulated between the initial and second inspection threshold. For all inspection intervals onwards, the average flight time is the flight hours divided by the flight cycles accumulated between the last two inspections.

(m) Credit for Previous Actions

This paragraph provides credit for the actions required by paragraph (g)(1) of this AD, if those actions were performed before the effective date of this AD using the applicable service information identified in paragraph (m)(1), (m)(2), or (m)(3) of this AD.

(1) Airbus Service Bulletin A310–57–2096, dated May 6, 2008, which was incorporated by reference in AD 2010–04–03.

(2) Airbus Service Bulletin A310–57–2096, Revision 01, dated August 5, 2010, which is not incorporated by reference in this AD.

(3) Airbus Service Bulletin A310–57–2096, Revision 02, dated March 5, 2014, which is not incorporated by reference in this AD.

(n) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs):* The Manager, International Branch, ANM–116, Transport Airplane Directorate, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the International Branch, send it to ATTN: Dan Rodina, Aerospace Engineer, International Branch, ANM–116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057–3356; telephone 425–227–2125; fax 425–227–1149. Information may be emailed to: *9-ANM-116-AMOC-REQUESTS@faa.gov.* Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

(2) *Contacting the Manufacturer:* As of the effective date of this AD, for any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, International Branch, ANM–116, Transport Airplane Directorate, FAA; or the EASA; or Airbus's EASA DOA. If approved by the DOA, the approval must include the DOA-authorized signature.

(3) *Required for Compliance (RC):* Except as required by paragraph (k) of this AD, if any service information contains procedures or tests that are identified as RC, those procedures and tests must be done to comply with this AD; any procedures or tests that are not identified as RC are recommended. Those procedures and tests that are not identified as RC may be deviated from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an AMOC, provided the procedures and tests identified as RC can be done and the airplane can be put back in an airworthy condition. Any substitutions or changes to procedures or tests identified as RC require approval of an AMOC.

(o) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA Airworthiness Directive 2016–0005, dated January 7, 2016, for related information. This MCAI may be found in the AD docket on the Internet at *http://www.regulations.gov* by searching for and locating Docket No. FAA–2015–3985.

(2) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (p)(4) and (p)(5) of this AD.

(p) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(3) The following service information was approved for IBR on December 15, 2016.

(i) Airbus Service Bulletin A310–57–2096, Revision 03, dated June 30, 2015.

(ii) Reserved.

(4) For service information identified in this AD, contact Airbus SAS, Airworthiness Office—EAW, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 44 51; email *account.airworth-eas@airbus.com;* Internet *http://www.airbus.com.*

(5) You may view this service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425–227–1221.

(6) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: *http://www.archives.gov/federal-register/cfr/ibr-locations.html.*

Issued in Renton, Washington, on October 28, 2016.

Dionne Palermo,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 2016–26810 Filed 11–9–16; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 71

[Docket No. FAA–2016–6985; Airspace Docket No. 16–AGL–16]

Amendment of Class E Airspace for the Following Illinois Towns; Carmi, IL; De Kalb, IL; Harrisburg, IL; Kewanee, IL; Litchfield, IL; Paris, IL; and Taylorville, IL

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This action modifies Class E airspace extending upward from 700 feet above the surface at Carmi Municipal Airport, Carmi, IL; De Kalb Taylor Municipal Airport, De Kalb, IL; Harrisburg-Raleigh Airport, Harrisburg, IL; Kewanne Municipal Airport, Kewanne, IL; Litchfield Municipal Airport, Litchfield, IL; Edgar County Airport, Paris, IL; and Taylorville Municipal Airport, Taylorville, IL. Decommissioning of non-directional radio beacons (NDB), cancellation of NDB approaches, or implementation of area navigation (RNAV) procedures have made this action necessary for the safety and management of Instrument Flight Rules (IFR) operations at the above airports. This action also updates the geographic coordinates of Carmi Municipal Airport, De Kalb Taylor Municipal Airport, Harrisburg-Raleigh Airport, Litchfield Municipal Airport, Edgar County Airport, and Taylorville Municipal Airport to coincide with the FAA's aeronautical database.

DATES: Effective 0901 UTC, March 2, 2017. 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 7400.11 and publication of conforming amendments.

ADDRESSES: FAA Order 7400.11A, Airspace Designations and Reporting Points, and subsequent amendments can be viewed online at *http://www.faa.gov/air_traffic/publications/.* For further information, you can contact the Airspace Policy Group, Federal Aviation Administration, 800 Independence Avenue SW., Washington, DC 20591; telephone: 202–267–8783. The Order is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of FAA Order 7400.11A at NARA, call 202–741–6030, or go to *http://www.archives.gov/federal_register/code_of_federal-regulations/ibr_locations.html.*

FAA Order 7400.11, Airspace Designations and Reporting Points, is published yearly and effective on September 15.

FOR FURTHER INFORMATION CONTACT: Jeffrey Claypool, Federal Aviation Administration, Operations Support Group, Central Service Center, 10101 Hillwood Parkway, Fort Worth, TX, 76177; telephone (817) 222–5711.

SUPPLEMENTARY INFORMATION:

Authority for This Rulemaking

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 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 Class E airspace at Carmi Municipal Airport, Carmi, IL; De Kalb Taylor Municipal Airport, De Kalb, IL; Harrisburg-Raleigh Airport, Harrisburg, IL; Kewanne Municipal Airport, Kewanne, IL; Litchfield Municipal Airport, Litchfield, IL; Edgar County Airport, Paris, IL; and Taylorville Municipal Airport, Taylorville, IL.

History

On July 1, 2016, the FAA published in the **Federal Register** a notice of proposed rulemaking (NPRM), (81 FR 43124) Docket No. FAA–2016–6985, to modify Class E airspace at Carmi Municipal Airport, Carmi, IL; De Kalb Taylor Municipal Airport, De Kalb, IL; Harrisburg-Raleigh Airport, Harrisburg, IL; Kewanne Municipal Airport, Kewanne, IL; Litchfield Municipal Airport, Litchfield, IL; Edgar County Airport, Paris, IL; and Taylorville Municipal Airport, Taylorville, IL. Interested parties were invited to participate in this rulemaking effort by submitting written comments on the proposal to the FAA. No comments were received. The FAA discovered a typographical error in the geographic coordinate of Harrisburg-Raleigh Airport which has been corrected in this action.

Class E airspace designations are published in paragraph 6005 of FAA Order 7400.11A, dated August 3, 2016, and effective September 15, 2016, which

is incorporated by reference in 14 CFR part 71.1. The Class E airspace designation listed in this document will be published subsequently in the Order.

Availability and Summary of Documents for Incorporation by Reference

This document amends FAA Order 7400.11A, Airspace Designations and Reporting Points, dated August 3, 2016, and effective September 15, 2016. FAA Order 7400.11A is publicly available as listed in the **ADDRESSES** section of this document. FAA Order 7400.11A lists Class A, B, C, D, and E airspace areas, air traffic service routes, and reporting points.

The Rule

This amendment to Title 14, Code of Federal Regulations (14 CFR) part 71 modifies Class E airspace extending upward from 700 feet above the surface at the following airports:

Within a 6.4-mile radius (reduced from the 7-mile radius) of Carmi Municipal Airport, Carmi, IL, and updating the geographic coordinates of this airport to coincide with the FAA's aeronautical database;

Within a 6.8-mile radius (increased from the 6.6-mile radius) of De Kalb Taylor Municipal Airport, De Kalb, IL, and updating the geographic coordinates of this airport to coincide with the FAA's aeronautical database;

Within a 6.5-mile radius (reduced from the 7-mile radius) of Harrisburg-Raleigh Airport, Harrisburg, IL, and updating the geographic coordinates of this airport to coincide with the FAA's aeronautical database;

Within a 6.5-mile radius (reduced from the 7-mile radius) of Kewanee Municipal Airport, Kewanee, IL;

Within a 6.7-mile radius (reduced from the 7-mile radius) of Litchfield Municipal Airport, Litchfield, IL, and updating the geographic coordinates of this airport to coincide with the FAA's aeronautical database;

Within a 6.4-mile radius (increased from the 6.3-mile radius) of Edgar County Airport, Paris, IL, and updating the geographic coordinates of this airport to coincide with the FAA's aeronautical database; and

Within a 6.5-mile radius (reduced from the 7-mile radius) of Taylorville Municipal Airport, Taylorville, IL, and updating the geographic coordinates of this airport to coincide with the FAA's aeronautical database.

These airspace reconfigurations are necessary due to the decommissioning of NDBs, cancellation of NDB approaches, or implementation of RNAV standard instrument procedures at these airports. Controlled airspace is necessary for the safety and management of the standard instrument approach procedures for IFR operations at these airports.

Regulatory Notices and Analyses

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, is non-controversial and unlikely to result in adverse or negative comments. 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 only affects air traffic procedures and air navigation, it is certified that this rule, when promulgated, does not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

Environmental Review

The FAA has determined that this action qualifies for categorical exclusion under the National Environmental Policy Act in accordance with FAA Order 1050.1F, ''Environmental Impacts: Policies and Procedures,'' paragraph 5–6.5.a. This airspace action is not expected to cause any potentially significant environmental impacts, and no extraordinary circumstances exist that warrant preparation of an environmental assessment.

Lists 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 part 71 continues to read as follows:

Authority: 49 U.S.C. 106(f), 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 7400.11A, Airspace Designations and Reporting Points, dated August 3, 2016, and effective September 15, 2016, is amended as follows:

Paragraph 6005 Class E Airspace Areas Extending Upward From 700 Feet or More Above the Surface of the Earth.

* * * * *

AGL IL E5 Carmi, IL [Amended]

Carmi Municipal Airport, IL
(Lat. 38°05′22″ N., long. 88°07′23″ W.)

That airspace extending upward from 700 feet above the surface within a 6.4-mile radius of the Carmi Municipal Airport.

* * * * *

AGL IL E5 De Kalb, IL [Amended]

De Kalb Taylor Municipal Airport, IL
(Lat. 41°56′02″ N., long. 88°42′20″ W.)

That airspace extending upward from 700 feet above the surface within a 6.8-mile radius of the De Kalb Taylor Municipal Airport, excluding that airspace which overlies the Chicago, IL, Class E airspace area.

* * * * *

AGL IL E5 Harrisburg, IL [Amended]

Harrisburg-Raleigh Airport, IL
(Lat. 37°48′41″ N., long. 88°33′01″ W.)

That airspace extending upward from 700 feet above the surface within a 6.5-mile radius of Harrisburg-Raleigh Airport.

* * * * *

AGL IL E5 Kewanee, IL [Amended]

Kewanee Municipal Airport, IL
(Lat. 41°12′19″ N., long. 89°57′50″ W.)

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

* * * * *

AGL IL E5 Litchfield, IL [Amended]

Litchfield Municipal Airport, IL
(Lat. 39°09′45″ N., long. 89°40′29″ W.)

That airspace extending upward from 700 feet above the surface within a 6.7-mile radius of the Litchfield Municipal Airport.

* * * * *

AGL IL E5 Paris, IL [Amended]

Paris, Edgar County Airport, IL
(Lat. 39°41′59″ N., long. 87°40′15″ W.)

That airspace extending upward from 700 feet above the surface within a 6.4-mile radius of the Edgar County Airport.

* * * * *

AGL IL E5 Taylorville, IL [Amended]

Taylorville Municipal Airport, IL
(Lat. 39°31′57″ N., long. 89°19′51″ W.)

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

Issued in Fort Worth, Texas, on November 2, 2016.

Walter Tweedy,

Acting Manager, Operations Support Group, ATO Central Service Center.

[FR Doc. 2016–27101 Filed 11–9–16; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 71

[Docket No. FAA–2016–8840; Airspace Docket No. 16–AGL–20]

Amendment of Class E Airspace for the Following Ohio Towns; Marion, OH; Portsmouth, OH; Van Wert, OH; and Versailles, OH

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This action modifies Class E airspace extending upward from 700 feet above the surface at Marion Municipal Airport, Marion, OH; Greater Portsmouth Regional Airport, Portsmouth, OH; Van Wert County Airport, Van Wert, OH; and Darke County Airport, Versailles, OH. Decommissioning of non-directional radio beacons (NDB), cancellation of NDB approaches, and implementation of area navigation (RNAV) procedures have made this action necessary for the safety and management of Instrument Flight Rules (IFR) operations at these airports. This action also updates the geographic coordinates for Southern Ohio Regional Medical Center Heliport, Portsmouth OH; and Darke County Airport to coincide with the FAA's aeronautical database. Also, the name of Southern Ohio Regional Medical Center Heliport (formerly Southern Ohio Medical Center Helipad) is updated to coincide with the FAA's aeronautical database.

DATES: Effective 0901 UTC, March 2, 2017. 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 7400.11 and publication of conforming amendments.

ADDRESSES: FAA Order 7400.11A, Airspace Designations and Reporting Points, and subsequent amendments can be viewed online at *http://www.faa.gov/air_traffic/publications/.* For further information, you can contact the Airspace Policy Group, Federal Aviation Administration, 800 Independence Avenue SW., Washington, DC 20591; telephone: 202–267–8783. The Order is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of FAA Order 7400.11A at NARA, call 202–741–6030, or go to *http://www.archives.gov/federal_register/code_of_federal-regulations/ibr_locations.html.*

FAA Order 7400.11, Airspace Designations and Reporting Points, is published yearly and effective on September 15.

FOR FURTHER INFORMATION CONTACT: Jeffrey Claypool, Federal Aviation Administration, Operations Support Group, Central Service Center, 10101 Hillwood Parkway, Fort Worth, TX, 76177; telephone (817) 222–5711.

SUPPLEMENTARY INFORMATION:

Authority for This Rulemaking

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 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 modifies Class E airspace extending upward from 700 feet above the surface at Marion Municipal Airport, Marion, OH; Greater Portsmouth Regional Airport, Portsmouth, OH; Van Wert County Airport, Van Wert, OH; and Darke County Airport, Versailles, OH.

History

On August 25, 2016, the FAA published in the **Federal Register** a notice of proposed rulemaking (NPRM), (81 FR 58413) Docket No. FAA–2016–8840, to modify Class E airspace extending upward from 700 feet above the surface at Marion Municipal Airport, Marion, OH; Greater Portsmouth Regional Airport, Portsmouth, OH; Van Wert County Airport, Van Wert, OH; and Darke County Airport, Versailles, OH,. 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 7400.11A, dated August 3, 2016, and effective September 15, 2016, which is incorporated by reference in 14 CFR 71.1. The Class E airspace designations listed in this document will be published subsequently in the Order.

Availability and Summary of Documents for Incorporation by Reference

This document amends FAA Order 7400.11A, Airspace Designations and Reporting Points, dated August 3, 2016, and effective September 15, 2016. FAA Order 7400.11A is publicly available as listed in the **ADDRESSES** section of this document. FAA Order 7400.11A lists Class A, B, C, D, and E airspace areas, air traffic service routes, and reporting points.

The Rule

This amendment to Title 14, Code of Federal Regulations (14 CFR) part 71 modifies Class E airspace extending upward from 700 feet above the surface at the following airports:

Within a 7-mile radius (reduced from a 7.4-mile radius) of Marion Municipal Airport, Marion, OH;

Within a 6.8-mile radius (increased from a 6.4-mile radius) of Greater Portsmouth Regional Airport, Portsmouth, OH, and updating the name and geographic coordinates of Southern Ohio Regional Medical Center Heliport (formerly Southern Ohio Medical Center Helipad), Portsmouth, OH, to coincide with the FAA's aeronautical database;

Within a 6.5-mile radius (reduced from a 7-mile radius) of Van Wert County Airport, Van Wert, OH;

And within a 6.4-mile radius (increased from a 6.3-mile radius) of Darke County Airport, Versailles, OH, removing the segment extending 7 miles west of the airport, and updating the geographic coordinates of the airport to coincide with the FAA's aeronautical database.

Airspace reconfiguration is necessary due to the decommissioning of NDBs, cancellation of NDB approaches, and implementation of RNAV procedures at the above airports for the safety and management of the standard instrument approach procedures for IFR operations at the airports.

Regulatory Notices and Analyses

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, is non-controversial and unlikely to result in adverse or negative comments. 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 only affects air traffic procedures and air navigation, it is certified that this rule, when promulgated, does not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

Environmental Review

The FAA has determined that this action qualifies for categorical exclusion under the National Environmental Policy Act in accordance with FAA Order 1050.1F, ''Environmental Impacts: Policies and Procedures,'' paragraph 5–6.5.a. This airspace action is not expected to cause any potentially significant environmental impacts, and no extraordinary circumstances exist that warrant preparation of an environmental assessment.

Lists 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 part 71 continues to read as follows:

Authority: 49 U.S.C. 106(f), 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 7400.11A, Airspace Designations and Reporting Points, dated August 3, 2016, and effective September 15, 2016, is amended as follows:

Paragraph 6005 Class E Airspace Areas Extending Upward From 700 Feet or More Above the Surface of the Earth.

* * * * *

AGL OH E5 Marion, OH [Amended]

Marion Municipal Airport, OH
(Lat. 40°36′59″ N., long. 83°03′49″ W.)

That airspace extending upward from 700 feet above the surface within a 7-mile radius of Marion Municipal Airport, excluding that airspace within the Bucyrus, OH, Class E airspace area.

* * * * *

AGL OH E5 Portsmouth, OH [Amended]

Greater Portsmouth Regional Airport, OH
(Lat. 38°50′26″ N., long. 82°50′50″ W.)

Portsmouth, Southern Ohio Regional Medical Center Heliport, OH, Point in Space Coordinates
(Lat. 38°45′16″ N., long. 82°58′38″ W.)

That airspace extending upward from 700 feet above the surface within a 6.8-mile radius of Greater Portsmouth Regional Airport, and within a 6-mile radius of the Point in Space serving Southern Ohio Regional Medical Center Heliport.

* * * * *

AGL OH E5 Van Wert, OH [Amended]

Van Wert County Airport, OH
(Lat. 40°51′50″ N., long. 84°36′23″ W.)

That airspace extending upward from 700 feet above the surface within a 6.5-mile radius of Van Wert County Airport.

AGL OH E5 Versailles, OH [Amended]

Darke County Airport, OH
(Lat. 40°12′16″ N., long. 84°31′55″ W.)

That airspace extending upward from 700 feet above the surface within a 6.4-mile radius of Darke County Airport.

Issued in Fort Worth, Texas, on November 2, 2016.

Walter Tweedy,

Acting Manager, Operations Support Group, ATO Central Service Center.

[FR Doc. 2016–27096 Filed 11–9–16; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 71

[Docket No. FAA–2016–8828; Airspace Docket No. 16–ASW–13]

Amendment of Class E Airspace for the Following Texas Towns; Levelland, TX; Vernon, TX; and Winters, TX

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This action modifies Class E airspace extending upward from 700 feet above the surface at Levelland Municipal Airport, Levelland, TX; Wilbarger County Airport, Vernon, TX; and Winters Municipal Airport, Winters, TX. Decommissioning of non-directional radio beacons (NDB), cancellation of NDB approaches, and implementation of area navigation (RNAV) procedures have made this action necessary for the safety and management of Instrument Flight Rules (IFR) operations at these airports. This action also updates the geographic coordinates for Levelland Municipal Airport and Wilbarger County Airport to coincide with the FAA's aeronautical database.

DATES: Effective 0901 UTC, March 2, 2017. 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 7400.11 and publication of conforming amendments.

ADDRESSES: FAA Order 7400.11A, Airspace Designations and Reporting Points, and subsequent amendments can be viewed online at *http://www.faa.gov/air_traffic/publications/.* For further information, you can contact the Airspace Policy Group, Federal Aviation Administration, 800 Independence Avenue SW., Washington, DC, 20591; telephone: 202–267–8783. The Order is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of FAA Order 7400.11A at NARA, call 202–741–6030, or go to *http://www.archives.gov/federal_register/code_of_federal-regulations/ibr_locations.html.*

FAA Order 7400.11, Airspace Designations and Reporting Points, is published yearly and effective on September 15.

FOR FURTHER INFORMATION CONTACT: Jeffrey Claypool, Federal Aviation Administration, Operations Support Group, Central Service Center, 10101 Hillwood Parkway, Fort Worth, TX, 76177; telephone (817) 222–5711.

SUPPLEMENTARY INFORMATION:

Authority for This Rulemaking

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 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 modifies Class E airspace extending upward from 700 feet above the surface at Levelland Municipal Airport, Levelland, TX; Wilbarger County Airport, Vernon, TX; and Winters Municipal Airport, Winters, TX.

History

On August 25, 2016, the FAA published in the **Federal Register** a

notice of proposed rulemaking (NPRM), (81 FR 58417) Docket No. FAA–2016–8828, to modify Class E airspace extending upward from 700 feet above the surface at Levelland Municipal Airport, Levelland, TX; Wilbarger County Airport, Vernon, TX; and Winters Municipal Airport, Winters, TX. 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 7400.11A, dated August 3, 2016, and effective September 15, 2016, which is incorporated by reference in 14 CFR 71.1. The Class E airspace designations listed in this document will be published subsequently in the Order.

Availability and Summary of Documents for Incorporation by Reference

This document amends FAA Order 7400.11A, Airspace Designations and Reporting Points, dated August 3, 2016, and effective September 15, 2016. FAA Order 7400.11A is publicly available as listed in the **ADDRESSES** section of this document. FAA Order 7400.11A lists Class A, B, C, D, and E airspace areas, air traffic service routes, and reporting points.

The Rule

This amendment to Title 14, Code of Federal Regulations (14 CFR) part 71 modifies Class E airspace extending upward from 700 feet above the surface at the following airports:

Within a 6.6-mile radius (decreased from a 6.7-mile radius) of Levelland Municipal Airport, Levelland, TX, and updating the geographic coordinates of the airport to coincide with the FAA's aeronautical database;

Within a 6.6-mile radius (decreased from a 7-mile radius) of Wilbarger County Airport, Vernon, TX, and updating the geographic coordinates of the airport to coincide with the FAA's aeronautical database;

And within a 6.6-mile radius (increased from a 6.3-mile radius) of Winters Municipal Airport, Winters, TX, with an extension to the north of the airport from the 6.6-mile radius to 9.3 miles, and with a new extension to the south of the airport from the 6.6-mile radius to 9.6 miles.

Airspace reconfiguration is necessary due to the decommissioning of NDBs, cancellation of NDB approaches, and implementation of RNAV procedures at the above airports for the safety and management of the standard instrument approach procedures for IFR operations at the airports.

Regulatory Notices and Analyses

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, is non-controversial and unlikely to result in adverse or negative comments. 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 only affects air traffic procedures and air navigation, it is certified that this rule, when promulgated, does not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

Environmental Review

The FAA has determined that this action qualifies for categorical exclusion under the National Environmental Policy Act in accordance with FAA Order 1050.1F, ''Environmental Impacts: Policies and Procedures,'' paragraph 5–6.5.a. This airspace action is not expected to cause any potentially significant environmental impacts, and no extraordinary circumstances exist that warrant preparation of an environmental assessment.

Lists 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 part 71 continues to read as follows:

Authority: 49 U.S.C. 106(f), 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 7400.11A, Airspace Designations and Reporting Points, dated August 3, 2016, and effective September 15, 2016, is amended as follows:

Paragraph 6005 Class E Airspace Areas Extending Upward From 700 Feet or More Above the Surface of the Earth.

* * * * *

ASW TX E5 Levelland, TX [Amended]

Levelland Municipal, TX
(Lat. 33°33′09″ N., long. 102°22′21″ W.)

That airspace extending upward from 700 feet above the surface within a 6.6-mile radius of Levelland Municipal Airport.

* * * * *

ASW TX E5 Vernon, TX [Amended]

Wilbarger County Airport, TX
(Lat. 34°13′32″ N., long. 99°17′02″ W.)

That airspace extending upward from 700 feet above the surface within a 6.6-mile radius of Wilbarger County Airport.

* * * * *

ASW TX E5 Winters, TX [Amended]

Winters Municipal Airport, TX
(Lat. 31°56′50″ N., long. 99°59′09″ W.)

That airspace extending upward from 700 feet above the surface within a 6.6-mile radius of Winters Municipal Airport, and 1 mile each side of the 352° bearing from the airport extending from the 6.6-mile radius to 9.3 miles north of the airport, and within 2 miles each side of the 180° bearing from the airport from the 6.6-mile radius to 9.6 miles south of the airport.

Issued in Fort Worth, Texas, on November 2, 2016.

Walter Tweedy,

Acting Manager, Operations Support Group, ATO Central Service Center.

[FR Doc. 2016–27091 Filed 11–9–16; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 71

[Docket No. FAA–2016–4172; Airspace Docket No. 16–ASW–7]

Amendment of Class E Airspace for the Following Arkansas Towns; Blytheville, AR; Brinkley, AR; Clarksville, AR; and DeQueen, AR

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This action modifies Class E airspace extending upward from 700 feet above the surface at Arkansas International Airport, Blytheville, AR; Blytheville Municipal Airport, Blytheville, AR; Frank Federer Memorial Airport, Brinkley, AR; Clarksville Municipal Airport, Clarksville, AR; and J. Lynn Helms Sevier County Airport, De Queen, AR. Decommissioning of non-directional radio beacons (NDBs), cancellation of

NDB approaches, and implementation of area navigation (RNAV) procedures have made this action necessary for the safety and management of Instrument Flight Rules (IFR) operations at the above airports. This action also updates the name of Arkansas International Airport, and the geographic coordinates for Arkansas International Airport, Blytheville Municipal Airport, and Clarksville Municipal Airport, to coincide with the FAA's aeronautical database.

DATES: Effective 0901 UTC, March 2, 2017. 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 7400.11 and publication of conforming amendments.

ADDRESSES: FAA Order 7400.11A, Airspace Designations and Reporting Points, and subsequent amendments can be viewed online at *http://www.faa.gov/air_traffic/publications/.* For further information, you can contact the Airspace Policy Group, Federal Aviation Administration, 800 Independence Avenue SW., Washington, DC, 20591; telephone: 202–267–8783. The Order is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of FAA Order 7400.11A at NARA, call 202–741–6030, or go to *http://www.archives.gov/federal_register/code_of_federal-regulations/ibr_locations.html.*

FAA Order 7400.11A, Airspace Designations and Reporting Points, is published yearly and effective on September 15.

FOR FURTHER INFORMATION CONTACT: Jeffrey Claypool, Federal Aviation Administration, Operations Support Group, Central Service Center, 10101 Hillwood Parkway, Fort Worth, TX, 76177; telephone (817) 222–5711.

SUPPLEMENTARY INFORMATION:

Authority for This Rulemaking

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 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 Class E airspace at Arkansas International Airport, Blytheville, AR; Blytheville Municipal Airport, Blytheville, AR; Frank Federer Memorial Airport, Brinkley, AR; Clarksville Municipal Airport, Clarksville, AR; and J. Lynn Helms Sevier County Airport, De Queen, AR.

History

On May 3, 2016, the FAA published in the **Federal Register** a notice of proposed rulemaking (NPRM), (81 FR 26505) Docket No. FAA–2016–4172, to modify Class E airspace at Arkansas International Airport, Blytheville, AR; Blytheville Municipal Airport, Blytheville, AR; Frank Federer Memorial Airport, Brinkley, AR; Clarksville Municipal Airport, Clarksville, AR; and J. Lynn Helms Sevier County Airport, De Queen, AR. 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 7400.11A, dated August 3, 2016, and effective September 15, 2016, which is incorporated by reference in 14 CFR part 71.1. The Class E airspace designation listed in this document will be published subsequently in the Order.

Availability and Summary of Documents for Incorporation by Reference

This document amends FAA Order 7400.11A, Airspace Designations and Reporting Points, dated August 3, 2016, and effective September 15, 2016. FAA Order 7400.11A is publicly available as listed in the **ADDRESSES** section of this document. FAA Order 7400.11A lists Class A, B, C, D, and E airspace areas, air traffic service routes, and reporting points.

The Rule

This amendment to Title 14, Code of Federal Regulations (14 CFR) part 71 modifies Class E airspace extending upward from 700 feet above the surface at the following airports:

Within 7-mile radius (reduced from an 8-mile radius) of Arkansas International Airport (formerly Eaker AFB), and within a 6.5-mile radius (reduced from a 7-mile radius) of Blytheville Municipal Airport, Blytheville, AR, and updates the airport's geographic coordinates;

By removing the 7.3-mile extension to the north from the 6.4-mile radius of Frank Federer Memorial Airport, Brinkley, AR;

Within a 7.3-mile radius (reduced from a 7.4-mile radius) of Clarksville Municipal Airport, Clarksville, AR, and updates the airport's geographic coordinates; and

Within a 6.5-mile radius (increased from a 6.4-mile radius) of J. Lynn Helms Sevier County Airport, De Queen, AR.

Airspace reconfiguration is necessary due to the decommissioning of NDBs, cancellation of NDB approaches, or implementation of RNAV procedures at the above airports. Controlled airspace is necessary for the safety and management of the standard instrument approach procedures for IFR operations at these airports.

Regulatory Notices and Analyses

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, is non-controversial and unlikely to result in adverse or negative comments. 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 only affects air traffic procedures and air navigation, it is certified that this rule, when promulgated, does not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

Environmental Review

The FAA has determined that this action qualifies for categorical exclusion under the National Environmental Policy Act in accordance with FAA Order 1050.1F, ''Environmental Impacts: Policies and Procedures,'' paragraph 5–6.5.a. This airspace action is not expected to cause any potentially significant environmental impacts, and no extraordinary circumstances exist that warrant preparation of an environmental assessment.

Lists 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 part 71 continues to read as follows:

Authority: 49 U.S.C. 106(f), 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 7400.11A, Airspace Designations and Reporting Points, dated August 3, 2016, and effective September 15, 2016, 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 Blytheville, AR [Amended]

Blytheville, Arkansas International Airport, AR
(Lat. 35°57′52″ N., long. 89°56′38″ W.)
Blytheville Municipal Airport, AR
(Lat. 35°56′26″ N., long. 89°49′51″ W.)

That airspace extending upward from 700 feet above the surface within a 7-mile radius of Arkansas International Airport and within a 6.5-mile radius of Blytheville Municipal Airport.

ASW AR E5 Brinkley, AR [Amended]

Brinkley, Frank Federer Memorial Airport, AR
(Lat. 34°52′49″ N., long. 91°10′35″ W.)

That airspace extending upward from 700 feet above the surface within a 6.4-mile radius of Frank Federer Memorial Airport.

* * * * *

ASW AR E5 Clarksville, AR [Amended]

Clarksville Municipal Airport, AR
(Lat. 35°28′15″ N., long. 93°25′38″ W.)

That airspace extending upward from 700 feet above the surface within a 7.3-mile radius of Clarksville Municipal Airport.

* * * * *

ASW AR E5 De Queen, AR [Amended]

De Queen, J. Lynn Helms Sevier County Airport, AR
(Lat. 34°02′49″ N., long. 94°23′58″ W.)

That airspace extending upward from 700 feet above the surface within a 6.5-mile radius of J. Lynn Helms Sevier County Airport.

Issued in Fort Worth, Texas, on November 2, 2016.

Walter Tweedy,

Acting Manager, Operations Support Group, ATO Central Service Center.

[FR Doc. 2016–27093 Filed 11–9–16; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF THE TREASURY

Internal Revenue Service

26 CFR Part 1

[TD 9793]

RIN 1545–BM01

Removal of the 36-Month Non-Payment Testing Period Rule

AGENCY: Internal Revenue Service (IRS), Treasury.

ACTION: Final regulation.

SUMMARY: This document contains final regulations that remove the rule that a deemed discharge of indebtedness for which a Form 1099–C, ''Cancellation of Debt,'' must be filed occurs at the expiration of a 36-month non-payment testing period. The Treasury Department and the IRS are concerned that the rule creates confusion for taxpayers and does not increase tax compliance by debtors or provide the IRS with valuable third-party information that may be used to ensure taxpayer compliance. The final regulations affect certain financial institutions and governmental entities.

DATES: *Effective Date:* These regulations are effective on November 10, 2016.

Applicability Date: For dates of applicability, see § 1.6050P–1(h).

FOR FURTHER INFORMATION CONTACT: Eliezer Mishory at (202) 317–6844 (not a toll-free call).

SUPPLEMENTARY INFORMATION:

Background

This document contains amendments to the Income Tax Regulations (26 CFR part 1) under section 6050P of the Internal Revenue Code (Code), relating to the rule in § 1.6050P–1(b)(2)(iv) that the 36-month non-payment testing period is an identifiable event triggering an information reporting obligation on Form 1099–C for discharge of indebtedness by certain entities. On October 15, 2014, a notice of proposed rulemaking (REG–136676–13) was published in the **Federal Register** (79 FR 61791). The notice of proposed rulemaking proposed to remove the 36-month non-payment testing period. Written comments responding to the proposed regulations were received. The comments have been considered in connection with these final regulations and are available for public inspection at www.regulations.gov or on request. No public hearing was requested or held. After consideration of all the comments, the proposed regulations are adopted as final regulations without significant modification by this Treasury decision.

Statutory Provisions

Section 61(a)(12) provides that income from discharge of indebtedness is includible in gross income. Section 6050P was added to the Code by section 13252 of the Omnibus Budget Reconciliation Act of 1993, Public Law 103–66 (107 Stat. 312, 531–532 (1993)). Section 6050P was enacted in part ''to encourage taxpayer compliance with respect to discharged indebtedness'' and to ''enhance the ability of the IRS to enforce the discharge of indebtedness rules.'' H.R. Rep. No. 103–111, at 758 (1993). As originally enacted, section 6050P generally required applicable financial entities (generally financial institutions, credit unions, and federal executive agencies) that discharge (in whole or in part) indebtedness of $600 or more during a calendar year to file information returns with the IRS and to furnish information statements to the persons whose indebtedness was discharged. In addition to other information prescribed by regulations, an applicable financial entity is required to include on the information return the debtor's name, taxpayer identification number, the date of the discharge, and the amount discharged. *See* 26 U.S.C. 6050P(a) (1994).

The Debt Collection Improvement Act of 1996 (1996 Act), Public Law 104–134 (110 Stat. 1321, 1321–368 through 1321–369 (1996)) was enacted on April 26, 1996. Section 31001(m)(2)(B)(i) and (ii) of the 1996 Act amended section 6050P to expand the reporting requirement to cover ''applicable entities,'' which includes any executive, judicial, or legislative agency, not just federal executive agencies, and any previously covered applicable financial entity. Effective for discharges of indebtedness occurring after December 31, 1999, section 533(a) of the Ticket to Work and Work Incentives Improvement Act of 1999 (1999 Act), Public Law 106–170 (113 Stat. 1860, 1931 (1999)), added subparagraph (c)(2)(D) to section 6050P, to further expand entities covered by the reporting requirements to include any organization the ''significant trade or business of which is the lending of money.''

On April 4, 2000, the IRS released Notice 2000–22 (2000–1 CB 902) to provide penalty relief to organizations that were newly made subject to section 6050P by the 1999 Act (organizations with a significant trade or business of lending money). The relief applied to penalties for failure to file information returns or furnish payee statements for discharges of indebtedness occurring before January 1, 2001. On December 26,

2000, the IRS released Notice 2001–8 (2001–1 CB 374) to extend the penalty relief for organizations described in Notice 2000–22 for discharges of indebtedness that occurred prior to the first calendar year beginning at least two months after the date that appropriate guidance is issued.

Regulatory History

On December 27, 1993, temporary regulations under section 6050P relating to the reporting of discharge of indebtedness by applicable financial entities were published in the **Federal Register** (TD 8506; 58 FR 68301). The temporary regulations provided that an applicable financial entity must report a discharge of indebtedness upon the occurrence of an identifiable event that, considering all the facts and circumstances, indicated the debt would never have to be repaid. The temporary regulations provided a non-exhaustive list of three identifiable events that would give rise to the reporting requirement under section 6050P: (1) A discharge of indebtedness under title 11 of the United States Code (Bankruptcy Code); (2) an agreement between the applicable financial entity and the debtor to discharge the indebtedness, provided that the last event to effectuate the agreement has occurred; and (3) a cancellation or extinguishment of the indebtedness by operation of law. These regulations were effective for discharges of indebtedness occurring after December 31, 1993.

A concurrently published notice of proposed rulemaking (IA–63–93; 58 FR 68337) proposed to adopt those and other rules in the temporary regulations. Written comments were received in response to the notice of proposed rulemaking, and testimony was given at a public hearing held on March 30, 1994. In response to the comments and testimony, the IRS provided, in Notice 94–73 (1994–2 CB 553), interim relief from penalties for failure to comply with certain of the reporting requirements of the temporary regulations for discharges of indebtedness occurring before the later of January 1, 1995, or the effective date of final regulations under section 6050P.

On January 4, 1996, prior to the amendments made by the 1996 Act, final regulations relating to the information reporting requirements of applicable financial entities for discharges of indebtedness were published in the **Federal Register** (TD 8654; 61 FR 262) (the 1996 final regulations). The 1996 final regulations were generally effective for discharges of indebtedness occurring after December 21, 1996, although applicable financial entities at their discretion could apply the 1996 final regulations to any discharge of indebtedness occurring on or after January 1, 1996, and before December 22, 1996. Finally, the preamble to these regulations provided that the temporary regulations and the interim relief provided in Notice 94–73 remained in effect until December 21, 1996.

In response to objections by commenters, the 1996 final regulations did not adopt the facts and circumstances test to determine whether a discharge of indebtedness had occurred and information reporting was required. Instead, the 1996 final regulations provided that a person's indebtedness is deemed to be discharged for information reporting purposes only upon the occurrence of an identifiable event specified in an exhaustive list under § 1.6050P–1(b)(2), whether or not an actual discharge has occurred on or before the date of the identifiable event. *See* § 1.6050P–1(a)(1).

Section 1.6050P–1(b)(2) of the 1996 final regulations listed eight identifiable events that trigger information reporting obligations on the part of an applicable financial entity: (1) A discharge of indebtedness under the Bankruptcy Code; (2) a cancellation or extinguishment of an indebtedness that renders the debt unenforceable in a receivership, foreclosure, or similar proceeding in a federal or state court, as described in section 368(a)(3)(A)(ii) (other than a discharge under the Bankruptcy Code); (3) a cancellation or extinguishment of an indebtedness upon the expiration of the statute of limitations for collection (but only if, and only when, the debtor's statute of limitations affirmative defense has been upheld in a final judgment or decision in a judicial proceeding, and the period for appealing it has expired) or upon the expiration of a statutory period for filing a claim or commencing a deficiency judgment proceeding; (4) a cancellation or extinguishment of an indebtedness pursuant to an election of foreclosure remedies by a creditor that statutorily extinguishes or bars the creditor's right to pursue collection of the indebtedness; (5) a cancellation or extinguishment of an indebtedness that renders a debt unenforceable pursuant to a probate or similar proceeding; (6) a discharge of indebtedness pursuant to an agreement between an applicable entity and a debtor to discharge indebtedness at less than full consideration; (7) a discharge of indebtedness pursuant to a decision by the creditor, or the application of a defined policy of the creditor, to discontinue collection activity and discharge debt; and (8) the expiration of a 36-month non-payment testing period.

The first seven identifiable events are specific occurrences that typically result from an actual discharge of indebtedness. The eighth identifiable event, the expiration of a 36-month non-payment testing period, may not result from an actual discharge of indebtedness. The 36-month non-payment testing period was added to the 1996 final regulations as an additional identifiable event in response to concerns of creditors that the facts and circumstances approach taken in the temporary and proposed regulations was unclear regarding the effect of continuing collection activity. Creditors proposed (among other things) that the final regulations require reporting after a fixed time period during which there had been no collection efforts.

Section 1.6050P–1(b)(2)(iv) of the 1996 regulations sets forth the 36-month non-payment testing period rule (the 36-month rule). Under that rule, a rebuttable presumption arises that an identifiable event has occurred if a creditor does not receive a payment within a 36-month testing period. The creditor may rebut the presumption if the creditor engaged in significant bona fide collection activity at any time within the 12-month period ending at the close of the calendar year or if the facts and circumstances existing as of January 31 of the calendar year following the expiration of the non-payment testing period indicate that the indebtedness has not been discharged. A creditor's decision not to rebut the presumption that an identifiable event has occurred pursuant to the 36-month rule is not an indication that it has discharged the debt, but the creditor is nonetheless required, for information reporting purposes, to report amounts on a Form 1099–C to the debtor taxpayer. Taxpayers receiving Forms 1099–C may conclude that the debts have, in fact, been discharged, causing the taxpayers to erroneously include in income the amounts reported on Forms 1099–C even though creditors may continue to attempt to collect the debt after issuing a Form 1099–C as required by the 36-month rule. *See* § 1.6050P–1(a)(1) and (b)(2)(iv). Finally, the 1996 final regulations provided that an identifiable event with respect to the 36-month non-payment testing period in § 1.6050P–1(b)(2)(i)(H) and (b)(2)(iv) could not occur prior to December 31, 1997. *See* § 1.6050P–1(b)(2)(iv)(C) of the 1996 regulations.

On October 25, 2004, final regulations reflecting the amendments to section 6050P(c) made by the 1999 Act were published in the **Federal Register** (TD

9160; 69 FR 62181). These regulations describe circumstances in which an organization has a significant trade or business of lending money and provide three safe harbors under which organizations will not be considered to have a significant trade or business of lending money.

On November 10, 2008, final and temporary regulations were published in the **Federal Register** (TD 9430; 73 FR 66539) (the 2008 regulations) to amend the regulations under section 6050P to exempt from the 36-month rule entities that were not within the scope of section 6050P as originally enacted (organizations with a significant trade or business of lending money and agencies other than federal executive agencies). The changes made by the 2008 regulations reduced the burden on these entities and protected debtors from receiving information returns that reported discharges of indebtedness from these entities before a discharge had occurred. The 2008 regulations also added § 1.6050P–1(b)(2)(v), which provided that, for organizations with a significant trade or business of lending money and agencies other than federal executive agencies that were required to file information returns pursuant to the 36-month rule in a tax year prior to 2008 and failed to file them, the date of discharge would be the first identifiable event, if any, described in § 1.6050P–1(b)(2)(i)(A) through (G) that occurs after 2007. On September 17, 2009, final regulations were published in the **Federal Register** (TD 9461; 74 FR 47728–01) adopting the 2008 regulations without change.

Notice 2012–65

Even after the amendments to the regulations in 2008 and 2009, concerns continued to arise about the 36-month rule, and taxpayers remained confused regarding whether the receipt of a Form 1099–C represents cancellation of indebtedness that must be included in gross income. To address those concerns, in Notice 2012–65 (2012–52 IRB 773 (Dec. 27, 2012)), the Treasury Department and the IRS requested comments from the public regarding whether to remove or modify the 36-month rule as an identifiable event for purposes of information reporting under section 6050P. Ten comments were received, all recommending removal or revision of the 36-month rule. Several commenters generally expressed concerns that the expiration of a 36-month non-payment testing period does not necessarily coincide with an actual discharge of the indebtedness, leading to confusion on the part of the debtor and, in some instances, uncertainty on the part of the creditor regarding whether it may lawfully continue to pursue the debt. Additionally, commenters noted that the IRS's ability to collect tax on discharge of indebtedness income may be undermined if the actual discharge occurs in a different year than the year of information reporting.

Proposed Regulations

In response to the comments received, on October 15, 2014, a notice of proposed rulemaking (REG–136676–13) proposing removing the 36-month rule was published in the **Federal Register** (79 FR 61791). The Treasury Department and the IRS agreed that information reporting under section 6050P should generally coincide with the actual discharge of a debt. Because reporting under the 36-month rule may not reflect a discharge of indebtedness, a debtor may conclude that the debtor has taxable income even though the creditor has not discharged the debt and continues to pursue collection. Issuing a Form 1099–C before a debt has been discharged may also cause the IRS to initiate compliance actions even though a discharge has not occurred. Additionally, § 1.6050P–1(e)(9) provides that no additional reporting is required if a subsequent identifiable event occurs. Therefore, in cases in which the Form 1099–C is issued because of the 36-month rule but before the debt is discharged, the IRS does not subsequently receive third-party reporting when the debt is discharged. The IRS's ability to enforce collection of tax for discharge of indebtedness income may, thus, be diminished when the information reporting does not reflect an actual cancellation of indebtedness.

Section 1.6050P–1(b)(2)(i)(H), (b)(2)(iv), and (b)(2)(v) were proposed to be removed on the date final regulations are published in the **Federal Register**. The proposed regulations also proposed conforming amendments to the effective/applicability date provision, § 1.6050P–1(h).

Explanation and Summary of Comments

The notice of proposed rulemaking invited comments on the proposed removal of the 36-month rule. A public hearing was not requested and none was held. Four comments were received. All commenters supported the proposal and agreed that the 36-month rule did not increase compliance and caused confusion, and supported its removal. Accordingly, these final regulations adopt the proposed regulations without change (except as described in the Applicability Date section of this preamble), remove the 36-month rule from the list of identifiable events, and remove related provisions.

Applicability Date

The notice of proposed rulemaking proposed to amend the effective/applicability date paragraph in § 1.6050P–1(h) to remove references to the 36-month rule that were added along with the 36-month rule in TD 9461, 74 FR 47728–01, and such amendments would have been both effective and applicable as of the date of publication of these final regulations in the **Federal Register**. The Treasury Department and the IRS have determined that it is not in the interest of sound tax administration to have the removal of the 36-month rule apply for a portion of a calendar year. Therefore, these final regulations do not adopt the effective/applicability date provision of the proposed regulations. Information returns required to be filed under section 6050P must be filed on or before February 28 (March 31 if filed electronically) of the year following the calendar year in which the identifiable event occurs and payee statements must be furnished on or before January 31 of the year following the calendar year in which the identifiable event occurs. The final regulations are applicable to information returns required to be filed, and payee statements required to be furnished, after December 31, 2016. Because the deadline for filing information returns and furnishing payee statements for calendar year 2016 would be after December 31, 2016, the expiration of the 36-month testing period during 2016 does not create a requirement to file information returns and furnish payee statements. However, § 1.6050P–1 (as contained in 26 CFR part 1, revised April 2016) continues to apply to information returns required to be filed, and payee statements required to be furnished, on or before December 31, 2016.

Special Analyses

Certain IRS regulations, including this one, are exempt from the requirements of Executive Order 12866, as supplemented and reaffirmed by Executive Order 13563. Therefore, a regulatory impact assessment is not required. Because the regulations do not impose a collection of information on small entities, the Regulatory Flexibility Act (5 U.S.C. chapter 6) does not apply. Pursuant to section 7805(f) of the Code, the notice of proposed rulemaking that preceded these final regulations was submitted to the Chief Counsel for Advocacy of the Small Business

Administration for comment on its impact on small business, and no comments were received.

Drafting Information

The principal author of these final regulations is Eliezer Mishory of the Office of Associate Chief Counsel (Procedure and Administration).

List of Subjects in 26 CFR Part 1

Income Taxes, Reporting and recordkeeping requirements.

Proposed Amendments to the Regulations

Accordingly, 26 CFR part 1 is amended as follows:

PART 1—INCOME TAXES

■ **Paragraph 1.** The authority citation for part 1 continues to read in part as follows:

Authority: 26 U.S.C. 7805 * * *

■ **Par. 2.** Section 1.6050P–1 is amended by:

■ 1. Removing paragraphs (b)(2)(i)(H), (b)(2)(iv), and (b)(2)(v).

■ 2. Adding the word ''or'' at the end of paragraph (b)(2)(i)(F).

■ 3. Removing the semicolon and adding a period in its place at the end of paragraph (b)(2)(i)(G).

■ 4. Revising paragraph (h).

The revision reads as follows:

§ 1.6050P–1 Information reporting for discharge of indebtedness by certain entities.

* * * * *

(h) *Applicability dates.* This section applies to information returns required to be filed, and payee statements required to be furnished, after December 31, 2016. Section 1.6050P–1 (as contained in 26 CFR part 1, revised April 2016) applies to information returns required to be filed, and payee statements required to be furnished, on or before December 31, 2016.

John Dalrymple,

Deputy Commissioner for Services and Enforcement.

Approved: October 17, 2016.

Mark J. Mazur,

Assistant Secretary of the Treasury (Tax Policy).

[FR Doc. 2016–27160 Filed 11–9–16; 8:45 am]

BILLING CODE 4830–01–P

DEPARTMENT OF DEFENSE

Department of the Army

32 CFR Part 635

RIN 0702–AA75

[Docket No. USA–2016–HQ–0033]

Law Enforcement Reporting

AGENCY: Department of the Army, DoD.

ACTION: Direct final rule.

SUMMARY: The Department of the Army is amending its Law Enforcement Regulation. Specifically, Army is clarifying language for contractors who are required to register as sex offenders on Army installations. This change will allow the Department to collect information from registered sex offenders in accordance with their contract requirements. This ensures contractors meet the government requirements under the terms and conditions of the contract.

DATES: The rule will be effective on December 15, 2016 unless comments are received that would result in a contrary determination. Comments will be accepted on or before December 12, 2016.

ADDRESSES: You may submit comments, identified by docket number and/or RIN number and title, by any of the following methods:

- *Federal Rulemaking Portal: http://www.regulations.gov.* Follow the instructions for submitting comments.
- *Mail:* Department of Defense, Office of the Deputy Chief Management Officer, Directorate for Oversight and Compliance, 4800 Mark Center Drive, Mailbox #24, Alexandria, VA 22350–1700.

Instructions: All submissions received must include the agency name and docket number or Regulatory Information Number (RIN) 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: Ms. Katherine Brennan, (703) 692–6721.

SUPPLEMENTARY INFORMATION: This direct final rule makes changes to the Department of the Army's Law Enforcement Reporting rule which published in the **Federal Register** on March 29, 2016 (81 FR 17385).

DoD has determined this rulemaking meets the criteria for a direct final rule because it involves a change that clarifies language for contractors who are required to register as sex offenders on Army installations per the requirements of their contracts. DoD expects no opposition to the changes and no significant adverse comments. However, if DoD receives a significant adverse comment, the Department will withdraw this direct final rule by publishing a notice in the **Federal Register**. A significant adverse comment is one that explains: (1) Why the direct final rule is inappropriate, including challenges to the rule's underlying premise or approach; or (2) why the direct final rule will be ineffective or unacceptable without a change. In determining whether a comment necessitates withdrawal of this direct final rule, DoD will consider whether it warrants a substantive response in a notice and comment process.

Executive Summary

This rule provides policies and procedures for Army's implementation of Law Enforcement Reporting. The authority citation is 28 U.S.C. 534, 42 U.S.C. 10601, 18 U.S.C. 922, 10 U.S.C. 1562, 10 U.S.C. Chap. 47, 42 U.S.C. 16901 *et seq.,* 10 U.S.C. 1565, 42 U.S.C. 14135a.

The Army is clarifying language for contractors who are required to register as sex offenders on Army installations.

This regulatory action imposes no monetary costs to the Agency or public. The benefit to the public is the Army law enforcement community is ensuring the safety and security of the Army installations by ensuring sex offenders required to register are complying with their registration requirements.

Regulatory Procedures

A. Regulatory Flexibility Act

The Department of the Army has certified that the Regulatory Flexibility Act does not apply because the rule does not have a significant economic impact on a substantial number of small entities within the meaning of the Regulatory Flexibility Act, 5 U.S.C. 601–612.

B. Unfunded Mandates Reform Act

The Department of the Army has determined that the Unfunded Mandates Reform Act does not apply because the rule does not include a mandate that may result in estimated costs to State, local or tribal governments in the aggregate, or the private sector, of $100 million or more.

C. National Environmental Policy Act

The Department of the Army has determined that the National

Environmental Policy Act does not apply because the rule does not have an adverse impact on the environment.

D. Paperwork Reduction Act

It has been certified that this rule does impose reporting or recordkeeping requirements under the Paperwork Reduction Act of 1995. OMB has approved these requirements under OMB Control Number 0702–0128.

E. Executive Order 12630 (Government Actions and Interference With Constitutionally Protected Property Rights)

The Department of the Army has determined that Executive Order 12630 does not apply because the rule does not impair private property rights.

F. Executive Order 12866 (Regulatory Planning and Review) and Executive Order 13563 (Improving Regulation and Regulatory Review)

The Department of the Army has determined that according to the criteria defined in Executive Order 12866 and Executive Order 13563, this rule is not a significant regulatory action.

G. Executive Order 13045 (Protection of Children From Environmental Health Risk and Safety Risks)

The Department of the Army has determined that the criteria of Executive Order 13045 do not apply because this rule does not implement or require actions impacting environmental health and safety risks on children.

H. Executive Order 13132 (Federalism)

The Department of the Army has determined that the criteria of Executive Order 13132 do not apply because this rule will not have a substantial effect 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.

List of Subjects in 32 CFR Part 635

Crime, Law, Law enforcement, Law enforcement officers, Military law.

For reasons stated in the preamble the Department of the Army amends 32 CFR part 635 as follows:

PART 635—LAW ENFORCEMENT REPORTING

■ 1. The authority citation for part 635 continues to read as follows:

Authority: 28 U.S.C. 534, 42 U.S.C. 10601, 18 U.S.C. 922, 10 U.S.C. 1562, 10 U.S.C. Chap. 47, 42 U.S.C. 16901 *et seq.,* 10 U.S.C. 1565, 42 U.S.C. 14135a.

■ 2. Amend § 635.6 by revising paragraph (a) to read as follows:

§ 635.6 Registration of sex offenders on Army installations (inside and outside the Continental United States)

(a) *Sex Offenders on US Army Installations.* Garrison Commander's responsibilities: Garrison Commanders will ensure that sex offenders, as defined in paragraph (b) of this section that reside or are employed on an Army Installation register with the installation PM/DES. This includes service members, civilian employees, accompanying dependent family members, and contractors subject to the incorporation of the sex offender registration requirement into the contract.

* * * * *

Thomas S. Blair,

Chief, Law Enforcement Branch.

[FR Doc. 2016–27165 Filed 11–9–16; 8:45 am]

BILLING CODE 5001–03–P

DEPARTMENT OF HOMELAND SECURITY

Coast Guard

33 CFR Part 117

[Docket No. USCG–2016–1004]

Drawbridge Operation Regulation; Great Channel, Between Stone Harbor and Nummy Island, NJ

AGENCY: Coast Guard, DHS.

ACTION: Notice of deviation from drawbridge regulation.

SUMMARY: The Coast Guard has issued a temporary deviation from the operating schedule that governs the Cape May County (Ocean Drive/CR619) Bridge across the Great Channel, mile 0.7, between Stone Harbor and Nummy Island, NJ. This deviation is necessary to avoid bridge failure and perform emergency bridge repairs. This deviation allows the bridge to remain in the closed-to-navigation position.

DATES: This deviation is effective without actual notice from November 10, 2016 through 4 p.m. on December 2, 2016. For the purposes of enforcement, actual notice will be used from November 7, 2016 at 9 a.m., until November 10, 2016.

ADDRESSES: The docket for this deviation, [USCG–2016–1004] is available at *http://www.regulations.gov.* Type the docket number in the ''SEARCH'' box and click ''SEARCH''. Click on Open Docket Folder on the line associated with this deviation.

FOR FURTHER INFORMATION CONTACT: If you have questions on this temporary deviation, call or email Mr. Hal R. Pitts, Bridge Administration Branch Fifth District, Coast Guard, telephone 757–398–6222, email *Hal.R.Pitts@uscg.mil.*

SUPPLEMENTARY INFORMATION: The County of Cape May, NJ, that owns and operates the Cape May County (Ocean Drive/CR619) Bridge, across the Great Channel, mile 0.7, between Stone Harbor and Nummy Island, NJ, has requested a temporary deviation from the current operating regulations to avoid bridge failure and perform emergency repairs to the bridge, due to mechanical failure of the bascule span motor break, machinery brakes, and span lock mechanisms. The bridge is a bascule draw bridge and has a vertical clearance in the closed position of 11 feet above mean high water.

The current operating schedule is set out in 33 CFR 117.720. Under this temporary deviation, the bridge will remain in the closed-to-navigation position until 4 p.m. on December 2, 2016.

The Great Channel is used by a variety of vessels including small public vessels, commercial vessels, and recreational vessels. The Coast Guard has carefully considered the nature and volume of vessel traffic on the waterway in publishing this temporary deviation.

Vessels able to safely pass through the bridge in the closed position may do so at any time. The bridge will not be able to open for emergencies and Grassy Sound Channel (Ocean Drive/CR619) Bridge, across Grassy Sound Channel, mile 1.0, at North Wildwood, NJ, can be used as an alternate route for vessels unable to pass through the bridge in the closed position. The Coast Guard will also inform the users of the waterways through our Local and Broadcast Notices to Mariners of the change in operating schedule for the bridge so that vessel operators can arrange their transit to minimize any impact caused by the temporary deviation.

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

Dated: November 7, 2016.

Hal R. Pitts,

Bridge Program Manager, Fifth Coast Guard District.

[FR Doc. 2016–27184 Filed 11–9–16; 8:45 am]

BILLING CODE 9110–04–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 180

[EPA–HQ–OPP–2015–0712; FRL–9953–88]

Clomazone; Pesticide Tolerances

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This regulation establishes tolerances for residues of clomazone in or on asparagus and soybean, vegetable, succulent. The Interregional Research Project Number 4 (IR–4) requested these tolerances under the Federal Food, Drug, and Cosmetic Act (FFDCA).

DATES: This regulation is effective November 10, 2016. Objections and requests for hearings must be received on or before January 9, 2017, and must be filed in accordance with the instructions provided in 40 CFR part 178 (see also Unit I.C. of the **SUPPLEMENTARY INFORMATION**).

ADDRESSES: The docket for this action, identified by docket identification (ID) number EPA–HQ–OPP–2015–0712, is available at *http://www.regulations.gov* or at the Office of Pesticide Programs Regulatory Public Docket (OPP Docket) in the Environmental Protection Agency Docket Center (EPA/DC), West William Jefferson Clinton Bldg., Rm. 3334, 1301 Constitution Ave. NW., Washington, DC 20460–0001. 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 OPP Docket is (703) 305–5805. Please review the visitor instructions and additional information about the docket available at *http://www.epa.gov/dockets.*

FOR FURTHER INFORMATION CONTACT: Michael Goodis, Registration Division (7505P), Office of Pesticide Programs, Environmental Protection Agency, 1200 Pennsylvania Ave. NW., Washington, DC 20460–0001; main telephone number: (703) 305–7090; email address: *RDFRNotices@epa.gov.*

SUPPLEMENTARY INFORMATION:

I. General Information

A. Does this action apply to me?

You may be potentially affected by this action if you are an agricultural producer, food manufacturer, or pesticide manufacturer. The following list of North American Industrial Classification System (NAICS) codes is not intended to be exhaustive, but rather provides a guide to help readers determine whether this document applies to them. Potentially affected entities may include:

- Crop production (NAICS code 111).
- Animal production (NAICS code 112).
- Food manufacturing (NAICS code 311).
- Pesticide manufacturing (NAICS code 32532).

B. How can I get electronic access to other related information?

You may access a frequently updated electronic version of EPA's tolerance regulations at 40 CFR part 180 through the Government Printing Office's e-CFR site at *http://www.ecfr.gov/cgi-bin/text-idx?&c=ecfr&tpl=/ecfrbrowse/Title40/40tab_02.tpl.*

C. How can I file an objection or hearing request?

Under FFDCA section 408(g), 21 U.S.C. 346a, any person may file an objection to any aspect of this regulation and may also request a hearing on those objections. You must file your objection or request a hearing on this regulation in accordance with the instructions provided in 40 CFR part 178. To ensure proper receipt by EPA, you must identify docket ID number EPA–HQ–OPP–2015–0712 in the subject line on the first page of your submission. All objections and requests for a hearing must be in writing, and must be received by the Hearing Clerk on or before January 9, 2017. Addresses for mail and hand delivery of objections and hearing requests are provided in 40 CFR 178.25(b).

In addition to filing an objection or hearing request with the Hearing Clerk as described in 40 CFR part 178, please submit a copy of the filing (excluding any Confidential Business Information (CBI)) for inclusion in the public docket. Information not marked confidential pursuant to 40 CFR part 2 may be disclosed publicly by EPA without prior notice. Submit the non-CBI copy of your objection or hearing request, identified by docket ID number EPA–HQ–OPP–2015–0712, by one of the following methods:

- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the online instructions for submitting comments. Do not submit electronically any information you consider to be CBI or other information whose disclosure is restricted by statute.
- *Mail:* OPP Docket, Environmental Protection Agency Docket Center (EPA/DC), (28221T), 1200 Pennsylvania Ave. NW., Washington, DC 20460–0001.
- *Hand Delivery:* To make special arrangements for hand delivery or delivery of boxed information, please follow the instructions at *http://www.epa.gov/dockets/contacts.html.*

Additional instructions on commenting or visiting the docket, along with more information about dockets generally, is available at *http://www.epa.gov/dockets.*

II. Summary of Petitioned-For Tolerance

In the **Federal Register** of November 25, 2015 (80 FR 73695) (FRL–9937–14), EPA issued a document pursuant to FFDCA section 408(d)(3), 21 U.S.C. 346a(d)(3), announcing the filing of a pesticide petition (PP# 5E8402) by Interregional Research No. 4 (IR–4), Rutgers, The State University of New Jersey, 500 College Road East, Suite 201–W, Princeton, NJ 08540. The petition requested that 40 CFR 180.425 be amended by establishing tolerances for residues of the herbicide clomazone, 2-[(2-chlorophenyl)methyl]-4,4-dimethyl-3-isoxazolidinone, in or on asparagus at 0.05 parts per million (ppm) and vegetable soybean (edamame) at 0.05 ppm. That document referenced a summary of the petition prepared by FMC Corporation, the registrant, which is available in the docket EPA–HQ–OPP–2015–0712 at *http://www.regulations.gov.* There were no comments received in response to the notice of filing.

Based upon review of the data supporting the petition, EPA has revised the terminology to correct the commodity definition from vegetable soybean (edamame) to soybean, vegetable, succulent.

III. Aggregate Risk Assessment and Determination of Safety

Section 408(b)(2)(A)(i) of FFDCA allows EPA to establish a tolerance (the legal limit for a pesticide chemical residue in or on a food) only if EPA determines that the tolerance is ''safe.'' Section 408(b)(2)(A)(ii) of FFDCA defines ''safe'' to mean that ''there is a reasonable certainty that no harm will result from aggregate exposure to the pesticide chemical residue, including all anticipated dietary exposures and all other exposures for which there is reliable information.'' This includes exposure through drinking water and in residential settings, but does not include occupational exposure. Section 408(b)(2)(C) of FFDCA requires EPA to give special consideration to exposure of infants and children to the pesticide chemical residue in establishing a tolerance and to ''ensure that there is a reasonable certainty that no harm will result to infants and children from aggregate exposure to the pesticide chemical residue. . . .''

Consistent with FFDCA section 408(b)(2)(D), and the factors specified in FFDCA section 408(b)(2)(D), EPA has reviewed the available scientific data and other relevant information in support of this action. EPA has sufficient data to assess the hazards of and to make a determination on aggregate exposure for clomazone including exposure resulting from the tolerances established by this action. EPA's assessment of exposures and risks associated with clomazone follows.

A. Toxicological Profile

EPA has evaluated the available toxicity data and considered its validity, completeness, and reliability as well as the relationship of the results of the studies to human risk. EPA has also considered available information concerning the variability of the sensitivities of major identifiable subgroups of consumers, including infants and children.

The primary target of clomazone is the liver, with hepatocellular cytomegaly and increased liver weight noted in the subchronic rat study. No neurotoxicity studies with clomazone are available; however, based on a weight of the evidence approach, EPA has concluded that a neurotoxicity battery is not required for clomazone. This approach considered all of the available hazard and exposure information including: (1) There is no evidence of clinical signs of neurotoxicity or neuropathology in adult animals in subchronic and chronic studies; (2) the liver is the target organ for clomazone, not the neurological system; (3) clomazone is absorbed and rapidly excreted in rats with 97% of the radioactivity excreted within 168 hours; and (4) the point of departure (POD) and endpoint for chronic dietary risk assessment is based on liver effects in rats which appear to be the most sensitive endpoint. There is no quantitative or qualitative evidence of susceptibility in the developmental toxicity study in rabbits or in the 2-generation reproduction toxicity study in rats. In the developmental toxicity study in rats, delayed ossification occurred at doses that produced maternal effects (chromorhinorrhea and abdominogenital staining). Although qualitative susceptibility was observed in the developmental toxicity study in rats, the concern is low since there are clear no-observed-adverse-effect-levels (NOAELs) and lowest-observed-adverse-effect-levels (LOAELs) in the study and this study was used for risk assessment, and therefore, is protective of the developmental effects.

In the rat and mouse carcinogenicity studies, there was no evidence of carcinogenicity. Although the mouse carcinogenicity study was classified as unacceptable/guideline since no systemic toxicity was observed at the highest dose tested, the study was considered adequate to assess the carcinogenicity in mice. EPA has determined that an additional mouse carcinogenicity study is not needed. This finding is based upon the following conclusions: (1) The rat is more sensitive than the mouse for the chronic assessment; (2) the consistent effect in rats (decreased body weight and increased liver weight) has been used as the point of departure for the chronic assessment; (3) a new mouse study would only use doses well above the current POD for the chronic assessment; and (4) even if a new mouse study identified positive carcinogenicity effects, that finding would not result in the adoption of a quantitative linear assessment of cancer risk due to the negative carcinogenicity finding in the rat study and the lack of a positive finding for genotoxicity. Clomazone is classified as ''Not Likely to be Carcinogenic to Humans.'' Quantification of cancer risk is not required.

Specific information on the studies received and the nature of the adverse effects caused by clomazone as well as the NOAEL and the LOAEL from the toxicity studies can be found at *http://www.regulations.gov* in document ''Clomazone: Human Health Risk Assessment for the Use of Clomazone on Asparagus and Edamame (Vegetable Soybean)'' on pages 11–15 in docket ID number EPA–HQ–OPP–2015–0712.

B. Toxicological Points of Departure/Levels of Concern

Once a pesticide's toxicological profile is determined, EPA identifies toxicological points of departure (POD) and levels of concern to use in evaluating the risk posed by human exposure to the pesticide. For hazards that have a threshold below which there is no appreciable risk, the toxicological POD is used as the basis for derivation of reference values for risk assessment. PODs are developed based on a careful analysis of the doses in each toxicological study to determine the dose at which no adverse effects are observed (the NOAEL) and the lowest dose at which adverse effects of concern are identified (the LOAEL). Uncertainty/safety factors are used in conjunction with the POD to calculate a safe exposure level—generally referred to as a population-adjusted dose (PAD) or a reference dose (RfD)—and a safe margin of exposure (MOE). For non-threshold risks, the Agency assumes that any amount of exposure will lead to some degree of risk. Thus, the Agency estimates risk in terms of the probability of an occurrence of the adverse effect expected in a lifetime. For more information on the general principles EPA uses in risk characterization and a complete description of the risk assessment process, see *http://www.epa.gov/pesticides/factsheets/riskassess.htm.*

A summary of the toxicological endpoints for clomazone used for human risk assessment used for human risk assessment is shown in Table 1 of this unit.

TABLE 1—SUMMARY OF TOXICOLOGICAL DOSES AND ENDPOINTS FOR CLOMAZONE FOR USE IN HUMAN HEALTH RISK ASSESSMENT

Exposure/scenario	Point of departure and uncertainty/safety factors	RfD, PAD, LOC for risk assessment	Study and toxicological effects
Acute dietary (General population including infants and children).	An endpoint was not selected for the general population because no adverse effect in adult animals was identified that resulted from a single exposure. A risk assessment is not required for this population subgroup.		
Acute dietary (Females 13 to 49 years of age).	NOAEL = 100 mg/kg/day. UF_A = 10x ..... UF_H = 10x ..... FQPA SF = 1x	Acute RfD = 1.0 mg/kg/day. aPAD = 1.0 mg/kg/day.	Developmental Toxicity Study—Rats (MRID 00150291). LOAEL = 300 mg/kg/day based on indications of delayed ossification in the form of either partial ossification or the absence of the manubrium, sternebrae 3–4, xiphoid, caudal vertebrae, and meta-carpals.

TABLE 1—SUMMARY OF TOXICOLOGICAL DOSES AND ENDPOINTS FOR CLOMAZONE FOR USE IN HUMAN HEALTH RISK ASSESSMENT—Continued

Exposure/scenario	Point of departure and uncertainty/ safety factors	RfD, PAD, LOC for risk assessment	Study and toxicological effects
Chronic dietary (All populations)	NOAEL= 84.4 mg/ kg/day. UF_A = 10x ..... UF_H = 10x ..... FQPA SF = 1x	Chronic RfD = 0.84 mg/kg/day. cPAD = 0.84 mg/kg/ day.	Two Year Chronic Toxicity Study—Rats (MRID 00132586). NOAEL = 84.4/112.9 mg/kg/day, males/females (highest dose tested). LOAEL was not attained Co-critical 90-day Oral Rat Study (MRID 00132586). NOAEL = 135.2/160.9 mg/kg/day, males/females. LOAEL = 273/319.3 mg/kg/day, males/females, based on decreased body weight, body weight gains, food consumption and increased absolute and relative liver weights in females and increased absolute liver weights in males. Co-critical 2-Generation Reproduction Toxicity Study (MRID 00151108). Parental LOAEL = 100 mg/kg/day based on statistically significantly decreased body weight & body weight gain during premating, and decreased body weight during gestation & lactation M & F. In addition, decreased food consumption in females and hydronephritic kidneys in males.
Cancer (Oral, dermal, inhalation).	"Not Likely to be Carcinogenic to Humans." Quantitative assessment of cancer risk is not required.		

FQPA SF = Food Quality Protection Act Safety Factor. LOAEL = lowest-observed-adverse-effect-level. LOC = level of concern. mg/kg/day = milligram/kilogram/day. NOAEL = no-observed-adverse-effect-level. PAD = population adjusted dose (a = acute, c = chronic). RfD = reference dose. UF = uncertainty factor. UF_A = extrapolation from animal to human (interspecies). UF_H = potential variation in sensitivity among members of the human population (intraspecies).

C. Exposure Assessment

1. *Dietary exposure from food and feed uses.* In evaluating dietary exposure to clomazone, EPA considered exposure under the petitioned-for tolerances as well as all existing clomazone tolerances in 40 CFR 180.425. EPA assessed dietary exposures from clomazone in food as follows:

i. *Acute exposure.* Quantitative acute dietary exposure and risk assessments are performed for a food-use pesticide, if a toxicological study has indicated the possibility of an effect of concern occurring as a result of a 1-day or single exposure. Such effects were identified for clomazone. In estimating acute dietary exposure, EPA used the Dietary Exposure Evaluation Model software with the Food Commodity Intake Database (DEEM–FCID) Version 3.16. This software uses 2003–2008 food consumption data from the U.S. Department of Agriculture's (USDA's) National Health and Nutrition Examination Survey, What We Eat in America, (NHANES/WWEIA). As to residue levels in food, EPA incorporated tolerance-level residues, 100 percent crop treated (PCT) for all commodities, and DEEM 7.81 default processing factors as appropriate.

ii. *Chronic exposure.* In conducting the chronic dietary exposure assessment EPA used DEEM–FCID Version 3.16. This software uses 2003–2008 food consumption data from USDA's NHANES/WWEIA. As to residue levels in food, EPA incorporated tolerance-level residues, 100 PCT for all commodities, and DEEM 7.81 default processing factors as appropriate.

iii. *Cancer.* Based on the data summarized in Unit III.A., EPA has concluded that clomazone does not pose a cancer risk to humans. Therefore, a dietary exposure assessment for the purpose of assessing cancer risk is unnecessary.

iv. *Anticipated residue and PCT information.* EPA did not use anticipated residue or PCT information in the dietary assessment for clomazone. Tolerance level residues and 100 PCT were assumed for all food commodities.

2. *Dietary exposure from drinking water.* In drinking water, the residues of concern include clomazone parent and its degradate FMC65317 (*N*-[(2-chlorophenyl)methyl]-3-hydroxy-2,2-dimenthylpropanamide). The Agency used screening level water exposure models in the dietary exposure analysis and risk assessment for clomazone in drinking water. These simulation models take into account data on the physical, chemical, and fate/transport characteristics of clomazone. Further information regarding EPA drinking water models used in pesticide exposure assessment can be found at *http://www2.epa.gov/pesticide-science-and-assessing-pesticide-risks/about-water-exposure-models-used-pesticide.*

Based on the Tier 1 Rice Model and Pesticide Root Zone Model Ground Water (PRZM GW), the estimated drinking water concentrations (EDWCs) of clomazone for acute exposures are estimated to be 550 parts per billion (ppb) for surface water and 85.7 ppb for ground water. The EDWCs of clomazone for chronic exposures for non-cancer assessments are estimated to be 550 ppb for surface water and 77.4 ppb for ground water.

Modeled estimates of drinking water concentrations were directly entered into the dietary exposure model. For both acute and chronic dietary risk assessment, the water concentration value of 550 ppb was used to assess the contribution to drinking water.

3. *From non-dietary exposure.* The term ''residential exposure'' is used in this document to refer to non-occupational, non-dietary exposure (*e.g.,* for lawn and garden pest control, indoor pest control, termiticides, and flea and tick control on pets). Clomazone is not registered for any specific use patterns that would result in residential exposure.

4. *Cumulative effects from substances with a common mechanism of toxicity.* Section 408(b)(2)(D)(v) of FFDCA requires that, when considering whether to establish, modify, or revoke a tolerance, the Agency consider ''available information'' concerning the cumulative effects of a particular pesticide's residues and ''other

substances that have a common mechanism of toxicity.''

EPA has not found clomazone to share a common mechanism of toxicity with any other substances, and clomazone does not appear to produce a toxic metabolite produced by other substances. For the purposes of this tolerance action, therefore, EPA has assumed that clomazone does not have a common mechanism of toxicity with other substances. For information regarding EPA's efforts to determine which chemicals have a common mechanism of toxicity and to evaluate the cumulative effects of such chemicals, see EPA's Web site at *http://www2.epa.gov/pesticide-science-and-assessing-pesticide-risks/cumulative-assessment-risk-pesticides.*

D. Safety Factor for Infants and Children

1. *In general.* Section 408(b)(2)(C) of FFDCA provides that EPA shall apply an additional tenfold (10X) margin of safety for infants and children in the case of threshold effects to account for prenatal and postnatal toxicity and the completeness of the database on toxicity and exposure unless EPA determines based on reliable data that a different margin of safety will be safe for infants and children. This additional margin of safety is commonly referred to as the FQPA Safety Factor (SF). In applying this provision, EPA either retains the default value of 10X, or uses a different additional safety factor when reliable data available to EPA support the choice of a different factor.

2. *Prenatal and postnatal sensitivity.* There was no evidence of increased quantitative or qualitative susceptibility in the prenatal developmental toxicity study in rabbits or in the reproductive toxicity study in rats with clomazone. In the developmental toxicity study in rats, effects in the fetuses (delayed ossification) occurred at doses that produced maternal effects (chromorhinorrhea and abdominogenital staining) but were qualitatively more severe. Although qualitative susceptibility was observed in the developmental toxicity study in rats, the concern is low since there are clear NOAELs and LOAELs in this study and the NOAEL in the study was used as the POD for assessment of acute risk. EPA's assessment of acute risk is therefore protective of any developmental effects.

3. *Conclusion.* EPA has determined that reliable data show the safety of infants and children would be adequately protected if the FQPA SF were reduced to 1X. That decision is based on the following findings:

i. The toxicity database for clomazone is complete.

ii. There is no indication that clomazone is a neurotoxic chemical and there is no need for additional UFs to account for neurotoxicity.

iii. For the reasons described above in Unit III.D.2., there is low concern regarding increased susceptibility in the young from exposure to clomazone.

iv. There are no residual uncertainties identified in the exposure databases. The dietary food exposure assessments were performed based on 100 PCT and tolerance-level residues. EPA made conservative (protective) assumptions in the ground and surface water modeling used to assess exposure to clomazone in drinking water. There are no existing or pending residential uses. Therefore, these assessments will not underestimate the exposure and risks posed by clomazone.

E. Aggregate Risks and Determination of Safety

EPA determines whether acute and chronic dietary pesticide exposures are safe by comparing aggregate exposure estimates to the acute PAD (aPAD) and chronic PAD (cPAD). Short-, intermediate-, and chronic-term risks are evaluated by comparing the estimated aggregate food, water, and residential exposure to the appropriate PODs to ensure that an adequate MOE exists.

1. *Acute risk.* An acute aggregate risk assessment takes into account acute exposure estimates from dietary consumption of food and drinking water. No adverse effect resulting from a single oral exposure was identified and no acute dietary endpoint was selected for the general population including infants and children. Therefore, clomazone is not expected to pose an acute risk to these groups.

However, an acute endpoint was identified for females 13 to 49 years old due to effects observed in fetuses. Using the exposure assumptions discussed in this unit for acute exposure, the acute dietary exposure from food and water to clomazone will occupy 3.0% of the aPAD for females 13 to 49 years old.

2. *Chronic risk.* Using the exposure assumptions described in this unit for chronic exposure, EPA has concluded that chronic exposure to clomazone from food and water will utilize 3.6% of the cPAD for all infants <1 year old, the population group receiving the greatest exposure. There are no residential uses for clomazone.

3. *Short- and intermediate-term risk.* Short- and intermediate-term aggregate exposures take into account short- and intermediate-term residential exposure plus chronic exposure to food and water (considered to be a background exposure level).

Clomazone is not registered for any use patterns that would result in short- or intermediate-term residential exposure. Because there are no short- or intermediate-term residential exposures and chronic dietary exposure has already been assessed under the appropriately protective cPAD (which is at least as protective as the POD used to assess short- and intermediate-term risks), no further assessment of short- and intermediate-term risks are necessary.

4. *Aggregate cancer risk for U.S. population.* Based on the lack of evidence of carcinogenicity in rodent carcinogenicity studies, along with the data summarized in Unit III.A., clomazone is not expected to pose a cancer risk to humans.

5. *Determination of safety.* Based on these risk assessments, EPA concludes that there is a reasonable certainty that no harm will result to the general population, or to infants and children from aggregate exposure to clomazone residues.

IV. Other Considerations

A. Analytical Enforcement Methodology

Adequate enforcement methodology (gas chromatography (GC) using a nitrogen phosphorus detector (NPD) or mass spectrometer (MS)) is available to enforce the tolerance expression.

The method may be requested from: Chief, Analytical Chemistry Branch, Environmental Science Center, 701 Mapes Rd., Ft. Meade, MD 20755–5350; telephone number: (410) 305–2905; email address: *residuemethods@epa.gov.*

B. International Residue Limits

In making its tolerance decisions, EPA seeks to harmonize U.S. tolerances with international standards whenever possible, consistent with U.S. food safety standards and agricultural practices. EPA considers the international maximum residue limits (MRLs) established by the Codex Alimentarius Commission (Codex), as required by FFDCA section 408(b)(4). The Codex Alimentarius is a joint United Nations Food and Agriculture Organization/World Health Organization food standards program, and it is recognized as an international food safety standards-setting organization in trade agreements to which the United States is a party. EPA may establish a tolerance that is different from a Codex MRL; however, FFDCA section 408(b)(4) requires that

EPA explain the reasons for departing from the Codex level.

The Codex has not established any MRLs for clomazone.

V. Conclusion

Therefore, tolerances are established for residues of clomazone, 2-[(2-chlorophenyl)methyl]-4,4-dimethyl-3-isoxazolidinone, in or on asparagus at 0.05 ppm and soybean, vegetable, succulent at 0.05 ppm.

VI. Statutory and Executive Order Reviews

This action establishes tolerances under FFDCA section 408(d) in response to a petition submitted to the Agency. The Office of Management and Budget (OMB) has exempted these types of actions from review under Executive Order 12866, entitled ''Regulatory Planning and Review'' (58 FR 51735, October 4, 1993). Because this action has been exempted from review under Executive Order 12866, this action is not subject to Executive Order 13211, entitled ''Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use'' (66 FR 28355, May 22, 2001) or Executive Order 13045, entitled ''Protection of Children from Environmental Health Risks and Safety Risks'' (62 FR 19885, April 23, 1997). This action does not contain any information collections subject to OMB approval under the Paperwork Reduction Act (PRA) (44 U.S.C. 3501 *et seq.*), nor does it require any special considerations under Executive Order 12898, entitled ''Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations'' (59 FR 7629, February 16, 1994).

Since tolerances and exemptions that are established on the basis of a petition under FFDCA section 408(d), such as the tolerance in this final rule, do not require the issuance of a proposed rule, the requirements of the Regulatory Flexibility Act (RFA) (5 U.S.C. 601 *et seq.*), do not apply.

This action directly regulates growers, food processors, food handlers, and food retailers, not States or tribes, nor does this action alter the relationships or distribution of power and responsibilities established by Congress in the preemption provisions of FFDCA section 408(n)(4). As such, the Agency has determined that this action will not have a substantial direct effect on States or tribal governments, on the relationship between the national government and the States or tribal governments, or on the distribution of power and responsibilities among the various levels of government or between the Federal Government and Indian tribes. Thus, the Agency has determined that Executive Order 13132, entitled ''Federalism'' (64 FR 43255, August 10, 1999) and Executive Order 13175, entitled ''Consultation and Coordination with Indian Tribal Governments'' (65 FR 67249, November 9, 2000) do not apply to this action. In addition, this action does not impose any enforceable duty or contain any unfunded mandate as described under Title II of the Unfunded Mandates Reform Act (UMRA) (2 U.S.C. 1501 *et seq.*).

This action does not involve any technical standards that would require Agency consideration of voluntary consensus standards pursuant to section 12(d) of the National Technology Transfer and Advancement Act (NTTAA) (15 U.S.C. 272 note).

VII. Congressional Review Act

Pursuant to the Congressional Review Act (5 U.S.C. 801 *et seq.*), 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**. This action is not a ''major rule'' as defined by 5 U.S.C. 804(2).

List of Subjects in 40 CFR Part 180

Environmental protection, Administrative practice and procedure, Agricultural commodities, Pesticides and pests, Reporting and recordkeeping requirements.

Dated: October 21, 2016.

Michael Goodis,

Acting Director, Registration Division, Office of Pesticide Programs.

Therefore, 40 CFR chapter I is amended as follows:

PART 180—[AMENDED]

■ 1. The authority citation for part 180 continues to read as follows:

Authority: 21 U.S.C. 321(q), 346a and 371.

■ 2. In § 180.425, add alphabetically the commodities ''Asparagus'' and ''Soybean, vegetable, succulent'' to the table in paragraph (a) to read as follows:

§ 180.425 Clomazone; tolerances for residues.

(a) * * *

Commodity	Parts per million
Asparagus	0.05
* * * * *	*
Soybean, vegetable, succulent	0.05
* * * * *	*

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[FR Doc. 2016–27201 Filed 11–9–16; 8:45 am]

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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 180

[EPA–HQ–OPP–2015–0722; FRL–9953–71]

Prothioconazole; Pesticide Tolerances

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This regulation establishes tolerances for residues of prothioconazole in or on cotton gin byproducts and the cottonseed subgroup 20C. Bayer CropScience requested these tolerances under the Federal Food, Drug, and Cosmetic Act (FFDCA).

DATES: This regulation is effective November 10, 2016. Objections and requests for hearings must be received on or before January 9, 2017, and must be filed in accordance with the instructions provided in 40 CFR part 178 (see also Unit I.C. of the **SUPPLEMENTARY INFORMATION**).

ADDRESSES: The docket for this action, identified by docket identification (ID) number EPA–HQ–OPP–2015–0722, is available at *http://www.regulations.gov* or at the Office of Pesticide Programs Regulatory Public Docket (OPP Docket) in the Environmental Protection Agency Docket Center (EPA/DC), West William Jefferson Clinton Bldg., Rm. 3334, 1301 Constitution Ave. NW., Washington, DC 20460–0001. 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 OPP Docket is (703) 305–5805. Please review the visitor instructions and additional information about the docket available at *http://www.epa.gov/dockets.*

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SUPPLEMENTARY INFORMATION:

I. General Information

A. Does this action apply to me?

You may be potentially affected by this action if you are an agricultural producer, food manufacturer, or pesticide manufacturer. The following list of North American Industrial Classification System (NAICS) codes is not intended to be exhaustive, but rather provides a guide to help readers determine whether this document applies to them. Potentially affected entities may include:

- Crop production (NAICS code 111).
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B. How can i get electronic access to other related information?

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Under FFDCA section 408(g), 21 U.S.C. 346a, any person may file an objection to any aspect of this regulation and may also request a hearing on those objections. You must file your objection or request a hearing on this regulation in accordance with the instructions provided in 40 CFR part 178. To ensure proper receipt by EPA, you must identify docket ID number EPA–HQ–OPP–2015–0722 in the subject line on the first page of your submission. All objections and requests for a hearing must be in writing, and must be received by the Hearing Clerk on or before January 9, 2017. Addresses for mail and hand delivery of objections and hearing requests are provided in 40 CFR 178.25(b).

In addition to filing an objection or hearing request with the Hearing Clerk as described in 40 CFR part 178, please submit a copy of the filing (excluding any Confidential Business Information (CBI)) for inclusion in the public docket. Information not marked confidential pursuant to 40 CFR part 2 may be disclosed publicly by EPA without prior notice. Submit the non-CBI copy of your objection or hearing request, identified by docket ID number EPA–HQ–OPP–2015–0722, by one of the following methods:

- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the online instructions for submitting comments. Do not submit electronically any information you consider to be CBI or other information whose disclosure is restricted by statute.
- *Mail:* OPP Docket, Environmental Protection Agency Docket Center (EPA/DC), (28221T), 1200 Pennsylvania Ave. NW., Washington, DC 20460–0001.
- *Hand Delivery:* To make special arrangements for hand delivery or delivery of boxed information, please follow the instructions at *http://www.epa.gov/dockets/contacts.html.*

Additional instructions on commenting or visiting the docket, along with more information about dockets generally, is available at *http://www.epa.gov/dockets.*

II. Summary of Petitioned-For Tolerance

In the **Federal Register** of November 25, 2015 (80 FR 73695) (FRL–9937–14), EPA issued a document pursuant to FFDCA section 408(d)(3), 21 U.S.C. 346a(d)(3), announcing the filing of a pesticide petition (PP 5F8381) by Bayer CropScience, P.O. Box 12014, 2 T.W. Alexander Drive, Research Triangle Park, NC. The petition requested that 40 CFR 180.626 be amended by establishing tolerances for residues of the fungicide, prothioconazole in or on cotton, undelinted seed (crop subgroup 20C) at 0.4 parts per million (ppm) and to amend the existing tolerance in or on sugar beet, roots from 0.25 ppm to 0.3 ppm. That document referenced a summary of the petition prepared by Bayer CropScience, the registrant, which is available in the docket, *http://www.regulations.gov.* A comment was received in response to the notice of filing. EPA's response to this comment is discussed in Unit IV.C.

Based upon review of the data supporting the petition, EPA has determined that the sugar beet root tolerance does not need to be increased to 0.30 ppm. The reason for this determination is explained in Unit IV.D.

In the **Federal Register** of August 29, 2016 (81 FR 59165) (FRL–9950–22), EPA issued a document pursuant to FFDCA section 408(d)(3), 21 U.S.C. 346a(d)(3), announcing the filing of a pesticide petition (PP 5F8381) by Bayer CropScience, P.O. Box 12014, 2 T.W. Alexander Drive, Research Triangle Park, NC. The petition requested that 40 CFR 180.626 be amended by establishing tolerances for residues of the fungicide, prothioconazole in or on cotton, gin byproducts at 4.0 ppm. That document referenced a summary of the petition prepared by Bayer CropScience, the registrant, which is available in the docket, *http://www.regulations.gov.* There were no comments received in response to the notice of filing.

III. Aggregate Risk Assessment and Determination of Safety

Section 408(b)(2)(A)(i) of FFDCA allows EPA to establish a tolerance (the legal limit for a pesticide chemical residue in or on a food) only if EPA determines that the tolerance is ''safe.'' Section 408(b)(2)(A)(ii) of FFDCA defines ''safe'' to mean that ''there is a reasonable certainty that no harm will result from aggregate exposure to the pesticide chemical residue, including all anticipated dietary exposures and all other exposures for which there is reliable information.'' This includes exposure through drinking water and in residential settings, but does not include occupational exposure. Section 408(b)(2)(C) of FFDCA requires EPA to give special consideration to exposure of infants and children to the pesticide chemical residue in establishing a tolerance and to ''ensure that there is a reasonable certainty that no harm will result to infants and children from aggregate exposure to the pesticide chemical residue. . . .''

Consistent with FFDCA section 408(b)(2)(D), and the factors specified in FFDCA section 408(b)(2)(D), EPA has reviewed the available scientific data and other relevant information in support of this action. EPA has sufficient data to assess the hazards of and to make a determination on aggregate exposure for prothioconazole including exposure resulting from the tolerances established by this action. EPA's assessment of exposures and risks associated with prothioconazole follows.

A. Toxicological Profile

EPA has evaluated the available toxicity data and considered its validity, completeness, and reliability as well as the relationship of the results of the studies to human risk. EPA has also considered available information concerning the variability of the sensitivities of major identifiable subgroups of consumers, including infants and children.

Prothioconazole degrades into different compounds in different matrices, with prothioconazole-desthio (desthio) being the metabolite and degradate of concern. The target organs of prothioconazole and the desthio metabolite include the liver, kidney, bladder, thyroid and blood. In addition, the chronic studies showed body weight and food consumption changes, and toxicity to the lymphatic and gastrointestinal systems.

Developmental studies show that prothioconazole and its metabolites produce adverse effects including malformations in the conceptus at levels equal to or below maternally toxic levels, particularly those studies conducted using prothioconazole-desthio. Reproduction studies in the rat with prothioconazole and prothioconazole-desthio suggest that these chemicals do not adversely affect reproductive parameters or the offspring except at parentally toxic dose levels. Acute and subchronic neurotoxicity studies, as well as a developmental neurotoxicity study, raise no neurotoxicity concerns. Immunotoxicity data show that prothioconazole is not an immunotoxicant.

The available carcinogenicity and/or chronic studies in the mouse and rat, using both prothioconazole and prothioconazole-desthio, show no increase in tumor incidence and EPA has concluded that prothioconazole and its metabolites are not carcinogenic.

Specific information on the studies received and the nature of the adverse effects caused by prothioconazole as well as the no-observed-adverse-effect-level (NOAEL) and the lowest-observed-adverse-effect-level (LOAEL) from the toxicity studies can be found at *http://www.regulations.gov* in the document titled ''*Prothioconazole: Human Health Risk Assessment for a Proposed Tolerance on Cottonseed Subgroup 20C, a Tolerance Amendment on Sugar Beet Roots, and New Use Requests for Cotton, Sugar Beet, Soybean, and Dried Shelled Pea and Bean*'' on page 32 in docket ID number EPA–HQ–OPP–2015–0722.

B. Toxicological Points of Departure/Levels of Concern

Once a pesticide's toxicological profile is determined, EPA identifies toxicological points of departure (POD) and levels of concern to use in evaluating the risk posed by human exposure to the pesticide. For hazards that have a threshold below which there is no appreciable risk, the toxicological POD is used as the basis for derivation of reference values for risk assessment. PODs are developed based on a careful analysis of the doses in each toxicological study to determine the dose at which no adverse effects are observed (the NOAEL) and the lowest dose at which adverse effects of concern are identified (the LOAEL). Uncertainty/safety factors are used in conjunction with the POD to calculate a safe exposure level—generally referred to as a population-adjusted dose (PAD) or a reference dose (RfD)—and a safe margin of exposure (MOE). For non-threshold risks, the Agency assumes that any amount of exposure will lead to some degree of risk. Thus, the Agency estimates risk in terms of the probability of an occurrence of the adverse effect expected in a lifetime. For more information on the general principles EPA uses in risk characterization and a complete description of the risk assessment process, see *http://www2.epa.gov/pesticide-science-and-assessing-pesticide-risks/assessing-human-health-risk-pesticides.*

A summary of the toxicological endpoints for prothioconazole used for human risk assessment is shown in Table 1. of this unit.

TABLE 1—SUMMARY OF TOXICOLOGICAL DOSES AND ENDPOINTS FOR PROTHIOCONAZOLE FOR USE IN HUMAN HEALTH RISK ASSESSMENT

Exposure/scenario	Point of departure and uncertainty/safety factors	RfD, PAD, LOC for risk assessment	Study and toxicological effects
Acute dietary (Females 13–50 years of age).	NOAEL = 2.0 mg/kg/day UF_A = 10x. UF_H = 10x ..... FQPA SF = 1x	Acute RfD = 0.02 mg/kg/day ..... aPAD = 0.02 mg/kg/day	Developmental Toxicity study in rabbits. LOAEL = 10 mg/kg/day based on structural alterations including malformed vertebral body and ribs, arthrogryposis, and multiple malformations.
Acute dietary (General population including infants and children).	No observed effects could be attributable to a single dose exposure. Therefore, a dose and endpoint were not selected for this exposure scenario.		
Chronic dietary (All populations)	NOAEL = 1.1 mg/kg/day UF_A = 10x. UF_H = 10x ..... FQPA SF = 1x	Chronic RfD = 0.01 mg/kg/day ..... cPAD = 0.01 mg/kg/day	Chronic/Carcinogenicity study in rats. LOAEL = 8.0 mg/kg/day based on liver histopathology [hepatocellular vacuolation and fatty change (single cell, centrilobular, and periportal)].
Cancer (Oral, dermal, inhalation) ..	Not likely to be carcinogenic to humans based on the absence of significant tumor increases in two adequate rodent carcinogenicity studies.		

FQPA SF = Food Quality Protection Act Safety Factor. LOAEL = lowest-observed-adverse-effect-level. LOC = level of concern. mg/kg/day = milligram/kilogram/day.

MOE = margin of exposure. NOAEL = no-observed-adverse-effect-level. PAD = population adjusted dose (a = acute, c = chronic). RfD = reference dose. UF = uncertainty factor. UF_A = extrapolation from animal to human (interspecies). UF_H = potential variation in sensitivity among members of the human population (intraspecies).

C. Exposure Assessment

1. *Dietary exposure from food and feed uses.* In evaluating dietary exposure to prothioconazole, EPA considered exposure under the petitioned-for tolerances as well as all existing prothioconazole tolerances in 40 CFR 180.626. EPA assessed dietary exposures from prothioconazole in food as follows:

i. *Acute exposure.* Quantitative acute dietary exposure and risk assessments are performed for a food-use pesticide, if a toxicological study has indicated the possibility of an effect of concern occurring as a result of a 1-day or single exposure.

Such effects were identified for prothioconazole for females 13–50 years old. In estimating acute dietary exposure, EPA used food consumption information from the United States Department of Agriculture's National

Health and Nutrition Examination Survey, What We Eat in America, (NHANES/WWEIA; 2003–2008). As to residue levels in food, EPA assumed tolerance-level values for the proposed new uses and existing tolerances on berries and cucurbit vegetables, average field trial residues for all other commodities and empirical processing factors. With respect to sugar beet, the registrant-proposed tolerance value of 0.30 was incorporated in the dietary assessment, however, the Agency is leaving the tolerance at 0.25 ppm. The use of this higher residue level in the dietary assessment will serve as an overestimate of actual exposure to residues in/on sugar beet roots. 100 percent crop treated (PCT) was assumed for all proposed and established commodities.

ii. *Chronic exposure.* In conducting the chronic dietary exposure assessment EPA used the food consumption data from the USDA 2003–2008 NHANES/WWEIA. As to residue levels in food, EPA assumed tolerance-level values for the proposed new uses and existing tolerances on berries and cucurbit vegetables, average field trial residues for all other commodities and empirical processing factors. With respect to sugar beet, the registrant-proposed tolerance value of 0.30 was incorporated in the dietary assessment; however, the Agency is leaving the existing tolerance at 0.25 ppm. The use of this higher residue level in the dietary assessment will serve as an overestimate of actual exposure to residues in/on sugar beet roots. 100 PCT was assumed for all proposed and established commodities.

iii. *Cancer.* Based on the data summarized in Unit III.A., EPA has concluded that prothioconazole does not pose a cancer risk to humans. Therefore, a dietary exposure assessment for the purpose of assessing cancer risk was not conducted.

iv. *Anticipated residue and PCT information.* Section 408(b)(2)(E) of FFDCA authorizes EPA to use available data and information on the anticipated residue levels of pesticide residues in food and the actual levels of pesticide residues that have been measured in food. If EPA relies on such information, EPA must require pursuant to FFDCA section 408(f)(1) that data be provided 5 years after the tolerance is established, modified, or left in effect, demonstrating that the levels in food are not above the levels anticipated. For the present action, EPA will issue such data call-ins as are required by FFDCA section 408(b)(2)(E) and authorized under FFDCA section 408(f)(1). Data will be required to be submitted no later than 5 years from the date of issuance of these tolerances.

2. *Dietary exposure from drinking water.* The Agency used screening level water exposure models in the dietary exposure analysis and risk assessment for prothioconazole in drinking water. These simulation models take into account data on the physical, chemical, and fate/transport characteristics of prothioconazole. Further information regarding EPA drinking water models used in pesticide exposure assessment can be found at *http://www2.epa.gov/pesticide-science-and-assessing-pesticide-risks/about-water-exposure-models-used-pesticide.*

Based on the Pesticide Root Zone Model/Exposure Analysis Modeling System (PRZM/EXAMS) and Pesticide Root Zone Model Ground Water (PRZM GW) models, the estimated drinking water concentrations (EDWCs) of prothioconazole for acute exposures are estimated to be 109 parts per billion (ppb) for surface water and 132 ppb for ground water and for chronic exposures are estimated to be 97 ppb for surface water and 128 ppb for ground water.

Modeled estimates of drinking water concentrations were directly entered into the dietary exposure model. For acute dietary risk assessment, the water concentration value of 132 ppb was used to assess the contribution to drinking water. For chronic dietary risk assessment, the water concentration of value 128 ppb was used to assess the contribution to drinking water.

3. *From non-dietary exposure.* The term ''residential exposure'' is used in this document to refer to non-occupational, non-dietary exposure (*e.g.,* for lawn and garden pest control, indoor pest control, termiticides, and flea and tick control on pets). Prothioconazole is not registered for any specific use patterns that would result in residential exposure.

4. *Cumulative effects from substances with a common mechanism of toxicity.* Section 408(b)(2)(D)(v) of FFDCA requires that, when considering whether to establish, modify, or revoke a tolerance, the Agency consider ''available information'' concerning the cumulative effects of a particular pesticide's residues and ''other substances that have a common mechanism of toxicity.''

Prothioconazole is a member of the triazole-containing class of pesticides. Although conazoles act similarly in plants (fungi) by inhibiting ergosterol biosynthesis, there is not necessarily a relationship between their pesticidal activity and their mechanism of toxicity in mammals. Structural similarities do not constitute a common mechanism of toxicity. Evidence is needed to establish that the chemicals operate by the same, or essentially the same, sequence of major biochemical events in mammals (EPA, 2002). In the case of conazoles, however, a variable pattern of toxicological responses is found. Some are hepatotoxic and hepatocarcinogenic in mice. Some induce thyroid tumors in rats. Some induce developmental, reproductive, and neurological effects in rodents. Furthermore, the conazoles produce a diverse range of biochemical events including altered cholesterol levels, stress responses, and altered DNA methylation. It is not clearly understood whether these biochemical events are directly connected to their toxicological outcomes. Thus, there is currently no evidence to indicate that prothioconazole shares a common mechanism of toxicity with any other conazole pesticide, and EPA is not following a cumulative risk approach for this tolerance action. For information regarding EPA's procedures for cumulating effects from substances found to have a common mechanism of toxicity, see EPA's Web site at *http://www2.epa.gov/pesticide-science-and-assessing-pesticide-risks/cumulative-assessment-risk-pesticides.*

Prothioconazole is a triazole-derived pesticide. This class of compounds can form the common metabolite 1,2,4-triazole and two triazole conjugates (triazolylalanine and triazolylacetic acid). To support existing tolerances and to establish new tolerances for triazole-derivative pesticides, including prothioconazole, EPA conducted a human health risk assessment for exposure to 1,2,4-triazole, triazolylalanine, and triazolylacetic acid resulting from the use of all current and pending uses of any triazole-derived fungicide. The risk assessment is a highly conservative, screening-level evaluation in terms of hazards associated with common metabolites (*e.g.,* use of a maximum combination of uncertainty factors) and potential dietary and non-dietary exposures (*i.e.,* high end estimates of both dietary and non-dietary exposures). The Agency retained a 3X for the LOAEL to NOAEL safety factor when the reproduction study was used. In addition, the Agency retained a 10X for the lack of studies including a developmental neurotoxicity (DNT) study. The assessment includes evaluations of risks for various subgroups, including those comprised of infants and children. The Agency's complete risk assessment is found in the propiconazole reregistration docket at *http://www.regulations.gov,* Docket

Identification (ID) Number EPA–HQ–OPP–2005–0497.

An updated dietary exposure and risk analysis for the common triazole metabolites 1,2,4-triazole (T), triazolylalanine (TA), triazolylacetic acid (TAA), and triazolylpyruvic acid (TP) was completed on April 9, 2015, in association with registration requests for several triazole fungicides, propiconazole, difenoconazole, and flutriafol. That analysis concluded that risk estimates were below the Agency's level of concern for all population groups. The proposed new uses of prothioconazole are not expected to significantly increase the dietary exposure estimates for free triazole or conjugated triazoles. This assessment may be found on *http://www.regulations.gov* by searching for the following title and docket number: ''*Common Triazole Metabolites: Updated Aggregate Human Health Risk Assessment to Address The New Section 3 Registrations For Use of Propiconazole on Tea, Dill, Mustard Greens, Radish, and Watercress; Use of Difenoconazole on Globe Artichoke, Ginseng and Greenhouse Grown Cucumbers and Conversion of the Established Foliar Uses/Tolerances for Stone Fruit and Tree Nut Crop Groups to Fruit, Stone, Group 12–12 and the Nut, Tree, Group 14–12.; and Use of Flutriafol on Hops*'' (located in docket ID number EPA–HQ–OPP–2014–0788).

D. Safety Factor for Infants and Children

1. *In general.* Section 408(b)(2)(C) of FFDCA provides that EPA shall apply an additional tenfold (10X) margin of safety for infants and children in the case of threshold effects to account for prenatal and postnatal toxicity and the completeness of the database on toxicity and exposure unless EPA determines based on reliable data that a different margin of safety will be safe for infants and children. This additional margin of safety is commonly referred to as the FQPA Safety Factor (SF). In applying this provision, EPA either retains the default value of 10X, or uses a different additional safety factor when reliable data available to EPA support the choice of a different factor.

2. *Prenatal and postnatal sensitivity.* There are adequate data in the prothioconazole/prothioconazole-desthio toxicological database to characterize the potential for pre-natal or post-natal risks to infants and children: Two-generation reproduction studies in rats; developmental studies in rats and rabbits; and a DNT study in rats. The effects seen in these studies suggest that offspring are more susceptible: Offspring adverse effects were seen at levels below the LOAELs for maternal toxicity and, in general, were of comparable or greater severity compared to the effects observed in adults. However, clear NOAELs are established for offspring and fetal effects. The most sensitive effects (malformed vertebral body and ribs, anthrogryposis, and other multiple malformations) seen in the fetuses of a rabbit developmental study are established as the toxicity endpoints with a POD of 2 mg/kg/day. This POD is protective all fetal and offspring effects seen in the developmental toxicity and developmental neurotoxicity studies.

3. *Conclusion.* EPA has determined that reliable data show the safety of infants and children would be adequately protected if the FQPA SF were reduced to 1x. That decision is based on the following findings:

i. The toxicity database for prothioconazole is complete.

ii. No neurotoxicity was seen in acute and subchronic neurotoxicity studies and other studies with prothioconazole or prothioconazole-desthio. Although offspring neurotoxicity was found, characterized by peripheral nerve lesions in the developmental neurotoxicity study on prothioconazole-desthio, the increase was seen only in the highest dose group at 105 mg/kg/day. Further, a NOAEL was established for the peripheral nerve lesions and all of the PODs used in the risk assessment were protective of this finding.

iii. Evidence of quantitative and qualitative susceptibility of offspring were observed in the developmental studies. However, basing the POD on the offspring in the most sensitive of these studies provides the needed protection of offspring.

iv. There are no residual uncertainties identified in the exposure databases. The dietary food exposure assessments were performed based on 100 PCT and EPA-recommended tolerance values for all of the proposed uses and existing tolerances on berries and cucurbit vegetables, average field trial residue levels for the remaining uses, and empirical processing factors. EPA made conservative (protective) assumptions in the ground and surface water modeling used to assess exposure to prothioconazole in drinking water. These assessments will not underestimate the exposure and risks posed by prothioconazole.

E. Aggregate Risks and Determination of Safety

EPA determines whether acute and chronic dietary pesticide exposures are safe by comparing aggregate exposure estimates to the acute PAD (aPAD) and chronic PAD (cPAD). For linear cancer risks, EPA calculates the lifetime probability of acquiring cancer given the estimated aggregate exposure. Short-, intermediate-, and chronic-term risks are evaluated by comparing the estimated aggregate food, water, and residential exposure to the appropriate PODs to ensure that an adequate MOE exists.

1. *Acute risk.* Using the exposure assumptions discussed in this unit for acute exposure, the acute dietary exposure from food and water to prothioconazole will occupy 40% of the aPAD for females 13–49 years old, the only population group of concern.

2. *Chronic risk.* Using the exposure assumptions described in this unit for chronic exposure, EPA has concluded that chronic exposure to prothioconazole from food and water will utilize 77% of the cPAD for all infants less than 1 year old, the population group receiving the greatest exposure. There are no residential uses for prothioconazole.

3. *Short- and Intermediate-term risk.* Short- and intermediate-term aggregate exposure takes into account short- and intermediate-term residential exposure plus chronic exposure to food and water (considered to be a background exposure level).

Both short- and intermediate-term adverse effects were identified; however, prothioconazole is not registered for any use patterns that would result in either short- or intermediate-term residential exposure. Short- and intermediate-term risk is assessed based on short- and intermediate-term residential exposure plus chronic dietary exposure. Because there is no short- or intermediate-term residential exposure and chronic dietary exposure has already been assessed under the appropriately protective cPAD (which is at least as protective as the POD used to assess short-term risk), no further assessment of short- or intermediate-term risk is necessary, and EPA relies on the chronic dietary risk assessment for evaluating short- and intermediate-term risk for prothioconazole.

4. *Aggregate cancer risk for U.S. population.* Based on the lack of evidence of carcinogenicity in two adequate rodent carcinogenicity studies, prothioconazole is not expected to pose a cancer risk to humans.

5. *Determination of safety.* Based on these risk assessments, EPA concludes that there is a reasonable certainty that no harm will result to the general population, or to infants and children

from aggregate exposure to prothioconazole residues, including aggregate exposure to residues of the common metabolites of prothioconazole and other related conazole fungicides.

IV. Other Considerations

A. Analytical Enforcement Methodology

Adequate liquid chromatography with tandem mass spectrometry (LC/MS/MS) methods are available for enforcing prothioconazole tolerances in crop and livestock commodities.

The method may be requested from: Chief, Analytical Chemistry Branch, Environmental Science Center, 701 Mapes Rd., Ft. Meade, MD 20755–5350; telephone number: (410) 305–2905; email address: *residuemethods@epa.gov*.

B. International Residue Limits

In making its tolerance decisions, EPA seeks to harmonize U.S. tolerances with international standards whenever possible, consistent with U.S. food safety standards and agricultural practices. EPA considers the international maximum residue limits (MRLs) established by the Codex Alimentarius Commission (Codex), as required by FFDCA section 408(b)(4). The Codex Alimentarius is a joint United Nations Food and Agriculture Organization/World Health Organization food standards program, and it is recognized as an international food safety standards-setting organization in trade agreements to which the United States is a party. EPA may establish a tolerance that is different from a Codex MRL; however, FFDCA section 408(b)(4) requires that EPA explain the reasons for departing from the Codex level.

There are no Codex MRLs established for prothioconazole in or on cotton.

The Codex has established MRLs for prothioconazole in or on sugar beet roots at 0.3 ppm. This MRL is different than the tolerances established for prothioconazole in the United States. The U.S. is keeping the tolerance previously established in or on beet, sugar, roots at 0.25 ppm based on an evaluation of the residue data and in order to remain harmonized with Canada. The registrant, Bayer CropScience, has indicated their wish is to harmonize with Canada. Bayer cited data from the International Trade Macro Analysis Branch within the Economic Indicators Division of the U.S. Census Bureau, indicating that Canada and Mexico are the largest trade partners for U.S. exports of processed and refined sugar beets. Therefore, it would be more beneficial for U.S. growers if the U.S. tolerance is harmonized with Canada instead of Codex.

C. Response to Comments

A comment was submitted by the Center for Food Safety and was primarily concerned about EPA's consideration of the impacts of prothioconazole on the environment, pollinators, and endangered species. This comment is not relevant to the Agency's evaluation of safety of the prothioconazole tolerances under section 408 of the FFDCA, which requires the Agency to evaluate the potential harms to human health, not effects on the environment.

D. Revisions to Petitioned-For Tolerances

Based on the review of the sugar beet residue data, EPA has determined that increasing the existing tolerance in or on beet, sugar, roots from 0.25 ppm to 0.30 ppm is not necessary, and therefore the sugar beet root tolerance will remain at 0.25 ppm. The registrant has indicated that they support this conclusion.

V. Conclusion

Therefore, tolerances are established for residues of prothioconazole in or on cotton gin byproducts at 4.0 ppm and the cottonseed subgroup 20C at 0.4 ppm.

VI. Statutory and Executive Order Reviews

This action establishes tolerances under FFDCA section 408(d) in response to a petition submitted to the Agency. The Office of Management and Budget (OMB) has exempted these types of actions from review under Executive Order 12866, entitled ''Regulatory Planning and Review'' (58 FR 51735, October 4, 1993). Because this action has been exempted from review under Executive Order 12866, this action is not subject to Executive Order 13211, entitled ''Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use'' (66 FR 28355, May 22, 2001) or Executive Order 13045, entitled ''Protection of Children from Environmental Health Risks and Safety Risks'' (62 FR 19885, April 23, 1997). This action does not contain any information collections subject to OMB approval under the Paperwork Reduction Act (PRA) (44 U.S.C. 3501 *et seq.*), nor does it require any special considerations under Executive Order 12898, entitled ''Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations'' (59 FR 7629, February 16, 1994).

Since tolerances and exemptions that are established on the basis of a petition under FFDCA section 408(d), such as the tolerance in this final rule, do not require the issuance of a proposed rule, the requirements of the Regulatory Flexibility Act (RFA) (5 U.S.C. 601 *et seq.*), do not apply.

This action directly regulates growers, food processors, food handlers, and food retailers, not States or tribes, nor does this action alter the relationships or distribution of power and responsibilities established by Congress in the preemption provisions of FFDCA section 408(n)(4). As such, the Agency has determined that this action will not have a substantial direct effect on States or tribal governments, on the relationship between the national government and the States or tribal governments, or on the distribution of power and responsibilities among the various levels of government or between the Federal Government and Indian tribes. Thus, the Agency has determined that Executive Order 13132, entitled ''Federalism'' (64 FR 43255, August 10, 1999) and Executive Order 13175, entitled ''Consultation and Coordination with Indian Tribal Governments'' (65 FR 67249, November 9, 2000) do not apply to this action. In addition, this action does not impose any enforceable duty or contain any unfunded mandate as described under Title II of the Unfunded Mandates Reform Act (UMRA) (2 U.S.C. 1501 *et seq.*).

This action does not involve any technical standards that would require Agency consideration of voluntary consensus standards pursuant to section 12(d) of the National Technology Transfer and Advancement Act (NTTAA) (15 U.S.C. 272 note).

VII. Congressional Review Act

Pursuant to the Congressional Review Act (5 U.S.C. 801 *et seq.*), 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**. This action is not a ''major rule'' as defined by 5 U.S.C. 804(2).

List of Subjects in 40 CFR Part 180

Environmental protection, Administrative practice and procedure, Agricultural commodities, Pesticides and pests, Reporting and recordkeeping requirements.

Dated: November 2, 2016.

Michael Goodis,

Acting Director, Registration Division, Office of Pesticide Programs.

Therefore, 40 CFR chapter I is amended as follows:

PART 180—[AMENDED]

■ 1. The authority citation for part 180 continues to read as follows:

Authority: 21 U.S.C. 321(q), 346a and 371.

■ 2. In § 180.626, add alphabetically the commodities ''Cotton, gin byproducts'' and ''Cottonseed subgroup 20C'' to the table in paragraph (a)(1) to read as follows:

§ 180.626 Prothioconazole; tolerances for residues.

(a) * * *

(1) * * *

Commodity	Parts per million
* * * * *	
Cotton, gin byproducts	4.0
Cottonseed subgroup 20C ...	0.4
* * * * *	

* * * * *

[FR Doc. 2016–27206 Filed 11–9–16; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 180

[EPA–HQ–OPP–2015–0655; FRL–9953–82]

2-Pyrrolidinone, 1-butyl-; Exemption From the Requirement of a Tolerance

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This regulation establishes an exemption from the requirement of a tolerance for residues of 2-pyrrolidinone, 1-butyl- (CAS Reg. No. 3470–98–2) when used as an inert ingredient (solvent/cosolvent) in pesticide formulations applied to growing crops only at a concentration not to exceed 30% by weight under EPA regulations. SciReg. Inc. on behalf of Taminco U.S., Inc. a subsidiary of Eastman Chemical Company submitted a petition to EPA under the Federal Food, Drug, and Cosmetic Act (FFDCA), requesting the establishment of an exemption from the requirement of a tolerance. This rule eliminates the need to establish a maximum permissible level for residues of 2-pyrrolidinone, 1-butyl- when used in accordance with the regulations.

DATES: This regulation is effective November 10, 2016. Objections and requests for hearings must be received on or before January 9, 2017, and must be filed in accordance with the instructions provided in 40 CFR part 178 (see also Unit I.C. of the **SUPPLEMENTARY INFORMATION**).

ADDRESSES: The docket for this action, identified by docket identification (ID) number EPA–HQ–OPP–2015–0655, is available at *http://www.regulations.gov* or at the Office of Pesticide Programs Regulatory Public Docket (OPP Docket) in the Environmental Protection Agency Docket Center (EPA/DC), West William Jefferson Clinton Bldg., Rm. 3334, 1301 Constitution Ave. NW., Washington, DC 20460–0001. 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 OPP Docket is (703) 305–5805. Please review the visitor instructions and additional information about the docket available at *http://www.epa.gov/dockets.*

FOR FURTHER INFORMATION CONTACT: Michael Goodis, Registration Division (7505P), Office of Pesticide Programs, Environmental Protection Agency, 1200 Pennsylvania Ave. NW., Washington, DC 20460–0001; main telephone number: (703) 305–7090; email address: *RDFRNotices@epa.gov.*

SUPPLEMENTARY INFORMATION:

I. General Information

A. Does this action apply to me?

You may be potentially affected by this action if you are an agricultural producer, food manufacturer, or pesticide manufacturer. The following list of North American Industrial Classification System (NAICS) codes is not intended to be exhaustive, but rather provides a guide to help readers determine whether this document applies to them. Potentially affected entities may include:

- Crop production (NAICS code 111).
- Animal production (NAICS code 112).
- Food manufacturing (NAICS code 311).
- Pesticide manufacturing (NAICS code 32532).

B. How can I get electronic access to other related information?

You may access a frequently updated electronic version of 40 CFR part 180 through the Government Printing Office's e-CFR site at *http://www.ecfr.gov/cgi-bin/text-idx?&c=ecfr&tpl=/ecfrbrowse/Title40/40tab_02.tpl.*

C. How can I file an objection or hearing request?

Under FFDCA section 408(g), 21 U.S.C. 346a, any person may file an objection to any aspect of this regulation and may also request a hearing on those objections. You must file your objection or request a hearing on this regulation in accordance with the instructions provided in 40 CFR part 178. To ensure proper receipt by EPA, you must identify docket ID number EPA–HQ–OPP–2015–0655 in the subject line on the first page of your submission. All objections and requests for a hearing must be in writing, and must be received by the Hearing Clerk on or before January 9, 2017. Addresses for mail and hand delivery of objections and hearing requests are provided in 40 CFR 178.25(b).

In addition to filing an objection or hearing request with the Hearing Clerk as described in 40 CFR part 178, please submit a copy of the filing (excluding any Confidential Business Information (CBI)) for inclusion in the public docket. Information not marked confidential pursuant to 40 CFR part 2 may be disclosed publicly by EPA without prior notice. Submit the non-CBI copy of your objection or hearing request, identified by docket ID number EPA–HQ–OPP–2015–0655, by one of the following methods:

- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the online instructions for submitting comments. Do not submit electronically any information you consider to be CBI or other information whose disclosure is restricted by statute.
- *Mail:* OPP Docket, Environmental Protection Agency Docket Center (EPA/DC), (28221T), 1200 Pennsylvania Ave. NW., Washington, DC 20460–0001.
- *Hand Delivery:* To make special arrangements for hand delivery or delivery of boxed information, please follow the instructions at *http://www.epa.gov/dockets/contacts.html.* Additional instructions on commenting or visiting the docket, along with more information about dockets generally, is available at *http://www.epa.gov/dockets.*

II. Petition for Exemption

In the **Federal Register** of October 21, 2015 (80 FR 63731) (FRL–9935–29), EPA issued a document pursuant to FFDCA section 408, 21 U.S.C. 346a, announcing the filing of a pesticide petition (PP IN–10854) by SciReg Inc. (12733 Director's Loop, Woodbridge, VA 22192) on behalf of Taminco U.S., Inc.

a subsidiary of Eastman Chemical Company (Two Windsor Plaza, Suite 400, 7540 Windsor Drive, Allentown, PA 18195). The petition requested that 40 CFR 180.920 be amended by establishing an exemption from the requirement of a tolerance for residues of 2-pyrrolidinone, 1-butyl- (CAS Reg. No. 3470–98–2), when used as an inert ingredient (solvent/cosolvent) in pesticide formulations applied to growing crops only. That document referenced a summary of the petition prepared by SciReg. Inc. on behalf of Taminco U.S., Inc., the petitioner, which is available in the docket, *http://www.regulations.gov.* No relevant comments were received on the notice of filing.

Based upon review of the data supporting the petition, EPA has limited the concentration of 2-pyrrolidinone, 1-butyl- in final pesticide formulation not to exceed 30% w/w. This limitation is based on the Agency's risk assessment which can be found at *http://www.regulations.gov in document* Human Health Risk Assessment and Ecological Effects Assessment to Support Proposed Exemption from the Requirement of a Tolerance When Used as an Inert Ingredient in Pesticide Formulations *in docket ID number* EPA–HQ–OPP–2015–0655.

III. Inert Ingredient Definition

Inert ingredients are all ingredients that are not active ingredients as defined in 40 CFR 153.125 and include, but are not limited to, the following types of ingredients (except when they have a pesticidal efficacy of their own): Solvents such as alcohols and hydrocarbons; surfactants such as polyoxyethylene polymers and fatty acids; carriers such as clay and diatomaceous earth; thickeners such as carrageenan and modified cellulose; wetting, spreading, and dispersing agents; propellants in aerosol dispensers; microencapsulating agents; and emulsifiers. The term ''inert'' is not intended to imply nontoxicity; the ingredient may or may not be chemically active. Generally, EPA has exempted inert ingredients from the requirement of a tolerance based on the low toxicity of the individual inert ingredients.

IV. Aggregate Risk Assessment and Determination of Safety

Section 408(c)(2)(A)(i) of FFDCA allows EPA to establish an exemption from the requirement for a tolerance (the legal limit for a pesticide chemical residue in or on a food) only if EPA determines that the tolerance is ''safe.'' Section 408(b)(2)(A)(ii) of FFDCA defines ''safe'' to mean that ''there is a reasonable certainty that no harm will result from aggregate exposure to the pesticide chemical residue, including all anticipated dietary exposures and all other exposures for which there is reliable information.'' This includes exposure through drinking water and in residential settings, but does not include occupational exposure. Section 408(b)(2)(C) of FFDCA requires EPA to give special consideration to exposure of infants and children to the pesticide chemical residue in establishing a tolerance and to ''ensure that there is a reasonable certainty that no harm will result to infants and children from aggregate exposure to the pesticide chemical residue. . . .''

EPA establishes exemptions from the requirement of a tolerance only in those cases where it can be clearly demonstrated that the risks from aggregate exposure to pesticide chemical residues under reasonably foreseeable circumstances will pose no appreciable risks to human health. In order to determine the risks from aggregate exposure to pesticide inert ingredients, the Agency considers the toxicity of the inert in conjunction with possible exposure to residues of the inert ingredient through food, drinking water, and through other exposures that occur as a result of pesticide use in residential settings. If EPA is able to determine that a finite tolerance is not necessary to ensure that there is a reasonable certainty that no harm will result from aggregate exposure to the inert ingredient, an exemption from the requirement of a tolerance may be established.

Consistent with FFDCA section 408(c)(2)(A), and the factors specified in FFDCA section 408(c)(2)(B), EPA has reviewed the available scientific data and other relevant information in support of this action. EPA has sufficient data to assess the hazards of and to make a determination on aggregate exposure for 2-pyrrolidinone, 1-butyl- including exposure resulting from the exemption established by this action. EPA's assessment of exposures and risks associated with 2-pyrrolidinone, 1-butyl- follows.

A. Toxicological Profile

EPA has evaluated the available toxicity data and considered their validity, completeness, and reliability as well as the relationship of the results of the studies to human risk. EPA has also considered available information concerning the variability of the sensitivities of major identifiable subgroups of consumers, including infants and children. Specific information on the studies received and the nature of the adverse effects caused by 2-pyrrolidinone, 1-butyl- as well as the no-observed-adverse-effect-level (NOAEL) and the lowest-observed-adverse-effect-level (LOAEL) from the toxicity studies are discussed in this unit.

The oral LD_{50} for 2-pyrrolidinone, 1-butyl- in the rat is greater than 300 mg/kg. The dermal LD_{50} in the rat is > 2,000 mg/kg. It is moderately irritating to the eye of New Zealand White rabbits. It is slightly irritating to the skin of New Zealand White rabbits. It is not a skin sensitizer in mice in the local lymph node assay.

A 90-day subchronic oral toxicity study was conducted with Wistar rats exposed to 2-pyrrolidinone, 1-butyl- via gavage dose of 0, 10, 100, and 500 mg/kg/day, according to OECD Test Guideline 408. The following effects were considered to be treatment-related and adaptive in nature and, therefore, not adverse:

1. The microscopic liver changes in animals of either sex treated with 500 mg/kg/day and males treated with 100 mg/kg/day; however, these changes were not associated with blood chemistry changes. Therefore they were considered as an adaptive response.

2. The microscopic changes in the adrenals of males treated with 500 and 100 mg/kg/day and the microscopic thymus changes were not associated with any changes in the organ weights, therefore they were not considered as adverse effects. Minor changes in the kidney weights were not associated with any clinical chemistry changes or treatment related histopathological findings; therefore, it was not considered adverse. The NOAEL is 500 mg/kg/day.

A prenatal development toxicity study was conducted with 2-pyrrolidinone, 1-butyl-, in accordance with OECD Test Guideline 414 using Pregnant Crl:CD(SD) rats exposed to the test item at concentrations of 0, 5, 50, or 500 mg/kg/day by oral gavage. Maternal toxicity was manifested as decreased food consumption and weight loss on days 6 to 19 of gestation at a dose level of 500 mg/kg/day. Developmental toxicity was manifested as decreased fetal weight in female fetuses at the same dose as maternal toxicity, 500 mg/kg/day. There was no evidence of fetal susceptibility. The NOAEL for developmental toxicity of 2-pyrrolidinone, 1-butyl- was determined to be 50 mg/kg/day.

Since there is a wide dose spread in the developmental toxicity study in rats, a benchmark dose (BMD) modeling was conducted using decreased fetal weight

as an adverse effect. The BMD value is 306 mg/kg/day and the average BMDL is 201 mg/kg/day for a 5% response in decreased fetal body weight.

Carcinogenicity data are not available for 2-pyrrolidinone, 1-butyl-. In the 90-day toxicity study, the liver, kidney, thymus, and adrenals were target organs, however, they were considered as adaptive response at the dose levels tested. Evaluation of the database for N-methylpyrrolidone (NMP) shows similar target organ toxicity as 2-pyrrolidinone, 1-butyl- (structurally related chemicals differing only in carbon chain length (1 vs 4 carbon chain length)) and 1-ethylpyrrolidin-2-one (NEP) (2 carbon chain length), as both chemicals are considered suitable surrogates for evaluation. Neither 2-pyrrolidinone, 1-butyl-, N-methylpyrrolidone, nor 1-ethylpyrrolidin-2-one was found to be genotoxic or mutagenic in a number of assays. In carcinogenicity studies, N-methylpyrrolidone was not carcinogenic in two-year rat studies by the inhalation and dietary routes of exposure. An increased incidence of liver adenomas and carcinomas was seen in mice exposed to a dietary level of N-methylpyrrolidone exceeding 1,000 mg/kg/day for 18 months. However, based on the lack of mutagenicity or genotoxicity and the similarity of 2-pyrrolidinone, 1-butyl- to n-methylpyrrolidone, it can be concluded that 2-pyrrolidinone, 1-butyl- should not be considered as potentially carcinogenic at doses below the limit dose of 1,000 mg/kg/day.

The mutagenic potential of 2-pyrrolidinone, 1-butyl- was assessed in the *Salmonella typhimurium* reverse mutation assay, mammalian cell gene mutation and micronucleus tests. 2-Pyrrolidinone, 1-butyl- was negative in all assays. Therefore, 2-pyrrolidinone, 1-butyl- is not considered mutagenic nor clastogenic.

There were no studies/data directly related to the possible neurotoxicity of 2-pyrrolidinone, 1-butyl. However, evidence of potential neurotoxicity was not observed in functional observation battery (FOB) performed in the 90-day oral toxicity study in the rat. Therefore, pyrrolidinone, 1-butyl is not expected to be neurotoxic.

There were no studies/data directly related to the immunotoxicity of 2-pyrrolidinone, 1-butyl. Thymic atrophy was observed at >100 mg/kg/day in rats treated with 2-pyrrolidinone, 1-butyl for 90 days via gavage. However, microscopic changes in thymus were considered as an adaptive response and not as an adverse effect.

There were no studies/data directly related to the metabolism, of 2-pyrrolidinone, 1-butyl.

B. Toxicological Points of Departure/Levels of Concern

Once a pesticide's toxicological profile is determined, EPA identifies toxicological points of departure (POD) and levels of concern to use in evaluating the risk posed by human exposure to the pesticide. For hazards that have a threshold below which there is no appreciable risk, the toxicological POD is used as the basis for derivation of reference values for risk assessment. PODs are developed based on a careful analysis of the doses in each toxicological study to determine the dose at which no adverse effects are observed (the NOAEL) and the lowest dose at which adverse effects of concern are identified (the LOAEL). Uncertainty/safety factors are used in conjunction with the POD to calculate a safe exposure level—generally referred to as a population-adjusted dose (PAD) or a reference dose (RfD)—and a safe margin of exposure (MOE). For non-threshold risks, the Agency assumes that any amount of exposure will lead to some degree of risk. Thus, the Agency estimates risk in terms of the probability of an occurrence of the adverse effect expected in a lifetime. For more information on the general principles EPA uses in risk characterization and a complete description of the risk assessment process, see *http://www.epa.gov/pesticides/factsheets/riskassess.htm.*

For purposes of risk assessment, the Agency utilizes the toxicity point of departure identified in the developmental toxicity study in rats for chronic dietary assessment, residential exposure assessment and all dermal and inhalation exposure durations. Since there was a large dose spread, a benchmark dose modeling (BMD) assessment was conducted. The average benchmark model lower confidence limit (BMDL) is 201 mg/kg/day for a 5% response which was based on a 5% decreased fetal body weight. The BMDL of 201 mg/kg/day is used as a point departure for the risk assessment. An uncertainty factor of 10X is applied for interspecies extrapolation and an uncertainty factor of 10X is applied for intraspecies variation. The Food Quality Protection Act factor is reduced to 1X. Therefore, the Agency's level of concern is for Margins of Exposure (MOE) less than 100. No endpoint of concern was identified for acute dietary assessment in the database. Although there was a decrease in body weights in maternal animals on GD7 in the developmental toxicity study in rats, this effect is not considered relevant for acute dietary exposure assessment since the body weights returned to normal on GD8. A cancer risk assessment was not conducted because the Agency concluded that 2-pyrrolidinone, 1-butyl is unlikely to be carcinogenic at the anticipated dietary exposure levels. Dermal and inhalation absorption is assumed 100% of the oral equivalent dose.

C. Exposure Assessment

1. *Dietary exposure from food and feed uses.* In evaluating dietary exposure to 2-pyrrolidinone, 1-butyl-, EPA considered exposure under the proposed exemption from the requirement of a tolerance. EPA assessed dietary exposures from 2-pyrrolidinone, 1-butyl- in food as follows:

Dietary exposure (food and drinking water) to 2-pyrrolidinone, 1-butyl- can occur following ingestion of foods with residues from treated crops. Because no adverse effects attributable to a single exposure of 2-pyrrolidinone, 1-butyl- are seen in the toxicity databases, an acute dietary risk assessment is not necessary. For the chronic dietary risk assessment, EPA used the Dietary Exposure Evaluation Model software with the Food Commodity Intake Database (DEEM–FCID™, Version 3.16, and food consumption information from the U.S. Department of Agriculture's (USDA's) 2003–2008 National Health and Nutrition Examination Survey, What We Eat in America (NHANES/WWEIA). One hundred percent crop treated was assumed, default processing factors, and tolerance-level residues for all foods and use limitations of not more than 30% by weight of 2-pyrrolidinone, 1-butyl- in pesticide formulations applied to food.

2. *Dietary exposure from drinking water.* For the purpose of the screening-level dietary risk assessment to support this request for an exemption from the requirement of a tolerance for residues of 2-pyrrolidinone, 1-butyl- a conservative drinking water concentration value of 100 ppb based on screening-level modeling was used to assess the contribution to drinking water for the chronic dietary risk assessment. This value was directly entered into the dietary exposure model.

3. *From non-dietary exposure.* The term ''residential exposure'' is used in this document to refer to non-occupational, non-dietary exposure (*e.g.,* textiles (clothing and diapers), carpets, swimming pools, and hard surface disinfection on walls, floors, tables).

2-Pyrrolidinone, 1-butyl- may be used as an inert ingredient in products that are registered for specific uses that may result in residential exposure, such as pesticides used in and around the home. The Agency conducted a screening level assessment to represent worst-case residential exposure by assessing 2-pyrrolidinone, 1-butyl- in pesticide formulations (Outdoor Scenarios) and in disinfectant-type uses (Indoor Scenarios).

4. *Cumulative effects from substances with a common mechanism of toxicity.* Section 408(b)(2)(D)(v) of FFDCA requires that, when considering whether to establish, modify, or revoke a tolerance, the Agency consider ''available information'' concerning the cumulative effects of a particular pesticide's residues and ''other substances that have a common mechanism of toxicity.''

EPA has not found 2-pyrrolidinone, 1-butyl- to share a common mechanism of toxicity with any other substances, and 2-pyrrolidinone, 1-butyl do not appear to produce a toxic metabolite produced by other substances. For the purposes of this tolerance action, therefore, EPA has assumed that 2-pyrrolidinone, 1-butyl- does not have a common mechanism of toxicity with other substances. For information regarding EPA's efforts to determine which chemicals have a common mechanism of toxicity and to evaluate the cumulative effects of such chemicals, see EPA's Web site at *http://www.epa.gov/pesticides/cumulative.*

D. Safety Factor for Infants and Children

1. *In general.* Section 408(b)(2)(C) of FFDCA provides that EPA shall apply an additional tenfold (10X) margin of safety for infants and children in the case of threshold effects to account for prenatal and postnatal toxicity and the completeness of the database on toxicity and exposure unless EPA determines based on reliable data that a different margin of safety will be safe for infants and children. This additional margin of safety is commonly referred to as the FQPA Safety Factor (SF). In applying this provision, EPA either retains the default value of 10X, or uses a different additional safety factor when reliable data available to EPA support the choice of a different factor.

2. *Prenatal and postnatal sensitivity.* A developmental toxicity study in rats was available with 2-pyrrolidinone, 1-butyl. Fetal susceptibility was not observed. Maternal and developmental toxicity were observed at the same dose, 500 mg/kg/day, the highest dose tested.

3. *Conclusion.* EPA has determined that reliable data show the safety of infants and children would be adequately protected if the FQPA SF were reduced to 1X. That decision is based on the following findings:

i. The toxicity database for 2-pyrrolidinone, 1-butyl is adequate for FQPA assessment. It includes a 90-day rat oral toxicity study with FOB measurements, a prenatal developmental study in rats, acute toxicity studies and mutagenicity studies.

ii. There is no evidence of increased susceptibility in the database. There are no concerns for the lack of 2-generation reproduction study because the male and female reproductive parameters were evaluated in the 90-day study and no evidence of fetal susceptibility was seen in the rat developmental toxicity study in rats.

iii. There were no studies/data directly related to the possible neurotoxicity of 2-pyrrolidinone, 1-butyl. However, no evidence of potential neurotoxicity was observed in the functional observation battery (FOB) performed in the 90-day oral toxicity study in the rat. Therefore, pyrrolidinone, 1-butyl is not expected to be neurotoxic.

iv. There were no studies/data directly related to the immunotoxic potential of 2-pyrrolidinone, 1-butyl. However, no evidence of potential immunotoxicity was observed in the 90-day oral toxicity study in rats. EPA concluded that the immunotoxicity study is not required at this time.

v. The dietary food exposure assessment utilizes proposed tolerance level or higher residues and 100% crop treated (CT) information for all commodities. In addition, a conservative drinking water concentration value of 100 parts per billion (ppb) was used to assess the contribution to drinking water. By using these screening-level assessments, chronic exposures/risks will not be underestimated.

Taking into consideration the available information, EPA concludes the additional 10X FQPA safety factor be reduced to 1X.

E. Aggregate Risks and Determination of Safety

EPA determines whether acute and chronic dietary pesticide exposures are safe by comparing aggregate exposure estimates to the acute PAD (aPAD) and chronic PAD (cPAD). For linear cancer risks, EPA calculates the lifetime probability of acquiring cancer given the estimated aggregate exposure. Short-, intermediate-, and chronic-term risks are evaluated by comparing the estimated aggregate food, water, and residential exposure to the appropriate PODs to ensure that an adequate MOE exists.

1. *Acute risk.* An acute aggregate risk assessment takes into account acute exposure estimates from dietary consumption of food and drinking water. No adverse effect resulting from a single oral exposure was identified and no acute dietary endpoint was selected. Therefore, 2-pyrrolidinone, 1-butyl- is not expected to pose an acute risk.

2. *Chronic risk.* Using the exposure assumptions described in this unit for chronic exposure, EPA has concluded that chronic exposure to, 2-pyrrolidinone, 1-butyl- from food and water will utilize 21.1% of the cPAD for children 1–2 years old, the population group receiving the greatest exposure.

3. *Short-term and intermediate-term risk.* Short-term and intermediate-term aggregate exposure takes into account short-term and intermediate-term residential exposure plus chronic exposure to food and water (considered to be a background exposure level).

2-Pyrrolidinone, 1-butyl- may be used as inert ingredients in pesticide products that could result in short-term and intermediate-term residential exposure and the Agency has determined that it is appropriate to aggregate chronic exposure through food and water with short-term and intermediate-term residential exposures to 2-pyrrolidinone, 1-butyl-. Using the exposure assumptions described above, EPA has concluded that the combined short-term and intermediate-term aggregated food, water, and residential exposures result in an MOE of 350 for both adult males and females respectively. Adult residential exposure combines high-end dermal and inhalation handler exposure from indoor hard surface, wiping with a high-end post application dermal exposure from contact with treated lawns. As the level of concern is for MOEs that are lower than 100, this MOE is not of concern. EPA has concluded the combined short-term and intermediate-term aggregated food, water, and residential exposures result in an aggregate MOE of 218 for children. Children's residential exposure includes total exposures associated with contact with treated lawns (dermal and hand-to-mouth exposures). As the level of concern is for MOEs that are lower than 100, this MOEs is not of concern.

4. *Aggregate cancer risk for U.S. population.* Based on lack of carcinogenicity for N-methyl pyrrolidone (a surrogate chemical of 2-pyrrolidinone, 1-butyl-), 2-

pyrrolidinone, 1-butyl- is not expected to pose a cancer risk to humans.

5. *Determination of safety.* Based on these risk assessments, EPA concludes that there is a reasonable certainty that no harm will result to the general population, or to infants and children from aggregate exposure to 2-pyrrolidinone, 1-butyl- residues.

V. Other Considerations

A. Analytical Enforcement Methodology

An analytical method is not required for enforcement purposes since the Agency is not establishing a numerical tolerance for residues of 2-pyrrolidinone, 1-butyl- in or on any food commodities. EPA is establishing a limitation on the amount of 2-pyrrolidinone, 1-butyl- that may be used in pesticide formulations applied to growing crops. That limitation will be enforced through the pesticide registration process under the Federal Insecticide, Fungicide, and Rodenticide Act (''FIFRA''), 7 U.S.C. 136 *et seq.* EPA will not register any pesticide formulation for use on growing crops for sale or distribution that exceed 30% of 2-pyrrolidinone, 1-butyl-.

B. Revision to Petitioned-for Tolerances

The submitter requested an unlimited use of *2*-pyrrolidinone, 1-butyl in pesticide formulations under 180.920. However, MOEs for the aggregate residential exposure exceeded the Agency's level of concern; therefore the refinement was made using 30% maximum concentration in the final formulation. At that concentration level, the Agency is able to support the safety finding for the inert tolerance exemption; therefore, the Agency is limiting the tolerance exemption to cover residues of *2*-pyrrolidinone, 1-butyl only when used at levels not to exceed 30% by weight in pesticide formulations.

VI. Conclusions

Therefore, an exemption from the requirement of a tolerance is established under 40 CFR 180.920 for residues of 2-pyrrolidinone, 1-butyl- (CAS Reg. No. 3470–98–2) when used as an inert ingredient (solvent/cosolvent) in pesticide formulations applied to growing crops at a concentration not to exceed 30% by weight in the end-use formulation.

VII. Statutory and Executive Order Reviews

This action establishes an exemption to the requirement for a tolerance under FFDCA section 408(d) in response to a petition submitted to the Agency. The Office of Management and Budget (OMB) has exempted these types of actions from review under Executive Order 12866, entitled ''Regulatory Planning and Review'' (58 FR 51735, October 4, 1993). Because this action has been exempted from review under Executive Order 12866, this action is not subject to Executive Order 13211, entitled ''Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use'' (66 FR 28355, May 22, 2001) or Executive Order 13045, entitled ''Protection of Children from Environmental Health Risks and Safety Risks'' (62 FR 19885, April 23, 1997). This action does not contain any information collections subject to OMB approval under the Paperwork Reduction Act (PRA) (44 U.S.C. 3501 *et seq.*), nor does it require any special considerations under Executive Order 12898, entitled ''Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations'' (59 FR 7629, February 16, 1994).

Since tolerances and exemptions that are established on the basis of a petition under FFDCA section 408(d), such as the exemption in this final rule, do not require the issuance of a proposed rule, the requirements of the Regulatory Flexibility Act (RFA) (5 U.S.C. 601 *et seq.*), do not apply.

This action directly regulates growers, food processors, food handlers, and food retailers, not States or tribes, nor does this action alter the relationships or distribution of power and responsibilities established by Congress in the preemption provisions of FFDCA section 408(n)(4). As such, the Agency has determined that this action will not have a substantial direct effect on States or tribal governments, on the relationship between the national government and the States or tribal governments, or on the distribution of power and responsibilities among the various levels of government or between the Federal Government and Indian tribes. Thus, the Agency has determined that Executive Order 13132, entitled ''Federalism'' (64 FR 43255, August 10, 1999) and Executive Order 13175, entitled ''Consultation and Coordination with Indian Tribal Governments'' (65 FR 67249, November 9, 2000) do not apply to this action. In addition, this action does not impose any enforceable duty or contain any unfunded mandate as described under Title II of the Unfunded Mandates Reform Act (UMRA) (2 U.S.C. 1501 *et seq.*).

This action does not involve any technical standards that would require Agency consideration of voluntary consensus standards pursuant to section 12(d) of the National Technology Transfer and Advancement Act (NTTAA) (15 U.S.C. 272 note).

VIII. Congressional Review Act

Pursuant to the Congressional Review Act (5 U.S.C. 801 *et seq.*), 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**. This action is not a ''major rule'' as defined by 5 U.S.C. 804(2).

List of Subjects in 40 CFR Part 180

Environmental protection, Administrative practice and procedure, Agricultural commodities, Pesticides and pests, Reporting and recordkeeping requirements.

Dated: October 20, 2016.

Michael Goodis,

Acting Director, Registration Division, Office of Pesticide Programs.

Therefore, 40 CFR chapter I is amended as follows:

PART 180—[AMENDED]

■ 1. The authority citation for part 180 continues to read as follows:

Authority: 21 U.S.C. 321(q), 346a and 371.

■ 2. In § 180.920, add alphabetically the inert ingredient ''2-Pyrrolidinone, 1-butyl- (CAS Reg. No. 3470–98–2)'' to the table to read as follows:

§ 180.920 Inert ingredients used pre-harvest; exemptions from the requirement of a tolerance.

* * * * *

Inert ingredients	Limits	Uses
* * *	* * *	*
2-Pyrrolidinone, 1-butyl- (CAS Reg. No. 3470–98–2)	Not to exceed 30% by weight of pesticide formulation ..	Solvent/cosolvent.
* * *	* * *	*

[FR Doc. 2016–27212 Filed 11–9–16; 8:45 am]
BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 180

[EPA–HQ–OPP–2016–0159; FRL–9953–21]

Iron Oxide Yellow; Exemption From the Requirement of a Tolerance

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This regulation establishes an exemption from the requirement of a tolerance for residues of iron oxide yellow (CAS Reg. No. 20344–49–4) when used as an inert ingredient (colorant) in pesticide formulations intended for varroa mite control around bee hives at a maximum concentration not to exceed 0.15% by weight in the pesticide formulation. Technology Sciences Group, Inc. on behalf of Bayer HealthCare LLC submitted a petition to EPA under the Federal Food, Drug, and Cosmetic Act (FFDCA), requesting the establishment of an exemption from the requirement of a tolerance. This regulation eliminates the need to establish a maximum permissible level for residues of iron oxide yellow.

DATES: This regulation is effective November 10, 2016. Objections and requests for hearings must be received on or before January 9, 2017, and must be filed in accordance with the instructions provided in 40 CFR part 178 (see also Unit I.C. of the **SUPPLEMENTARY INFORMATION**).

ADDRESSES: The docket for this action, identified by docket identification (ID) number EPA–HQ–OPP–2016–0159, is available at *http://www.regulations.gov* or at the Office of Pesticide Programs Regulatory Public Docket (OPP Docket) in the Environmental Protection Agency Docket Center (EPA/DC), West William Jefferson Clinton Bldg., Rm. 3334, 1301 Constitution Ave. NW., Washington, DC 20460–0001. 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 OPP Docket is (703) 305–5805. Please review the visitor instructions and additional information about the docket available at *http://www.epa.gov/dockets.*

FOR FURTHER INFORMATION CONTACT: Michael Goodis, Registration Division (7505P), Office of Pesticide Programs, Environmental Protection Agency, 1200 Pennsylvania Ave. NW., Washington, DC 20460–0001; main telephone number: (703) 305–7090; email address: *RDFRNotices@epa.gov.*

SUPPLEMENTARY INFORMATION:

I. General Information

A. Does this action apply to me?

You may be potentially affected by this action if you are an agricultural producer, food manufacturer, or pesticide manufacturer. The following list of North American Industrial Classification System (NAICS) codes is not intended to be exhaustive, but rather provides a guide to help readers determine whether this document applies to them. Potentially affected entities may include:

- Crop production (NAICS code 111).
- Animal production (NAICS code 112).
- Food manufacturing (NAICS code 311).
- Pesticide manufacturing (NAICS code 32532).

B. How can I get electronic access to other related information?

You may access a frequently updated electronic version of 40 CFR part 180 through the Government Printing Office's e-CFR site at *http://www.ecfr.gov/cgi-bin/text-idx?&c=ecfr&tpl=/ecfrbrowse/Title40/40tab_02.tpl.*

C. How can I file an objection or hearing request?

Under FFDCA section 408(g), 21 U.S.C. 346a, any person may file an objection to any aspect of this regulation and may also request a hearing on those objections. You must file your objection or request a hearing on this regulation in accordance with the instructions provided in 40 CFR part 178. To ensure proper receipt by EPA, you must identify docket ID number EPA–HQ–OPP–2016–0159 in the subject line on the first page of your submission. All objections and requests for a hearing must be in writing, and must be received by the Hearing Clerk on or before January 9, 2017. Addresses for mail and hand delivery of objections and hearing requests are provided in 40 CFR 178.25(b).

In addition to filing an objection or hearing request with the Hearing Clerk as described in 40 CFR part 178, please submit a copy of the filing (excluding any Confidential Business Information (CBI)) for inclusion in the public docket. Information not marked confidential pursuant to 40 CFR part 2 may be disclosed publicly by EPA without prior notice. Submit the non-CBI copy of your objection or hearing request, identified by docket ID number EPA–HQ–OPP–2016–0159, by one of the following methods:

- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the online instructions for submitting comments. Do not submit electronically any information you consider to be CBI or other information whose disclosure is restricted by statute.
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Additional instructions on commenting or visiting the docket, along with more information about dockets generally, is available at *http://www.epa.gov/dockets.*

II. Petition for Exemption

In the **Federal Register** of April 25, 2016 (81 FR 24042) (FRL–9944–86), EPA issued a document pursuant to FFDCA section 408, 21 U.S.C. 346a, announcing the filing of a pesticide petition (PP IN–10884) by Technology Sciences Group, Inc. (1150 18th Street NW., Suite 1000, Washington, DC 20036) on behalf of Bayer HealthCare LLC (Animal Health, P.O. Box 390, Shawnee Mission, KS 66201–0390). The petition requested that 40 CFR 180.910 be amended by establishing an exemption from the requirement of a tolerance for residues of iron oxide yellow (CAS Reg. No. 20344–49–4), when used as an inert ingredient (colorant) in pesticide formulations intended for varroa mite control around bee hives at a concentration not to exceed 0.15% by weight. That document referenced a summary of the petition prepared by Technology Sciences Group on behalf of Bayer HealthCare Inc., the petitioner, which is available in the docket, *http://www.regulations.gov.* Comments were not received on the notice of filing.

III. Inert Ingredient Definition

Inert ingredients are all ingredients that are not active ingredients as defined in 40 CFR 153.125 and include, but are not limited to, the following types of ingredients (except when they have a pesticidal efficacy of their own): Solvents such as alcohols and hydrocarbons; surfactants such as polyoxyethylene polymers and fatty acids; carriers such as clay and diatomaceous earth; thickeners such as carrageenan and modified cellulose;

wetting, spreading, and dispersing agents; propellants in aerosol dispensers; microencapsulating agents; and emulsifiers. The term ''inert'' is not intended to imply nontoxicity; the ingredient may or may not be chemically active. Generally, EPA has exempted inert ingredients from the requirement of a tolerance based on the low toxicity of the individual inert ingredients.

IV. Aggregate Risk Assessment and Determination of Safety

Section 408(c)(2)(A)(i) of FFDCA allows EPA to establish an exemption from the requirement for a tolerance (the legal limit for a pesticide chemical residue in or on a food) only if EPA determines that the tolerance is ''safe.'' Section 408(b)(2)(A)(ii) of FFDCA defines ''safe'' to mean that ''there is a reasonable certainty that no harm will result from aggregate exposure to the pesticide chemical residue, including all anticipated dietary exposures and all other exposures for which there is reliable information.'' This includes exposure through drinking water and in residential settings, but does not include occupational exposure. Section 408(b)(2)(C) of FFDCA requires EPA to give special consideration to exposure of infants and children to the pesticide chemical residue in establishing a tolerance and to ''ensure that there is a reasonable certainty that no harm will result to infants and children from aggregate exposure to the pesticide chemical residue. . . .''

EPA establishes exemptions from the requirement of a tolerance only in those cases where it can be clearly demonstrated that the risks from aggregate exposure to pesticide chemical residues under reasonably foreseeable circumstances will pose no appreciable risks to human health. In order to determine the risks from aggregate exposure to pesticide inert ingredients, the Agency considers the toxicity of the inert in conjunction with possible exposure to residues of the inert ingredient through food, drinking water, and through other exposures that occur as a result of pesticide use in residential settings. If EPA is able to determine that a finite tolerance is not necessary to ensure that there is a reasonable certainty that no harm will result from aggregate exposure to the inert ingredient, an exemption from the requirement of a tolerance may be established.

Consistent with FFDCA section 408(c)(2)(A), and the factors specified in FFDCA section 408(c)(2)(B), EPA has reviewed the available scientific data and other relevant information in support of this action. EPA has sufficient data to assess the hazards of and to make a determination on aggregate exposure for iron oxide yellow including exposure resulting from the exemption established by this action. EPA's assessment of exposures and risks associated with iron oxide yellow follows.

A. Toxicological Profile

EPA has evaluated the available toxicity data and considered their validity, completeness, and reliability as well as the relationship of the results of the studies to human risk. EPA has also considered available information concerning the variability of the sensitivities of major identifiable subgroups of consumers, including infants and children. Specific information on the studies received and the nature of the adverse effects caused by iron oxide yellow as well as the no-observed-adverse-effect level (NOAEL) and the lowest-observed-adverse-effect level (LOAEL) from the toxicity studies are discussed in this unit.

The acute oral toxicity in rats, mice and dogs is low for iron oxide yellow. In an eight-generation reproduction study with rats, iron oxide was administered in the feed at an estimated oral dose of 25 milligram (mg) iron/day. No signs of toxicity were evident, reproductive performance was not affected.

Ten dogs were fed, from 1 to 9 years, diets containing iron oxide. Daily consumption was estimated to be 428 mg/dog. Two dogs experienced minor irregularities with stools, no other toxicological adverse effects were seen.

Four dogs were injected (i.v.) weekly for 10 weeks until each dog had received a total of 0.5 to 1.0 g/kg. There were signs of retinitis pigmentosa however there were no negative effects in hepatic function tests and biopsies of the liver, spleen, pancreas and other organs. Hemochromatosis was not induced.

Iron oxide yellow is poorly absorbed by mammalian systems after ingestion but data indicate it can be absorbed as iron after solubilization in the stomach and reduction to the ferrous form in the duodenum. Absorption of ingested iron in mammalian systems occurs primarily in the upper small intestine. Iron absorption is tightly regulated biologically such that individuals with low body iron stores absorb more iron while those with excess iron stores absorb less iron. Iron balance in the body is maintained by regulation of iron absorption in the upper small intestine because there are no specific mechanisms to eliminate excess iron.

Iron is an essential element necessary for maintenance of mammalian metabolic systems. Iron intake varies depending on the source of iron, the foods consumed with the iron, the iron oxidation state and the iron needs of the body. For instance, iron from animal origin (heme-iron) is more readily absorbed than iron from vegetable origins (5–20% for meats; 1–10% from vegetable iron). The non-heme iron absorption depends on solubilization of plant-based or inorganic iron in the stomach prior to entry in the intestines. Non-heme iron from ferrous salts is more readily absorbed than iron from ionizable ferric salts, and iron from ferric oxides and hydroxides is the least readily absorbed. Non-heme iron is transported into the duodenal mucosal cells via a transmembrane metal transporter protein that is upregulated when body iron stores are low and down-regulated when body iron stores are high. This mechanism minimizes the likelihood of excess systemic exposure to iron.

B. Toxicological Points of Departure/ Levels of Concern

Once a pesticide's toxicological profile is determined, EPA identifies toxicological points of departure (POD) and levels of concern to use in evaluating the risk posed by human exposure to the pesticide. For hazards that have a threshold below which there is no appreciable risk, the toxicological POD is used as the basis for derivation of reference values for risk assessment. PODs are developed based on a careful analysis of the doses in each toxicological study to determine the dose at which the NOAEL and the LOAEL are identified. Uncertainty/ safety factors are used in conjunction with the POD to calculate a safe exposure level—generally referred to as a population-adjusted dose (PAD) or a reference dose (RfD)—and a safe margin of exposure (MOE). For non-threshold risks, the Agency assumes that any amount of exposure will lead to some degree of risk. Thus, the Agency estimates risk in terms of the probability of an occurrence of the adverse effect expected in a lifetime. For more information on the general principles EPA uses in risk characterization and a complete description of the risk assessment process, see *http://www.epa.gov/pesticides/factsheets/riskassess.htm.*

An acute effect was not found in the database therefore an acute dietary assessment is not necessary. A NOAEL has not been identified for risk assessment purposes. However, the acceptable daily intake (ADI) level

identified by the World Health Organization Joint Expert Committee on Food and Agriculture is used as a safe exposure level for risk assessment purposes.

C. Exposure Assessment

1. *Dietary exposure from food and feed uses.* In evaluating dietary exposure to iron oxide yellow, EPA considered exposure under the proposed exemption from the requirement of a tolerance. EPA assessed dietary exposures from iron oxide yellow in food as follows:

Dietary exposure (food and drinking water) to iron oxide yellow could occur following ingestion of honey with residues from treated beehives. Because no adverse effects attributable to a single exposure of iron oxide yellow are seen in the toxicity databases, an acute dietary risk assessment is not necessary. For the chronic dietary risk assessment, EPA used the Dietary Exposure Evaluation Model software with the Food Commodity Intake Database (DEEM–FCID™, Version 3.16, and food consumption information from the U.S. Department of Agriculture's (USDA's) 2003–2008 National Health and Nutrition Examination Survey, What We Eat in America (NHANES/WWEIA). One hundred percent crop treated was assumed, default processing factors, and tolerance-level residues for honey and use limitations of not more than 0.15% by weight in pesticide formulations.

2. *Dietary exposure from drinking water.* For the purpose of the screening-level dietary risk assessment to support this request for an exemption from the requirement of a tolerance for iron oxide yellow, a conservative drinking water concentration value of 100 parts per billion (ppb) based on screening-level modeling was used to assess the contribution to drinking water for the chronic dietary risk assessments for parent compound. These values were directly entered into the dietary exposure model

3. *From non-dietary exposure.* The term ''residential exposure'' is used in this document to refer to non-occupational, non-dietary exposure (*e.g.,* textiles (clothing and diapers), carpets, swimming pools, and hard surface disinfection on walls, floors, tables). Iron oxide yellow might be used in inert ingredients in products that are registered for specific uses that may result in residential exposure, such as pesticides used in and around the home, personal (care) products, and cosmetics. The Agency conducted an assessment to represent worst-case residential dietary exposure from honey only. The Agency agrees with the World Health Organization Joint Expert Committee on Food and Agriculture opinion that there was no need for additional human absorption studies. The WHO JEFCA committee concluded that it is unlikely that intake of iron oxides from all sources would exceed the Acceptable Daily Intake of 0–0.5 milligram/kilogram/day (mg/kg/day). Thus the JEFCA committee did not prepare a toxicological monograph on the iron oxides.

4. *Cumulative effects from substances with a common mechanism of toxicity.* Section 408(b)(2)(D)(v) of FFDCA requires that, when considering whether to establish, modify, or revoke a tolerance, the Agency consider ''available information'' concerning the cumulative effects of a particular pesticide's residues and ''other substances that have a common mechanism of toxicity.''

EPA has not found iron oxide yellow to share a common mechanism of toxicity with any other substances, and iron oxide yellow does not appear to produce a toxic metabolite produced by other substances. For the purposes of this tolerance action, therefore, EPA has assumed that iron oxide yellow does not have a common mechanism of toxicity with other substances. For information regarding EPA's efforts to determine which chemicals have a common mechanism of toxicity and to evaluate the cumulative effects of such chemicals, see EPA's Web site at *http://www.epa.gov/pesticides/cumulative.*

D. Safety Factor for Infants and Children

Section 408(b)(2)(c) of the FFDCA provides that EPA shall apply an additional margin of safety for infants and children in the case of threshold effects to account for prenatal and postnatal toxicity and the completeness of the database on toxicity and exposure unless EPA determines that a different margin of safety will be safe for infants and children. Due to the expected low toxicity of iron oxide yellow, EPA has not used a safety factor analysis to assess the risk. For the same reasons the additional tenfold safety factor is unnecessary.

1. *In general.* Section 408(b)(2)(C) of FFDCA provides that EPA shall apply an additional tenfold (10X) margin of safety for infants and children in the case of threshold effects to account for prenatal and postnatal toxicity and the completeness of the database on toxicity and exposure unless EPA determines based on reliable data that a different margin of safety will be safe for infants and children. This additional margin of safety is commonly referred to as the Food Quality Protection Act Safety Factor (FQPA SF). In applying this provision, EPA either retains the default value of 10X, or uses a different additional safety factor when reliable data available to EPA support the choice of a different factor.

2. *Prenatal and postnatal sensitivity.* The toxicity database for iron oxide yellow contains an eight generation reproduction/developmental toxicity screening study with the rat. No signs of toxicity were evident and reproductive performance was not negatively affected. There is no indication of neurotoxicity or immunotoxicity in the available studies with dogs and rat therefore, there is no need to require neurotoxicity or immunotoxicity studies. Qualitative fetal susceptibility was observed in the 2-generation toxicity study in rats. However, concern for fetal effects are low since they only occurred in the presence of maternal toxicity and protecting against maternal toxicity will subsequently prevent fetal toxicity. In addition, the ADI of 0.5 mg/kg/day, will be protective of fetal effects. In addition, the Agency used conservative exposure estimates, with 100 percent crop treated (PCT), tolerance-level residues, conservative drinking water modeling numbers, and a worst-case assessment of potential residential exposure for infants and children.

E. Aggregate Risks and Determination of Safety

EPA determines whether acute and chronic dietary pesticide exposures are safe by comparing aggregate exposure estimates to the acute PAD (aPAD) and chronic PAD (cPAD). For linear cancer risks, EPA calculates the lifetime probability of acquiring cancer given the estimated aggregate exposure. Short-, intermediate-, and chronic-term risks are evaluated by comparing the estimated aggregate food, water, and residential exposure to the appropriate PODs to ensure that an adequate MOE exists.

1. *Acute risk.* An acute aggregate risk assessment takes into account acute exposure estimates from dietary consumption of food and drinking water. No adverse effect resulting from a single oral exposure was identified and no acute dietary endpoint was selected. Therefore, iron oxide yellow is not expected to pose an acute risk.

2. *Chronic risk.* Using the exposure assumptions described in this unit for chronic exposure, EPA has concluded that chronic exposure to iron oxide yellow from food (honey) and water will utilize 0.0% of the ADI for children 1–

2 years old, the population group receiving the greatest exposure.

3. *Short-term risk.* Short-term aggregate exposure takes into account short-term residential exposure plus chronic exposure to food and water (considered to be a background exposure level).

Iron oxide yellow may be used as an inert ingredient in pesticide products that could result in short-term residential exposure and the Agency has determined that it is appropriate to aggregate chronic exposure through food (honey). Using the exposure assumptions described above, EPA has concluded that the combined short-term food, water, and residential exposure result in aggregate MOEs of 6,758 for both adult males and females respectively. As the level of concern is for MOEs that are lower than 100, this MOEs is not of concern.

EPA has concluded the combined short-term food, water, and residential exposures result in an aggregate MOE of 4,347 for children. As the level of concern is for MOEs that are lower than 100, this MOEs is not of concern.

4. *Intermediate-term risk.* Intermediate-term aggregate exposure takes into account intermediate-term residential exposure plus chronic exposure to food and water (considered to be a background exposure level).

Iron oxide yellow may be used as an inert ingredient in pesticide products that could result in short-term residential exposure and the Agency has determined that it is appropriate to aggregate chronic exposure through food (honey). Using the exposure assumptions described above, EPA has concluded that the combined short-term food, water, and residential exposure result in aggregate MOEs of 6,758 for both adult males and females respectively. As the level of concern is for MOEs that are lower than 100, this MOEs is not of concern.

EPA has concluded the combined short-term food, water, and residential exposures result in an aggregate MOE of 4,347 for children. As the level of concern is for MOEs that are lower than 100, this MOEs is not of concern.

4. *Intermediate-term risk.* Intermediate-term aggregate exposure takes into account intermediate-term residential exposure plus chronic exposure to food and water (considered to be a background exposure level).

Iron oxide yellow may be used as inert ingredients in pesticide products that could result in intermediate-term residential exposure and the Agency has determined that it is appropriate to aggregate chronic exposure through food (honey) and water. Using the exposure assumptions described above, EPA has concluded that the combined intermediate-term food, water, and residential exposures result in aggregate MOEs of 6,758 for adult males and females. As the level of concern is for MOEs that are lower than 100, this MOE is not of concern. EPA has concluded the combined intermediate-term food, water, and residential exposures result in an aggregate MOE of 4,347 for children. As the level of concern is for MOEs that are lower than 100, this MOE is not of concern.

5. *Aggregate cancer risk for U.S. population.* Based on the data in the toxicological database iron oxide yellow is considered not expected to pose a cancer risk to humans.

6. *Determination of safety.* Based on these risk assessments, EPA concludes that there is a reasonable certainty that no harm will result to the general population, or to infants and children from aggregate exposure to iron oxide yellow residues.

V. Other Considerations

A. Analytical Enforcement Methodology

An analytical method is not required for enforcement purposes since the Agency is not establishing a numerical tolerance for residues of iron oxide yellow in or on any food commodities. EPA is establishing a limitation on the amount of iron oxide yellow that may be used in pesticide formulations applied to growing crops and raw agricultural commodities after harvest. That limitation will be enforced through the pesticide registration process under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), 7 U.S.C. 136 *et seq.* EPA will not register any pesticide formulation for use on growing crops or raw agricultural commodities after harvest for sale or distribution that exceed 0.15% of iron oxide yellow.

VI. Conclusions

Therefore, an exemption from the requirement of a tolerance is established under 40 CFR 180.910 for iron oxide yellow (CAS Reg. No. 20344–49–4) when used as an inert ingredient (colorant) in pesticide products intended for varroa mite control around bee hives at a concentration not to exceed 0.15% by weight in the end-use product formulation.

VII. Statutory and Executive Order Reviews

This action establishes exemptions to the requirement for a tolerance under FFDCA section 408(d) in response to a petition submitted to the Agency. The Office of Management and Budget (OMB) has exempted these types of actions from review under Executive Order 12866, entitled ''Regulatory Planning and Review'' (58 FR 51735, October 4, 1993). Because this action has been exempted from review under Executive Order 12866, this action is not subject to Executive Order 13211, entitled ''Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use'' (66 FR 28355, May 22, 2001) or Executive Order 13045, entitled ''Protection of Children from Environmental Health Risks and Safety Risks'' (62 FR 19885, April 23, 1997). This action does not contain any information collections subject to OMB approval under the Paperwork Reduction Act (PRA) (44 U.S.C. 3501 *et seq.*), nor does it require any special considerations under Executive Order 12898, entitled ''Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations'' (59 FR 7629, February 16, 1994).

Since tolerances and exemptions that are established on the basis of a petition under FFDCA section 408(d), such as the exemptions in this final rule, do not require the issuance of a proposed rule, the requirements of the Regulatory Flexibility Act (RFA) (5 U.S.C. 601 *et seq.*), do not apply.

This action directly regulates growers, food processors, food handlers, and food retailers, not States or tribes, nor does this action alter the relationships or distribution of power and responsibilities established by Congress in the preemption provisions of FFDCA section 408(n)(4). As such, the Agency has determined that this action will not have a substantial direct effect on States or tribal governments, on the relationship between the national government and the States or tribal governments, or on the distribution of power and responsibilities among the various levels of government or between the Federal Government and Indian tribes. Thus, the Agency has determined that Executive Order 13132, entitled ''Federalism'' (64 FR 43255, August 10, 1999) and Executive Order 13175, entitled ''Consultation and Coordination with Indian Tribal Governments'' (65 FR 67249, November 9, 2000) do not apply to this action. In addition, this action does not impose any enforceable duty or contain any unfunded mandate as described under Title II of the Unfunded Mandates Reform Act (UMRA) (2 U.S.C. 1501 *et seq.*).

This action does not involve any technical standards that would require Agency consideration of voluntary

consensus standards pursuant to section 12(d) of the National Technology Transfer and Advancement Act (NTTAA) (15 U.S.C. 272 note).

VIII. Congressional Review Act

Pursuant to the Congressional Review Act (5 U.S.C. 801 *et seq.*), 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**. This action is not a ''major rule'' as defined by 5 U.S.C. 804(2).

List of Subjects in 40 CFR Part 180

Environmental protection, Administrative practice and procedure, Agricultural commodities, Pesticides and pests, Reporting and recordkeeping requirements.

Dated: October 24, 2016.

Daniel J. Rosenblatt,

Acting Director, Registration Division, Office of Pesticide Programs.

Therefore, 40 CFR chapter I is amended as follows:

PART 180—[AMENDED]

■ 1. The authority citation for part 180 continues to read as follows:

Authority: 21 U.S.C. 321(q), 346a and 371.

■ 2. In § 180.910, add alphabetically the inert ingredient ''Iron oxide yellow (CAS Reg. No. 20344–49–4)'' to the table to read as follows:

§ 180.910 Inert ingredients used pre- and post-harvest; exemptions from the requirement of a tolerance.

* * * * *

Inert ingredients	Limits	Uses
* *	* *	* *
Iron oxide yellow (CAS Reg. No. 20344–49–4).	Not to exceed 0.15% by weight of pesticide formulation.	Colorant in pesticide formulations for varroa mite control around bee hives
* *	* *	* *

[FR Doc. 2016–27191 Filed 11–9–16; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 180

[EPA–HQ–OPP–2015–0745; FRL–9954–04]

Trifloxystrobin; Pesticide Tolerances

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This regulation establishes tolerances for residues of trifloxystrobin in or on Cottonseed subgroup 20C; Cotton, gin byproducts; and amends the existing tolerance on Corn, field, forage. Bayer CropScience LP requested these tolerances under the Federal Food, Drug, and Cosmetic Act (FFDCA).

DATES: This regulation is effective November 10, 2016. Objections and requests for hearings must be received on or before January 9, 2017, and must be filed in accordance with the instructions provided in 40 CFR part 178 (see also Unit I.C. of the **SUPPLEMENTARY INFORMATION**).

ADDRESSES: The docket for this action, identified by docket identification (ID) number EPA–HQ–OPP–2015–0745, is available at *http://www.regulations.gov* or at the Office of Pesticide Programs Regulatory Public Docket (OPP Docket) in the Environmental Protection Agency Docket Center (EPA/DC), West William Jefferson Clinton Bldg., Rm. 3334, 1301 Constitution Ave. NW., Washington, DC 20460–0001. 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 OPP Docket is (703) 305–5805. Please review the visitor instructions and additional information about the docket available at *http://www.epa.gov/dockets.*

FOR FURTHER INFORMATION CONTACT: Michael Goodis, Registration Division (7505P), Office of Pesticide Programs, Environmental Protection Agency, 1200 Pennsylvania Ave. NW., Washington, DC 20460–0001; main telephone number: (703) 305–7090; email address: *RDFRNotices@epa.gov.*

SUPPLEMENTARY INFORMATION:

I. General Information

A. Does this action apply to me?

You may be potentially affected by this action if you are an agricultural producer, food manufacturer, or pesticide manufacturer. The following list of North American Industrial Classification System (NAICS) codes is not intended to be exhaustive, but rather provides a guide to help readers determine whether this document applies to them. Potentially affected entities may include:

- Crop production (NAICS code 111).
- Animal production (NAICS code 112).
- Food manufacturing (NAICS code 311).
- Pesticide manufacturing (NAICS code 32532).

B. How can I get electronic access to other related information?

You may access a frequently updated electronic version of EPA's tolerance regulations at 40 CFR part 180 through the Government Printing Office's e-CFR site at *http://www.ecfr.gov/cgi-bin/text-idx?&c=ecfr&tpl=/ecfrbrowse/Title40/40tab_02.tpl.*

C. How can I file an objection or hearing request?

Under FFDCA section 408(g), 21 U.S.C. 346a, any person may file an objection to any aspect of this regulation and may also request a hearing on those objections. You must file your objection or request a hearing on this regulation in accordance with the instructions provided in 40 CFR part 178. To ensure proper receipt by EPA, you must identify docket ID number EPA–HQ–OPP–2015–0745 in the subject line on the first page of your submission. All objections and requests for a hearing must be in writing, and must be received by the Hearing Clerk on or before January 9, 2017. Addresses for mail and hand delivery of objections and hearing requests are provided in 40 CFR 178.25(b).

In addition to filing an objection or hearing request with the Hearing Clerk as described in 40 CFR part 178, please submit a copy of the filing (excluding any Confidential Business Information (CBI)) for inclusion in the public docket. Information not marked confidential pursuant to 40 CFR part 2 may be disclosed publicly by EPA without prior notice. Submit the non-CBI copy of your objection or hearing request, identified

by docket ID number EPA–HQ–OPP–2015–0745, by one of the following methods:

- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the online instructions for submitting comments. Do not submit electronically any information you consider to be CBI or other information whose disclosure is restricted by statute.
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Additional instructions on commenting or visiting the docket, along with more information about dockets generally, is available at *http://www.epa.gov/dockets.*

II. Summary of Petitioned-for Tolerance

In the **Federal Register** of June 22, 2016 (81 FR 40594) (FRL–9947–32), EPA issued a document pursuant to FFDCA section 408(d)(3), 21 U.S.C. 346a(d)(3), announcing the filing of a pesticide petition (PP 5F8380) by Bayer CropScience, 2 TW Alexander Drive, P.O. Box 12014, Research Triangle Park, NC 27709. The petition requested that 40 CFR 180.555 be amended by establishing tolerances for residues of the fungicide trifloxystrobin in or on cotton, undelinted seed, (Crop subgroup 20C) at 0.5 parts per million (ppm); cotton, gin byproducts at 3 ppm; and revising the existing tolerance for corn, field, forage from 6 ppm to 8 ppm. That document referenced a summary of the petition prepared by Bayer CropScience LP, the registrant, which is available in the docket, *http://www.regulations.gov.* A comment was received on the notice of filing. EPA's response to this comment is discussed in Unit IV.C.

Based upon review of the data supporting the petition, EPA has corrected the commodity definitions for the requested cotton commodities. The reason for these changes is explained in Unit IV.D.

III. Aggregate Risk Assessment and Determination of Safety

Section 408(b)(2)(A)(i) of FFDCA allows EPA to establish a tolerance (the legal limit for a pesticide chemical residue in or on a food) only if EPA determines that the tolerance is ''safe.'' Section 408(b)(2)(A)(ii) of FFDCA defines ''safe'' to mean that ''there is a reasonable certainty that no harm will result from aggregate exposure to the pesticide chemical residue, including all anticipated dietary exposures and all other exposures for which there is reliable information.'' This includes exposure through drinking water and in residential settings, but does not include occupational exposure. Section 408(b)(2)(C) of FFDCA requires EPA to give special consideration to exposure of infants and children to the pesticide chemical residue in establishing a tolerance and to ''ensure that there is a reasonable certainty that no harm will result to infants and children from aggregate exposure to the pesticide chemical residue. . . .''

Consistent with FFDCA section 408(b)(2)(D), and the factors specified in FFDCA section 408(b)(2)(D), EPA has reviewed the available scientific data and other relevant information in support of this action. EPA has sufficient data to assess the hazards of and to make a determination on aggregate exposure for trifloxystrobin including exposure resulting from the tolerances established by this action. EPA's assessment of exposures and risks associated with trifloxystrobin follows.

A. Toxicological Profile

EPA has evaluated the available toxicity data and considered its validity, completeness, and reliability as well as the relationship of the results of the studies to human risk. EPA has also considered available information concerning the variability of the sensitivities of major identifiable subgroups of consumers, including infants and children. Trifloxystrobin exhibits very low toxicity following single oral, dermal and inhalation exposures. It is a strong dermal sensitizer and a mild dermal and eye irritant. In repeated dose studies in rats, mice, and dogs, liver effects and reduced body weights along with reduction in food consumption are the common findings for trifloxystrobin. Liver effects included an increase in liver weights and an increased incidence of hepatocellular hypertrophy and/or hepatocellular necrosis. In the rabbit developmental toxicity study, an increase in the incidence of fused sternabrae was seen at a dose 10 times higher than the maternal lowest observed adverse effect level (LOAEL), while no developmental effects was seen in the rat developmental study at a limit dose. In the rat reproduction study, both parents and offspring showed decreases in body weight during lactation. The rat and rabbit developmental and the rat reproduction toxicity data do not demonstrate an increase in susceptibility in the fetus or other offspring. Trifloxystrobin is classified as: ''Not likely to be Carcinogenic to Humans'' based on both the negative results in the battery of mutagenicity tests (except at a cytotoxic dose in one in vitro test), and from the long-term carcinogenicity studies in rats and mice. There is no concern for neurotoxicity or immunotoxicity in the database.

Specific information on the studies received and the nature of the adverse effects caused by trifloxystrobin as well as the no-observed-adverse-effect-level (NOAEL) and the lowest-observed-adverse-effect-level (LOAEL) from the toxicity studies are discussed in the document ''Trifloxystrobin. Human Health Risk Assessment for the Proposed New Use on Cottonseed Subgroup 20C and a Tolerance Amendment on Corn Field Forage.,'' dated September 13, 2016.

B. Toxicological Points of Departure/Levels of Concern

Once a pesticide's toxicological profile is determined, EPA identifies toxicological points of departure (POD) and levels of concern to use in evaluating the risk posed by human exposure to the pesticide. For hazards that have a threshold below which there is no appreciable risk, the toxicological POD is used as the basis for derivation of reference values for risk assessment. PODs are developed based on a careful analysis of the doses in each toxicological study to determine the dose at which no adverse effects are observed (the NOAEL) and the lowest dose at which adverse effects of concern are identified (the LOAEL). Uncertainty/safety factors are used in conjunction with the POD to calculate a safe exposure level—generally referred to as a population-adjusted dose (PAD) or a reference dose (RfD)—and a safe margin of exposure (MOE). For non-threshold risks, the Agency assumes that any amount of exposure will lead to some degree of risk. Thus, the Agency estimates risk in terms of the probability of an occurrence of the adverse effect expected in a lifetime. For more information on the general principles EPA uses in risk characterization and a complete description of the risk assessment process, see *http://www.epa.gov/pesticides/factsheets/riskassess.htm.*

A summary of the toxicological endpoints for trifloxystrobin used for human risk assessment is discussed in Unit Unit III B of the final rule published in the **Federal Register** of June 11, 2010 (75 FR 33192) (FRL–8829–2). However, subsequent to that **Federal Register** publication, EPA reassessed the liver effects seen in the 28-day dermal toxicity study according

to current policy, and determined that these effects should not be considered adverse. The NOAEL for the 28-day dermal study was set at 1,000 mg/kg/day, and a LOAEL was not established. Because the Agency no longer considers there to be a toxic endpoint for dermal exposure, the endpoints assessed as part of this action exclude the endpoint for dermal exposure identified in the table published in the above-referenced **Federal Register** on June 11, 2010.

C. Exposure Assessment

1. *Dietary exposure from food and feed uses.* In evaluating dietary exposure to trifloxystrobin, EPA considered exposure under the petitioned-for tolerances as well as all existing trifloxystrobin tolerances in 40 CFR 180.555. EPA assessed dietary exposures from trifloxystrobin in food as follows:

i. *Acute exposure.* Quantitative acute dietary exposure and risk assessments are performed for a food-use pesticide, if a toxicological study has indicated the possibility of an effect of concern occurring as a result of a 1-day or single exposure.

Such effects were identified for trifloxystrobin. In estimating acute dietary exposure, EPA used food consumption information from the United States Department of Agriculture (USDA) 2003–2008 Nationwide Continuing Surveys of Food Intake by Individuals (CSFII). As to residue levels in food, EPA conducted the acute dietary assessment assuming tolerance level residues and 100 percent crop treated (PCT) for all commodities.

ii. *Chronic exposure.* In conducting the chronic dietary exposure assessment EPA used the food consumption data from the USDA 2003–2008 CSFII. As to residue levels in food, EPA assumed 100% crop treated, tolerance level residues, average residues for some crops, and default processing factors.

iii. *Cancer.* Based on the data summarized in Unit III.A., EPA has concluded that trifloxystrobin does not pose a cancer risk to humans. Therefore, a dietary exposure assessment for the purpose of assessing cancer risk is unnecessary.

iv. *Anticipated residue information.* Section 408(b)(2)(E) of FFDCA authorizes EPA to use available data and information on the anticipated residue levels of pesticide residues in food and the actual levels of pesticide residues that have been measured in food. If EPA relies on such information, EPA must require pursuant to FFDCA section 408(f)(1) that data be provided 5 years after the tolerance is established, modified, or left in effect, demonstrating that the levels in food are not above the levels anticipated. For the present action, EPA will issue such data call-ins as are required by FFDCA section 408(b)(2)(E) and authorized under FFDCA section 408(f)(1). Data will be required to be submitted no later than 5 years from the date of issuance of these tolerances.

2. *Dietary exposure from drinking water.* The Agency used screening level water exposure models in the dietary exposure analysis and risk assessment for trifloxystrobin in drinking water. These simulation models take into account data on the physical, chemical, and fate/transport characteristics of trifloxystrobin. Further information regarding EPA drinking water models used in pesticide exposure assessment can be found at *http://www.epa.gov/oppefed1/models/water/index.htm.*

Based on the PRZM/EXAMS (Pesticide Root Zone Model)/(Exposure Analysis Modeling System) and Pesticide Root Zone Model Ground Water (PRZM GW), the estimated drinking water concentrations (EDWCs) of trifloxystrobin for acute exposures are estimated to be 29 parts per billion (ppb) for surface water and 427 ppb for ground water, respectively. For chronic non-cancer exposure assessments, EDWCs are estimated to be 23 ppb for surface water and 365 ppb for ground water.

Modeled estimates of drinking water concentrations were directly entered into the dietary exposure model. For acute dietary risk assessment, the water concentration value of 427 ppb was used to assess the contribution to drinking water. For chronic dietary risk assessment, the water concentration of value 365 ppb was used to assess the contribution to drinking water.

3. *From non-dietary exposure.* The term ''residential exposure'' is used in this document to refer to non-occupational, non-dietary exposure (*e.g.,* for lawn and garden pest control, indoor pest control, termiticides, and flea and tick control on pets).

Trifloxystrobin is currently registered for the following uses that could result in residential exposures: ornamental plants and turfgrass. EPA assessed residential exposure from relevant registered trifloxystrobin products using the Agency's 2012 Residential Standard Operating Procedures (SOPs) along with updates in policy regarding body weight in addition to the following assumptions:

i. *Residential handler exposures.* Residential handler exposure is expected to be short-term only. Intermediate-term exposures are not likely because of the intermittent nature of applications by homeowners. Dermal handler exposures were not assessed since no adverse systemic dermal hazard was identified for trifloxystrobin.

ii. Residential post-application exposures. Because dermal hazard has not been identified for trifloxystrobin, a quantitative post-application assessment for dermal exposure is not necessary and the only exposure scenarios quantitatively assessed are for children 1 to <2 years old who may experience short-term incidental oral exposure to trifloxystrobin from treated turf. Incidental oral granule ingestion is not applicable because there is no endpoint identified for the acute dietary duration for infants and children. Intermediate-term incidental oral post-application exposures are not expected because trifloxystrobin is not persistent in soil or water; furthermore, the short-term incidental oral risk estimates would be protective of the possible intermediate-term incidental oral exposures because the POD for both durations is the same. Post-application inhalation exposure is expected to be negligible for the proposed residential uses. Further information regarding EPA standard assumptions and generic inputs for residential exposures may be found at *http://www.epa.gov/pesticides/trac/science/trac6a05.pdf.*

4. *Cumulative effects from substances with a common mechanism of toxicity.* Section 408(b)(2)(D)(v) of FFDCA requires that, when considering whether to establish, modify, or revoke a tolerance, the Agency consider ''available information'' concerning the cumulative effects of a particular pesticide's residues and ''other substances that have a common mechanism of toxicity.''

EPA has not found trifloxystrobin to share a common mechanism of toxicity with any other substances, and trifloxystrobin does not appear to produce a toxic metabolite produced by other substances. For the purposes of this tolerance action, therefore, EPA has assumed that trifloxystrobin does not have a common mechanism of toxicity with other substances. For information regarding EPA's efforts to determine which chemicals have a common mechanism of toxicity and to evaluate the cumulative effects of such chemicals, see EPA's Web site at *http://www.epa.gov/pesticides/cumulative.*

D. Safety Factor for Infants and Children

1. *In general.* Section 408(b)(2)(C) of FFDCA provides that EPA shall apply an additional tenfold (10X) margin of safety for infants and children in the case of threshold effects to account for

prenatal and postnatal toxicity and the completeness of the database on toxicity and exposure unless EPA determines based on reliable data that a different margin of safety will be safe for infants and children. This additional margin of safety is commonly referred to as the FQPA Safety Factor (SF). In applying this provision, EPA either retains the default value of 10X, or uses a different additional safety factor when reliable data available to EPA support the choice of a different factor.

2. *Prenatal and postnatal sensitivity.* There is no indication of increased quantitative or qualitative susceptibility to trifloxystrobin in rats or rabbits. In the prenatal developmental study in rats, there was no developmental toxicity up to or at the limit dose. In the prenatal developmental study in rabbits, developmental toxicity was seen at a dose that was higher than the dose causing maternal toxicity. In the multigeneration study, offspring and parental LOAELs are at the same dose level

3. *Conclusion.* EPA has determined that reliable data show the safety of infants and children would be adequately protected if the FQPA SF were reduced to 1X. That decision is based on the following findings:

i. The toxicity database for trifloxystrobin is complete.

ii. There is no indication that trifloxystrobin is a neurotoxic chemical and there is no need for a developmental neurotoxicity study or additional UFs to account for neurotoxicity.

iii. There is no evidence that trifloxystrobin results in increased susceptibility in *in utero* rats or rabbits in the prenatal developmental studies or in young rats in the 2-generation reproduction study.

iv. There are no residual uncertainties identified in the exposure databases. The exposure databases are complete or are estimated based on data that reasonably account for potential exposures. The exposure assessments will not underestimate the potential dietary (food and drinking water) or non-dietary exposures for infants and children from the use of trifloxystrobin. The chronic dietary food exposure assessment was conservatively based on 100%CT assumptions and conservative ground water drinking water modeling estimates. The dietary drinking water assessment utilizes water concentration values generated by models and associated modeling parameters which are designed to provide conservative, health protective, high-end estimates of water concentrations, and are not likely to be exceeded. In addition, the residential post-application assessment is based upon the residential SOPs employing surrogate study data. The Residential SOPs are based upon reasonable ''worst-case'' assumptions and are not expected to underestimate risk. These data are reliable and are not expected to underestimate risk to adults or children.

E. Aggregate Risks and Determination of Safety

EPA determines whether acute and chronic dietary pesticide exposures are safe by comparing aggregate exposure estimates to the acute PAD (aPAD) and chronic PAD (cPAD). For linear cancer risks, EPA calculates the lifetime probability of acquiring cancer given the estimated aggregate exposure. Short-, intermediate-, and chronic-term risks are evaluated by comparing the estimated aggregate food, water, and residential exposure to the appropriate PODs to ensure that an adequate MOE exists.

1. *Acute risk.* Using the exposure assumptions discussed in this unit for acute exposure, the acute dietary exposure from food and water to trifloxystrobin will occupy 5% of the aPAD for 13–49 year old females, the population group receiving the greatest exposure.

2. *Chronic risk.* Using the exposure assumptions described in this unit for chronic exposure, EPA has concluded that chronic exposure to trifloxystrobin from food and water will utilize 71% of the cPAD for infants (<1 year old), the population group receiving the greatest exposure. Based on the explanation in Unit III.C.3., regarding residential use patterns, chronic residential exposure to residues of trifloxystrobin is not expected.

3. *Short-term risk.* Short-term aggregate exposure takes into account short-term residential exposure plus chronic exposure to food and water (considered to be a background exposure level).

Trifloxystrobin is currently registered for uses that could result in short-term residential exposure, and the Agency has determined that it is appropriate to aggregate chronic exposure through food and water with short-term residential exposures to trifloxystrobin.

Using the exposure assumptions described in this unit for short-term exposures, EPA has concluded the combined short-term food, water, and residential exposures result in aggregate MOEs of 290 for adults and 130 for children 1–<2 years old. Because EPA's level of concern for trifloxystrobin is a MOE of 100 or below, these MOEs are not of concern.

4. *Intermediate-term risk.* Intermediate-term aggregate exposure takes into account intermediate-term residential exposure plus chronic exposure to food and water (considered to be a background exposure level). An intermediate-term aggregate risk assessment (1 to 6 months of exposure to trifloxystrobin residues from food, drinking water, and residential pesticide uses) is not expected to occur based on the intermittent nature of homeowner applications, and the short soil half-life of trifloxystrobin (about 2 days). Therefore, an intermediate-term aggregate risk assessment was not performed.

5. *Aggregate cancer risk for U.S. population.* Based on the lack of evidence of carcinogenicity in two adequate rodent carcinogenicity studies, trifloxystrobin is not expected to pose a cancer risk to humans.

6. *Determination of safety.* Based on these risk assessments, EPA concludes that there is a reasonable certainty that no harm will result to the general population, or to infants and children from aggregate exposure to trifloxystrobin residues.

IV. Other Considerations

A. Analytical Enforcement Methodology

Adequate enforcement methodology (gas chromatography with nitrogen phosphorus detection (GC/NPD), Method AG–659A) is available to enforce the tolerance expression for the combined residues of trifloxystrobin and CGA–321113 in plant and livestock commodities. The lowest level of method validation (LLMV) is equivalent to the limit of quantitation (LOQ) which was 0.010 ppm for each analyte in/on all matrices.

The method may be requested from: Chief, Analytical Chemistry Branch, Environmental Science Center, 701 Mapes Rd., Ft. Meade, MD 20755–5350; telephone number: (410) 305–2905; email address: *residuemethods@epa.gov.*

B. International Residue Limits

In making its tolerance decisions, EPA seeks to harmonize U.S. tolerances with international standards whenever possible, consistent with U.S. food safety standards and agricultural practices. EPA considers the international maximum residue limits (MRLs) established by the Codex Alimentarius Commission (Codex), as required by FFDCA section 408(b)(4). The Codex Alimentarius is a joint United Nations Food and Agriculture Organization/World Health Organization food standards program,

and it is recognized as an international food safety standards-setting organization in trade agreements to which the United States is a party. EPA may establish a tolerance that is different from a Codex MRL; however, FFDCA section 408(b)(4) requires that EPA explain the reasons for departing from the Codex level.

The Codex has not established a MRL for trifloxystrobin on cotton, gin byproducts; cottonseed subgroup 20C; or corn, field, forage.

C. Response to Comments

The Agency received one anonymous public comment suggesting that we deny this tolerance because there are ''too many toxic chemicals applied to food with no accurate long term tests that show any safety at all.'' No supporting data was included to support this comment.

The Agency considered a complete set of scientific data to assess the risk of this chemical and these new uses. These data, along with conservative models/assumptions, were used to assess the safety of these tolerances. The Agency understands the commenter's concerns and recognizes that some individuals believe that pesticides should be banned on agricultural crops. However, the existing legal framework provided by section 408 of the FFDCA states that tolerances may be set when persons seeking such tolerances or exemptions have demonstrated that the pesticide meets the safety standard imposed by that statute. The citizen's comments appear to be directed at the underlying statute and not EPA's implementation of it; the citizens have made no contention that EPA has acted in violation of the statutory framework.

D. Revisions to Petitioned-for Tolerances

The Agency is revising the commodity definitions for the requested tolerances to reflect the common commodity vocabulary currently used by the Agency. Specifically, the requested ''Cotton, undelinted seed (Crop subgroup 20C)'' was changed to ''Cottonseed subgroup 20C''; the requested ''Cotton, Gin By-products'' was changed to ''Cotton, gin byproducts''.

V. Conclusion

Therefore, tolerances are established for residues of trifloxystrobin, benzeneacetic acid, (*E,E*)-α-(methoxyimino)-2-[[[[1-[3-(trifluoromethyl) phenyl]ethylidene] amino]oxy]methyl]-, methyl ester, and the free form of its acid metabolite CGA–321113, (*E,E*)-methoxyimino-[2-[1-(3-trifluoromethyl-phenyl)-ethylideneaminooxymethyl]-phenyl]acetic acid, calculated as the stoichiometric equivalent of trifloxystrobin, in or on cottonseed subgroup 20C at 0.50 ppm; cotton, gin byproducts at 3.0 ppm. The existing corn, field, forage tolerance of 6.0 parts per million (ppm) is increased to 8.0 ppm.

VI. Statutory and Executive Order Reviews

This action establishes tolerances under FFDCA section 408(d) in response to a petition submitted to the Agency. The Office of Management and Budget (OMB) has exempted these types of actions from review under Executive Order 12866, entitled ''Regulatory Planning and Review'' (58 FR 51735, October 4, 1993). Because this action has been exempted from review under Executive Order 12866, this action is not subject to Executive Order 13211, entitled ''Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use'' (66 FR 28355, May 22, 2001) or Executive Order 13045, entitled ''Protection of Children from Environmental Health Risks and Safety Risks'' (62 FR 19885, April 23, 1997). This action does not contain any information collections subject to OMB approval under the Paperwork Reduction Act (PRA) (44 U.S.C. 3501 *et seq.*), nor does it require any special considerations under Executive Order 12898, entitled ''Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations'' (59 FR 7629, February 16, 1994).

Since tolerances and exemptions that are established on the basis of a petition under FFDCA section 408(d), such as the tolerance in this final rule, do not require the issuance of a proposed rule, the requirements of the Regulatory Flexibility Act (RFA) (5 U.S.C. 601 *et seq.*), do not apply.

This action directly regulates growers, food processors, food handlers, and food retailers, not States or tribes, nor does this action alter the relationships or distribution of power and responsibilities established by Congress in the preemption provisions of FFDCA section 408(n)(4). As such, the Agency has determined that this action will not have a substantial direct effect on States or tribal governments, on the relationship between the national government and the States or tribal governments, or on the distribution of power and responsibilities among the various levels of government or between the Federal Government and Indian tribes. Thus, the Agency has determined that Executive Order 13132, entitled ''Federalism'' (64 FR 43255, August 10, 1999) and Executive Order 13175, entitled ''Consultation and Coordination with Indian Tribal Governments'' (65 FR 67249, November 9, 2000) do not apply to this action. In addition, this action does not impose any enforceable duty or contain any unfunded mandate as described under Title II of the Unfunded Mandates Reform Act (UMRA) (2 U.S.C. 1501 *et seq.*).

This action does not involve any technical standards that would require Agency consideration of voluntary consensus standards pursuant to section 12(d) of the National Technology Transfer and Advancement Act (NTTAA) (15 U.S.C. 272 note).

VII. Congressional Review Act

Pursuant to the Congressional Review Act (5 U.S.C. 801 *et seq.*), 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**. This action is not a ''major rule'' as defined by 5 U.S.C. 804(2).

List of Subjects in 40 CFR Part 180

Environmental protection, Administrative practice and procedure, Agricultural commodities, Pesticides and pests, Reporting and recordkeeping requirements.

Dated: October 21, 2016.

Michael Goodis,

Acting Director, Registration Division, Office of Pesticide Programs.

Therefore, 40 CFR chapter I is amended as follows:

PART 180—[AMENDED]

■ 1. The authority citation for part 180 continues to read as follows:

Authority: 21 U.S.C. 321(q), 346a and 371.

■ 2. In § 180.555, in the table in paragraph (a):

■ a. Revise the entry for ''Corn, field, forage'';

■ b. Add alphabetically entries for ''Cotton, gin byproducts'' and ''Cottonseed subgroup 20C''.

The revisions and additions read as follows:

§ 180.555 Trifloxystrobin; tolerances for residues.

(a) * * *

Commodity	Parts per million
* * * * *	
Corn, field, forage	8.0
* * * * *	
Cotton, gin byproducts	3.0
Cottonseed subgroup 20C	0.50
* * * * *	

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[FR Doc. 2016–27204 Filed 11–9–16; 8:45 am]

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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 180

[EPA–HQ–OPP–2015–0631; FRL–9954–58]

Di-n-butyl Adipate; Exemption From the Requirement of a Tolerance

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This regulation establishes an exemption from the requirement of a tolerance for residues of di-n-butyl adipate (CAS Reg. No. 105–99–7) when used as an inert ingredient (plasticizer) at a concentration of not more than 25% by weight in pesticide formulations intended for varroa mite control around bee hives. Bayer Healthcare, LLC submitted a petition to EPA under the Federal Food, Drug, and Cosmetic Act (FFDCA), requesting establishment of an exemption from the requirement of a tolerance. This regulation eliminates the need to establish a maximum permissible level for residues of di-n-butyl adipate.

DATES: This regulation is effective November 10, 2016. Objections and requests for hearings must be received on or before January 9, 2017, and must be filed in accordance with the instructions provided in 40 CFR part 178 (see also Unit I.C. of the **SUPPLEMENTARY INFORMATION**).

ADDRESSES: The docket for this action, identified by docket identification (ID) number EPA–HQ–OPP–2015–0631, is available at *http://www.regulations.gov* or at the Office of Pesticide Programs Regulatory Public Docket (OPP Docket) in the Environmental Protection Agency Docket Center (EPA/DC), West William Jefferson Clinton Bldg., Rm. 3334, 1301 Constitution Ave. NW., Washington, DC 20460–0001. 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 OPP Docket is (703) 305–5805. Please review the visitor instructions and additional information about the docket available at *http://www.epa.gov/dockets.*

FOR FURTHER INFORMATION CONTACT: Michael Goodis, Registration Division (7505P), Office of Pesticide Programs, Environmental Protection Agency, 1200 Pennsylvania Ave. NW., Washington, DC 20460–0001; main telephone number: (703) 305–7090; email address: *RDFRNotices@epa.gov.*

SUPPLEMENTARY INFORMATION:

I. General Information

A. Does this action apply to me?

You may be potentially affected by this action if you are an agricultural producer, food manufacturer, or pesticide manufacturer. The following list of North American Industrial Classification System (NAICS) codes is not intended to be exhaustive, but rather provides a guide to help readers determine whether this document applies to them. Potentially affected entities may include:

- Crop production (NAICS code 111).
- Animal production (NAICS code 112).
- Food manufacturing (NAICS code 311).
- Pesticide manufacturing (NAICS code 32532).

B. How can I get electronic access to other related information?

You may access a frequently updated electronic version of 40 CFR part 180 through the Government Printing Office's e-CFR site at *http://www.ecfr.gov/cgi-bin/text-idx?&c=ecfr&tpl=/ecfrbrowse/Title40/40tab_02.tpl.*

C. How can I file an objection or hearing request?

Under FFDCA section 408(g), 21 U.S.C. 346a, any person may file an objection to any aspect of this regulation and may also request a hearing on those objections. You must file your objection or request a hearing on this regulation in accordance with the instructions provided in 40 CFR part 178. To ensure proper receipt by EPA, you must identify docket ID number EPA–HQ–OPP–2015–0631 in the subject line on the first page of your submission. All objections and requests for a hearing must be in writing, and must be received by the Hearing Clerk on or before January 9, 2017. Addresses for mail and hand delivery of objections and hearing requests are provided in 40 CFR 178.25(b).

In addition to filing an objection or hearing request with the Hearing Clerk as described in 40 CFR part 178, please submit a copy of the filing (excluding any Confidential Business Information (CBI)) for inclusion in the public docket. Information not marked confidential pursuant to 40 CFR part 2 may be disclosed publicly by EPA without prior notice. Submit the non-CBI copy of your objection or hearing request, identified by docket ID number EPA–HQ–OPP–2015–0631, by one of the following methods:

- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the online instructions for submitting comments. Do not submit electronically any information you consider to be CBI or other information whose disclosure is restricted by statute.
- *Mail:* OPP Docket, Environmental Protection Agency Docket Center (EPA/DC), (28221T), 1200 Pennsylvania Ave. NW., Washington, DC 20460–0001.
- *Hand Delivery:* To make special arrangements for hand delivery or delivery of boxed information, please follow the instructions at *http://www.epa.gov/dockets/contacts.html.*

Additional instructions on commenting or visiting the docket, along with more information about dockets generally, is available at *http://www.epa.gov/dockets.*

II. Petition for Exemption

In the **Federal Register** of October 21, 2015 (80 FR 63731) (FRL–9935–29), EPA issued a document pursuant to FFDCA section 408, 21 U.S.C. 346a, announcing the filing of a pesticide petition (PP IN–10838) by Bayer Healthcare, LLC, Animal Health Division, P.O. Box 390 Shawnee Mission, KS 66201. The petition requested that 40 CFR 180.910 be amended by establishing an exemption from the requirement of a tolerance for residues of di-n-butyl adipate, (CAS Reg. No. 105–99–7) when used as an inert ingredient (plasticizer) intended for varroa mite control around bee hives. That document referenced a summary of the petition prepared by Bayer Healthcare, LLC, the petitioner, which is available in the docket, *http://www.regulations.gov.* There were no comments received in response to the notice of filing.

III. Inert Ingredient Definition

Inert ingredients are all ingredients that are not active ingredients as defined in 40 CFR 153.125 and include, but are not limited to, the following types of ingredients (except when they have a pesticidal efficacy of their own): Solvents such as alcohols and

hydrocarbons; surfactants such as polyoxyethylene polymers and fatty acids; carriers such as clay and diatomaceous earth; thickeners such as carrageenan and modified cellulose; wetting, spreading, and dispersing agents; propellants in aerosol dispensers; microencapsulating agents; and emulsifiers. The term ''inert'' is not intended to imply nontoxicity; the ingredient may or may not be chemically active. Generally, EPA has exempted inert ingredients from the requirement of a tolerance based on the low toxicity of the individual inert ingredients.

IV. Aggregate Risk Assessment and Determination of Safety

Section 408(c)(2)(A)(i) of FFDCA allows EPA to establish an exemption from the requirement for a tolerance (the legal limit for a pesticide chemical residue in or on a food) only if EPA determines that the exemption is ''safe.'' Section 408(c)(2)(A)(ii) of FFDCA defines ''safe'' to mean that ''there is a reasonable certainty that no harm will result from aggregate exposure to the pesticide chemical residue, including all anticipated dietary exposures and all other exposures for which there is reliable information.'' This includes exposure through drinking water and in residential settings, but does not include occupational exposure. Section 408(b)(2)(C) of FFDCA requires EPA to give special consideration to exposure of infants and children to the pesticide chemical residue and to ''ensure that there is a reasonable certainty that no harm will result to infants and children from aggregate exposure to the pesticide chemical residue. . . .''

EPA establishes exemptions from the requirement of a tolerance only in those cases where it can be clearly demonstrated that aggregate exposure to pesticide chemical residues under reasonably foreseeable circumstances will pose no appreciable risks to human health. In order to determine the risks from aggregate exposure to pesticide inert ingredients, the Agency considers the toxicity of the inert in conjunction with possible exposure to residues of the inert ingredient through food, drinking water, and through other exposures that occur as a result of pesticide use in residential settings. If EPA is able to determine that a finite tolerance is not necessary to ensure that there is a reasonable certainty that no harm will result from aggregate exposure to the inert ingredient, an exemption from the requirement of a tolerance may be established.

Consistent with FFDCA section 408(c)(2)(A), and the factors specified in FFDCA section 408(c)(2)(B), EPA has reviewed the available scientific data and other relevant information in support of this action. EPA has sufficient data to assess the hazards of and to make a determination on aggregate exposure for di-n-butyl adipate including exposure resulting from the exemption established by this action. EPA's assessment of exposures and risks associated with di-n-butyl adipate follows.

A. Toxicological Profile

EPA has evaluated the available toxicity data and considered their validity, completeness, and reliability as well as the relationship of the results of the studies to human risk. EPA has also considered available information concerning the variability of the sensitivities of major identifiable subgroups of consumers, including infants and children. Specific information on the studies received and the nature of the adverse effects caused by di-n-butyl adipate as well as the no-observed-adverse-effect level (NOAEL) and the lowest-observed-adverse-effect level (LOAEL) from the toxicity studies are discussed in this unit.

Di-n-butyl adipate is of low acute oral toxicity, with an oral lethal dose $(LD)_{50}$ in rats of 1.52 gram/kilogram (g/kg) body weight. An 8-hour inhalation exposure to air saturated with di-n-butyl adipate caused no deaths in a group of 6 albino rats. Di-n-butyl adipate as not acutely toxic to rabbits by the dermal route, with a dermal LD_{50} of 19.24 g/kg. Non-standard dermal irritation studies suggest that di-n-butyl adipate is a dermal irritant. Eye irritation studies in rabbits indicated minor eye irritation with recovery in a few days. Di-n-butyl adipate is not a dermal sensitizer in guinea pigs.

In two separate Ames Assays, no mutations were induced in any bacterial strain at any concentration of di-n-butyl adipate with or without metabolic activation. A chromosomal aberration assay was conducted on di-n-butyl adipate using cultured Chinese Hamster lung (CHL/IU) cells. Details of the study were not reported, but structural chromosome aberrations were reported in this study with metabolic activation. In an *in vivo* micronucleus assay, no cytotoxic effects were identified in the bone marrow cells, and there was no significant increase in the number of cells with micronuclei at any dose or time after dosing.

In a reproduction and developmental toxicity study, male and female rats received di-n-butyl adipate at oral doses of 0, 100, 300 and 1,000 milligram/kilogram/day (mg/kg/day). There was no effect of di-n-butyl adipate exposure on any of the reproductive parameters measured. Pup body weight in the 1,000 mg/kg/day group was slightly reduced compared to controls at birth and on postnatal day 4. The study no-observable-adverse-effect level (NOAEL) for general toxicity in the parental generation of 300 mg/kg/day is based on the increase in kidney weights in males and females at 1,000 mg/kg/day. The NOAEL for reproduction in male and female rats was 1,000 mg/kg. The NOAEL for the F_1 generation (offspring toxicity) was 300 mg/kg/day.

The potential effects of repeated oral exposure to di-n-butyl adipate were evaluated in Sprague-Dawley rats in a 28-day toxicity test. Male and female rats received gavage doses of di-n-butyl adipate of 0, 20, 140, or 1000 mg/kg/day. No test substance-related changes were seen in any of the monitored endpoints. The NOAEL in both males and females was 1,000 mg/kg/day.

The results of the OncoLogic Quantitative Structure Activity Relationship (QSAR) model has not identified any concerns for carcinogenicity relating to di-n-butyl adipate.

B. Toxicological Points of Departure/Levels of Concern

Once a pesticide's toxicological profile is determined, EPA identifies toxicological points of departure (POD) and levels of concern to use in evaluating the risk posed by human exposure to the pesticide. For hazards that have a threshold below which there is no appreciable risk, the toxicological POD is used as the basis for derivation of reference values for risk assessment. PODs are developed based on a careful analysis of the doses in each toxicological study to determine the dose at which no adverse effects are observed (the NOAEL) and the lowest dose at which adverse effects of concern are identified (the LOAEL). Uncertainty/safety factors are used in conjunction with the POD to calculate a safe exposure level—generally referred to as a population-adjusted dose (PAD) or a reference dose (RfD)—and a safe margin of exposure (MOE). For non-threshold risks, the Agency assumes that any amount of exposure will lead to some degree of risk. Thus, the Agency estimates risk in terms of the probability of an occurrence of the adverse effect expected in a lifetime. For more information on the general principles EPA uses in risk characterization and a complete description of the risk assessment process, see *http://www.epa.gov/pesticides/factsheets/riskassess.htm.*

No acute toxicological endpoint of concern has been identified for di-n-butyl adipate. On the basis of the reproduction study (OECD Preliminary Reproduction Test), the NOAEL for di-n-butyl adipate was 300 mg/kg/day for offspring toxicity based on decreased in pup body weights seen at the LOAEL of 1,000 mg/kg/day was selected for risk assessment. The available toxicology data support that an Food Quality Protection Act safety factor (FQPA SF) of 3X for di-n-butyl adipate should be retained to account for uncertainties associated with subchronic to chronic extrapolation. Therefore, the chronic population adjusted dose (cPAD) is 1 mg/kg/day based upon a NOAEL of 300 mg/kg/day and the use of 10X factors for intra- and inter-species variability and an FQPA SF of 3X.

C. Exposure Assessment

1. *Dietary exposure from food and feed uses.* In evaluating dietary exposure to di-n-butyl adipate, EPA considered exposure under the proposed exemption from the requirement of a tolerance. EPA assessed dietary exposures from di-n-butyl adipate in food as follows:

Acute and chronic dietary assessments take into account exposure estimates from dietary consumption of food and drinking water. The Agency assessed the dietary exposures to di-n-butyl adipate as an inert ingredient at no more than 25% in the plastic of strips containing pesticides that are placed at the entrance to bee hives.

No adverse effects attributable to a single exposure to di-n-butyl adipate were seen in the toxicity databases; therefore, an acute dietary risk assessment is not appropriate.

In conducting the chronic dietary exposure assessment to di-n-butyl adipate the Dietary Exposure Evaluation Model/Food Commodity Intake Database (DEEM–FCID)TM, Version 3.16 was used. EPA used food consumption information from the U.S. Department of Agriculture's National Health and Nutrition Examination Survey, What We Eat in America, (NHANES/WWEIA). This dietary survey was conducted from 2003 to 2008. As to residue levels in food, no residue data were submitted for di-n-butyl adipate. In the absence of specific residue data, EPA has developed an approach that uses surrogate information to derive upper bound exposure estimates for the subject inert ingredient. Upper bound exposure estimates are based on the highest tolerance for a given commodity from a list of high-use insecticides, herbicides, and fungicides. A complete description of the general approach taken to assess inert ingredient risks in the absence of residue data is contained in the memorandum entitled ''Alkyl Amines Polyalkoxylates (Cluster 4): Acute and Chronic Aggregate (Food and Drinking Water) Dietary Exposure and Risk Assessments for the Inerts.'' (D361707, S. Piper, 2/25/09) and can be found at *http://www.regulations.gov* in docket ID number EPA–HQ–OPP–2008–0738. Adjustments were made to the DEEM model estimates for oral exposure from the use of di-n-butyl adipate to account for the use of not more than 25% di-n-butyl adipate in strips containing pesticides that are placed at the entrance to bee hives (for honey and including exposure through drinking water).

The Agency has not identified any concerns for carcinogenicity relating to di-n-butyl adipate; therefore, a cancer dietary exposure assessment was not performed.

2. *Dietary exposure from drinking water.* For the purpose of the screening level dietary risk assessment to support this request for an exemption from the requirement of a tolerance for di-n-butyl adipate, a conservative drinking water concentration value of 100 parts per billion (ppb) based on screening level modeling was used to assess the contribution to drinking water for the chronic dietary risk assessments for parent compound. These values were directly entered into the dietary exposure model.

3. *From non-dietary exposure.* The term ''residential exposure'' is used in this document to refer to non-occupational, non-dietary exposure (*e.g.,* textiles (clothing and diapers), carpets, swimming pools, and hard surface disinfection on walls, floors, tables).

Di-n-butyl adipate may be used in inert ingredients in products that are registered for specific uses that may result in residential exposure, such as pesticides used in and around the home. Based on the available data for products registered for residential use, the Agency SOPs concluded that products containing inert chemicals similar to di-n-butyl adipate usually comprise no more than 2–5% of the inert ingredient in the final product. Therefore, the Agency conducted an assessment to represent conservative residential exposure by assessing di-n-butyl adipate in pesticide formulations (outdoor scenarios) and in disinfectant-type uses (indoor scenarios) at no more than 5% in the final formulation.

4. *Cumulative effects from substances with a common mechanism of toxicity.* Section 408(b)(2)(D)(v) of FFDCA requires that, when considering whether to establish, modify, or revoke a tolerance or exemption from a tolerance, the Agency consider ''available information'' concerning the cumulative effects of a particular pesticide's residues and ''other substances that have a common mechanism of toxicity.''

EPA has not found di-n-butyl adipate to share a common mechanism of toxicity with any other substances, and di-n-butyl adipate does not appear to produce a toxic metabolite produced by other substances. For the purposes of this tolerance action, therefore, EPA has assumed that di-n-butyl adipate does not have a common mechanism of toxicity with other substances. For information regarding EPA's efforts to determine which chemicals have a common mechanism of toxicity and to evaluate the cumulative effects of such chemicals, see EPA's Web site at *http://www.epa.gov/pesticides/cumulative.*

D. Safety Factor for Infants and Children

1. *In general.* Section 408(b)(2)(C) of FFDCA provides that EPA shall apply an additional tenfold (10X) margin of safety for infants and children in the case of threshold effects to account for prenatal and postnatal toxicity and the completeness of the database on toxicity and exposure unless EPA determines based on reliable data that a different margin of safety will be safe for infants and children. This additional margin of safety is commonly referred to as the FQPA SF. In applying this provision, EPA either retains the default value of 10X, or uses a different additional safety factor when reliable data available to EPA support the choice of a different factor.

2. *Prenatal and postnatal sensitivity.* Considering the overall toxicity profile and the endpoints and doses selected for di-n-butyl adipate, the degree of concern for the effects observed in the di-n-butyl adipate reproductive and developmental toxicity screening study is low, with a clear NOAEL for the offspring effects and regulatory doses selected to be protective of any observed effects. No other residual uncertainties were identified with respect to susceptibility.

3. *Conclusion.* EPA has determined that reliable data show the safety of infants and children would be adequately protected if the FQPA SF were reduced to 3X. That decision is based on the following findings:

i. The toxicity database for di-n-butyl adipate is adequate to assess the safety of this chemical. However, to account for potential adverse effects from chronic exposures, an FQPA SF of 3X is retained to account for the extrapolation

of adverse effects seen in subchronic toxicity studies to chronic exposure scenarios.

ii. There is no indication that di-n-butyl adipate is a neurotoxic chemical and there is no need for a developmental neurotoxicity study or additional uncertainty factors (UFs) to account for neurotoxicity.

iii. There is some indication that potential effects of di-n-butyl adipate results in increased susceptibility in young rats in the 2-generation reproduction study but the concern is low due to the selected endpoints.

iv. There are no residual uncertainties identified in the exposure databases. The dietary food exposure assessments were performed based on 100% CT and tolerance-level residues. EPA made conservative (protective) assumptions in the ground and surface water modeling used to assess exposure to di-n-butyl adipate in drinking water. EPA used similarly conservative assumptions to assess postapplication exposure of children as well as incidental oral exposure of toddlers. These assessments will not underestimate the exposure and risks posed by di-n-butyl adipate.

E. Aggregate Risks and Determination of Safety

Determination of safety section. EPA determines whether acute and chronic dietary pesticide exposures are safe by comparing aggregate exposure estimates to the acute PAD (aPAD) and chronic PAD (cPAD). For linear cancer risks, EPA calculates the lifetime probability of acquiring cancer given the estimated aggregate exposure. Short-, intermediate-, and chronic-term risks are evaluated by comparing the estimated aggregate food, water, and residential exposure to the appropriate PODs to ensure that an adequate MOE exists.

1. *Acute risk.* An acute aggregate risk assessment takes into account acute exposure estimates from dietary consumption of food and drinking water. No adverse effect resulting from a single oral exposure was identified and no acute dietary endpoint was selected. Therefore, di-n-butyl adipate is not expected to pose an acute risk.

2. *Chronic risk.* Using the exposure assumptions described in this unit for chronic exposure, EPA has concluded that chronic exposure to di-n-butyl adipate from food and water will utilize <1% of the cPAD for all population subgroups.

3. *Short- and intermediate-term risk.* Short- and intermediate-term aggregate exposure takes into account short- and intermediate-term residential exposure plus chronic exposure to food and water (considered to be a background exposure level).

A short- and intermediate-term adverse effect was identified from the chronic oral end-point. Although di-n-butyl adipate is not currently used as an inert ingredient in pesticide products that are registered for any use patterns that would result in short- or intermediate-term residential exposure, there is a possibility that di-n-butyl adipate could be used in residential pesticide products that would result in short- or intermediate-term residential exposure. As a result, the Agency has determined that it is appropriate to aggregate chronic exposure through food and water with short- and intermediate-term residential exposures to di-n-butyl adipate.

Using the exposure assumptions described above, EPA has concluded that the combined chronic food and water, and short- and intermediate-term residential exposures result in aggregate MOEs of 1700 for adult males and females. Adult residential exposure combines liquids/trigger sprayer/home garden use with a high end post application dermal exposure from contact with treated lawns. As the level of concern is for MOEs that are lower than 100, this MOE is not of concern. EPA has concluded the combined short- and intermediate-term aggregated food, water, and residential exposures result in an aggregate MOE of 3200 for children. Children's residential exposure includes total exposures associated with contact with treated surfaces (dermal and hand-to-mouth exposures). As the level of concern is for MOEs that are lower than 100, this MOE is not of concern.

4. *Aggregate cancer risk for U.S. population.* Results of a predictive Quantitative Structure Activity Relationship (QSAR) model using the OncoLogic™ Model (EPA, 2013b, version 8.0) indicate no evidence for carcinogenicity of di-n-butyl adipate. Based on the lack of evidence of carcinogenicity in the toxicity database and the model results, di-n-butyl adipate not expected to pose a cancer risk to humans.

5. *Determination of safety.* Based on these risk assessments, EPA concludes that there is a reasonable certainty that no harm will result to the general population, or to infants and children from aggregate exposure to di-n-butyl adipate residues.

V. Other Considerations

A. Analytical Enforcement Methodology

Although EPA is establishing a limitation on the amount of di-n-butyl adipate that may be used in pesticide formulations, an analytical enforcement methodology is not necessary for this exemption from the requirement of tolerance. The limitation will be enforced through the pesticide registration process under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), 7 U.S.C. 136 *et seq.* EPA will not register any pesticide for sale or distribution for use on growing crops or raw agricultural commodities after harvest with concentrations of di-n-butyl adipate exceeding 25% by weight of the formulation.

B. Revisions to Petitioned-for Tolerances

Although not indicated the petitioner's notice of filing (NOF), the proposed concentration of di-n-butyl adipate indicated is not to exceed a maximum of 25%.

VI. Conclusions

Therefore, an exemption from the requirement of a tolerance is established under 40 CFR 180.910 for di-n-butyl adipate (CAS Reg. No. 105–99–7) when used at no more than 25% by weight in pesticide formulation for varroa mite control around bee hives.

VII. Statutory and Executive Order Reviews

This action establishes an exemption from the requirement of a tolerance under FFDCA section 408(d) in response to a petition submitted to the Agency. The Office of Management and Budget (OMB) has exempted these types of actions from review under Executive Order 12866, entitled ''Regulatory Planning and Review'' (58 FR 51735, October 4, 1993). Because this action has been exempted from review under Executive Order 12866, this action is not subject to Executive Order 13211, entitled ''Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use'' (66 FR 28355, May 22, 2001) or Executive Order 13045, entitled ''Protection of Children from Environmental Health Risks and Safety Risks'' (62 FR 19885, April 23, 1997). This action does not contain any information collections subject to OMB approval under the Paperwork Reduction Act (PRA) (44 U.S.C. 3501 *et seq.*), nor does it require any special considerations under Executive Order 12898, entitled ''Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations'' (59 FR 7629, February 16, 1994).

Since tolerances and exemptions that are established on the basis of a petition under FFDCA section 408(d), such as

the exemption in this final rule, do not require the issuance of a proposed rule, the requirements of the Regulatory Flexibility Act (RFA) (5 U.S.C. 601 *et seq.*), do not apply.

This action directly regulates growers, food processors, food handlers, and food retailers, not States or tribes, nor does this action alter the relationships or distribution of power and responsibilities established by Congress in the preemption provisions of FFDCA section 408(n)(4). As such, the Agency has determined that this action will not have a substantial direct effect on States or tribal governments, on the relationship between the national government and the States or tribal governments, or on the distribution of power and responsibilities among the various levels of government or between the Federal Government and Indian tribes. Thus, the Agency has determined that Executive Order 13132, entitled ''Federalism'' (64 FR 43255, August 10, 1999) and Executive Order 13175, entitled ''Consultation and Coordination with Indian Tribal Governments'' (65 FR 67249, November 9, 2000) do not apply to this action. In addition, this action does not impose any enforceable duty or contain any unfunded mandate as described under Title II of the Unfunded Mandates Reform Act (UMRA) (2 U.S.C. 1501 *et seq.*).

This action does not involve any technical standards that would require Agency consideration of voluntary consensus standards pursuant to section 12(d) of the National Technology Transfer and Advancement Act (NTTAA) (15 U.S.C. 272 note).

VIII. Congressional Review Act

Pursuant to the Congressional Review Act (5 U.S.C. 801 *et seq.*), 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**. This action is not a ''major rule'' as defined by 5 U.S.C. 804(2).

List of Subjects in 40 CFR Part 180

Environmental protection, Administrative practice and procedure, Agricultural commodities, Pesticides and pests, Reporting and recordkeeping requirements.

Dated: October 28, 2016.

Rachel C. Holloman,

Acting Director, Registration Division, Office of Pesticide Programs.

Therefore, 40 CFR chapter I is amended as follows:

PART 180—[AMENDED]

■ 1. The authority citation for part 180 continues to read as follows:

Authority: 21 U.S.C. 321(q), 346a and 371.

■ 2. In § 180.910, add alphabetically the inert ingredient to the table to read as follows:

§ 180.910 Inert ingredients used pre- and post-harvest; exemptions from the requirement of a tolerance.

* * * * *

Inert ingredients	Limits	Uses
* *	* *	* * * * *
di-n-Butyl adipate (CAS Reg. No. 105–99–7).	Not to exceed 25% by weight of pesticide formulation.	Plasticizer in pesticide formulations for varroa mite control around bee hives
* *	* *	* * * * *

[FR Doc. 2016–27209 Filed 11–9–16; 8:45 am]

BILLING CODE 6560–50–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 622

[Docket No. 101206604–1758–02]

RIN 0648–XF017

Coastal Migratory Pelagic Resources of the Gulf of Mexico and Atlantic Region; 2016–2017 Commercial Accountability Measures and Closure for King Mackerel in the Florida West Coast Northern Subzone

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Temporary rule; closure.

SUMMARY: NMFS implements accountability measures (AMs) for commercially harvested king mackerel in the Florida west coast northern subzone of the eastern zone of the Gulf of Mexico (Gulf) exclusive economic zone (EEZ) through this temporary rule. NMFS has determined that the commercial quota for king mackerel in the eastern zone, Florida west coast northern subzone of the Gulf EEZ will be reached by November 10, 2016. Therefore, NMFS closes the Florida west coast northern subzone to commercial fishing for king mackerel on November 10, 2016, to protect the Gulf king mackerel resource.

DATES: The closure is effective at noon, local time, November 10, 2016, until 12:01 a.m., local time, on October 1, 2017.

FOR FURTHER INFORMATION CONTACT: Susan Gerhart, NMFS Southeast Regional Office, telephone: 727–824–5305, email: *susan.gerhart@noaa.gov.*

SUPPLEMENTARY INFORMATION: The fishery for coastal migratory pelagic fish includes king mackerel, Spanish mackerel, and cobia, and is managed under the Fishery Management Plan for Coastal Migratory Pelagic Resources in the Gulf of Mexico and Atlantic Region (FMP). The FMP was prepared by the Gulf of Mexico and South Atlantic Fishery Management Councils and is implemented by NMFS under the authority of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) by regulations at 50 CFR part 622.

The Gulf migratory group of king mackerel is divided into western and eastern zones. The Gulf's eastern zone for king mackerel is further divided into the Florida west coast northern and southern subzones that have separate commercial quotas. The Florida west coast northern subzone is that part of the Gulf EEZ between 26°19.8′ N. lat., a line extending directly west from the boundary between Lee and Collier Counties, Florida, and 87°31.1′ W. long., a line extending directly south from the state boundary of Alabama and Florida. The commercial quota for the Florida west coast northern subzone is 178,848 lb (81,124 kg), round or gutted weight, as specified in 50 CFR 622.384(b)(1)(i)(B)(*2*).

Regulations at 50 CFR 622.8(b) and 50 CFR 622.388(a)(1)(i) require NMFS to close the commercial sector for Gulf migratory group king mackerel in the

Florida west coast northern subzone when the commercial quota is reached, or is projected to be reached, by filing a notification to that effect with the Office of the Federal Register. Based on the best scientific information available, NMFS has determined the commercial quota of 178,848 lb (81,124 kg) for Gulf migratory group king mackerel in the Florida west coast northern subzone will be reached by November 10, 2016. Accordingly, the Florida west coast northern subzone is closed to commercial fishing for Gulf migratory group king mackerel effective from noon, local time, November 10, 2016, through September 30, 2017, the end of the current fishing year. The next fishing year for the Florida west coast northern subzone is October 1, 2017, through September 30, 2018.

Except for a person aboard a charter vessel or headboat, during the closure, no person aboard a vessel for which a commercial permit for king mackerel has been issued may fish for or retain Gulf group king mackerel in the EEZ in the closed subzone, as specified in 50 CFR 622.384(e)(1) and (2). A person aboard a vessel that has a valid charter vessel/headboat permit for coastal migratory pelagic fish may continue to retain king mackerel in or from the closed subzone under the bag and possession limits set forth in 50 CFR 622.382(a)(1)(ii) and (a)(2), provided the vessel is operating as a charter vessel or headboat. A charter vessel or headboat that also has a commercial king mackerel permit is considered to be operating as a charter vessel or headboat when it carries a passenger who pays a fee or when there are more than three persons aboard, including operator and crew.

During the closure, king mackerel harvested from the closed subzone, including those harvested under the bag and possession limits, may not be purchased or sold. This prohibition does not apply to king mackerel from the closed zones or subzones that were harvested, landed ashore, and sold prior to the closure and were held in cold storage by a dealer or processor, as specified in 50 CFR 622.384(e)(3).

Classification

The Regional Administrator, Southeast Region, NMFS, has determined this temporary rule is necessary for the conservation and management of Gulf migratory group king mackerel and is consistent with the Magnuson-Stevens Act and other applicable laws.

This action is taken under 50 CFR 622.388(a)(1)(i) and 50 CFR 622.384(e) and is exempt from review under Executive Order 12866.

These measures are exempt from the procedures of the Regulatory Flexibility Act because the temporary rule is issued without opportunity for prior notice and comment.

This action responds to the best scientific information available. The Assistant Administrator for NOAA Fisheries (AA) finds that the need to immediately implement this action to close the Florida west coast northern subzone of the Gulf eastern zone to commercial king mackerel fishing constitutes good cause to waive the requirements to provide prior notice and opportunity for public comment pursuant to the authority set forth at 5 U.S.C. 553(b)(B), as such procedures are unnecessary and contrary to the public interest. Such procedures are unnecessary, because the rule implementing the commercial quota and the associated AMs has already been subject to notice and public comment, and all that remains is to notify the public of the closure. Such procedures are contrary to the public interest because the capacity of the fishing fleet allows for rapid harvest of the commercial quota, and there is a need to immediately implement this action to protect the king mackerel resource. Prior notice and opportunity for public comment would require time and could potentially result in a harvest well in excess of the established commercial quota.

For the aforementioned reasons, the AA also finds good cause to waive the 30-day delay in the effectiveness of this action under 5 U.S.C. 553(d)(3).

Authority: 16 U.S.C. 1801 *et seq.*

Dated: November 7, 2016.

Jenni Wallace,

Acting Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 2016–27200 Filed 11–7–16; 4:15 pm]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 648

[Docket No. 151211999–6343–02]

RIN 0648–XF030

Fisheries of the Northeastern United States; Northeast Multispecies Fishery; Witch Flounder Trimester Total Allowable Catch Area Closure for the Common Pool Fishery

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Temporary rule; area closure.

SUMMARY: This action closes the Witch Flounder Trimester Total Allowable Catch Area to Northeast multispecies common pool vessels fishing with trawl gear for the remainder of Trimester 2, through December 31, 2016. The common pool fishery is projected to have caught 90 percent of its Trimester 2 quota for witch flounder. The closure is intended to prevent an overage of the common pool's quota for this stock.

DATES: This action is effective November 9, 2016, through December 31, 2016.

FOR FURTHER INFORMATION CONTACT: Liz Sullivan, Fishery Management Specialist, (978) 282–8493.

SUPPLEMENTARY INFORMATION: Federal regulations at 50 CFR 648.82(n)(2)(ii) require the Regional Administrator to close a common pool Trimester Total Allowable Catch (TAC) Area for a stock when 90 percent of the Trimester TAC is projected to be caught. The closure applies to all common pool vessels fishing with gear capable of catching that stock for the remainder of the trimester.

As of November 1, 2016, the common pool fishery caught approximately 80 percent of the Trimester 2 TAC (2.4 mt) for witch flounder. We project that 90 percent of the Trimester 2 TAC was caught by November 6.

Effective November 9, 2016, the Witch Flounder Trimester TAC Area is closed for the remainder of Trimester 2, through December 31, 2016, to all common pool vessels fishing with trawl gear. The Witch Flounder Trimester TAC Area consists of statistical areas 512, 513, 514, 515, 521, 522, and 525. The area reopens at the beginning of Trimester 3 on January 1, 2017.

If a vessel declared its trip through the Vessel Monitoring System (VMS) or the interactive voice response system, and

crossed the VMS demarcation line prior to November 9, 2016, it may complete its trip within the Trimester TAC Area.

Any overage of the Trimester 1 or 2 TACs must be deducted from the Trimester 3 TAC. Any uncaught portion of the Trimester 1 and Trimester 2 TACs is carried over into the next trimester. If the common pool fishery exceeds its sub-ACL for the 2016 fishing year, the overage must be deducted from the common pool's sub-ACL for fishing year 2017. However, any uncaught portion of the common pool's sub-ACL may not be carried over into the following fishing year.

Weekly quota monitoring reports for the common pool fishery are on our Web site at: *http://www.greateratlantic.fisheries.noaa.gov/ro/fso/MultiMonReports.htm*. We will continue to monitor common pool catch through vessel trip reports, dealer-reported landings, VMS catch reports, and other available information, and, if necessary, we will make additional adjustments to common pool management measures.

Classification

This action is required by 50 CFR part 648 and is exempt from review under Executive Order 12866.

The Assistant Administrator for Fisheries, NOAA, finds good cause pursuant to 5 U.S.C. 553(b)(B) and 5 U.S.C. 553(d)(3) to waive prior notice and the opportunity for public comment and the 30-day delayed effectiveness period because it would be impracticable and contrary to the public interest.

Regulations require the Regional Administrator to close a trimester TAC area to the common pool fishery when 90 percent of the Trimester TAC for a stock has been caught. Updated catch information only recently became available indicating that common pool catch would reach 90 percent of the Trimester 2 TAC for witch flounder by November 6, 2016. The time necessary to provide for prior notice and comment, and a 30-day delay in effectiveness, would prevent the immediate closure of the Witch Flounder Trimester 2 TAC Area. Delaying the effective date of the closure increases the likelihood that the common pool fishery will exceed its quota of witch flounder to the detriment of this stock, which could undermine management objectives of the Northeast Multispecies FMP.

Additionally, an overage of the common pool quota could cause negative economic impacts to the common pool fishery as a result of overage paybacks in a future trimester or fishing year.

Authority: 16 U.S.C. 1801 *et seq.*

Dated: November 8, 2016.

Jennifer M. Wallace,

Acting Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 2016–27319 Filed 11–9–16; 8:45 am]

BILLING CODE 3510–22–P

Proposed Rules

Federal Register
Vol. 81, No. 218
Thursday, November 10, 2016

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.

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2015–0084; Directorate Identifier 2014–NM–181–AD]

RIN 2120–AA64

Airworthiness Directives; Airbus Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Supplemental notice of proposed rulemaking (SNPRM); reopening of comment period.

SUMMARY: We are revising an earlier proposed airworthiness directive (AD) for certain Airbus Model A300 B4–2C, B4–103, and B4–203 airplanes; and Model A300 B4–600 and A300 B4–600R series airplanes. This action revises the NPRM by adding additional inspections for cracking, and related investigative and corrective actions if necessary, and adding airplanes to the applicability. We are proposing this SNPRM to detect and correct cracking on the frame (FR) 40 forward fittings, which could result in reduced structural integrity of the airplane. Since these actions impose an additional burden over those proposed in the NPRM, we are reopening the comment period to allow the public the chance to comment on these proposed changes.

DATES: The comment period for the NPRM published in the **Federal Register** on February 13, 2015 (80 FR 7992) is reopened.

We must receive comments on this SNPRM by December 27, 2016.

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- *Federal eRulemaking Portal:* Go to *http://www.regulations.gov.* Follow the instructions for submitting comments.
- *Fax:* 202–493–2251.
- *Mail:* U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- *Hand Delivery:* U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this SNPRM, contact Airbus SAS, Airworthiness Office—EAW, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 44 51; email *account.airworth-eas@airbus.com;* Internet *http://www.airbus.com.* You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425–227–1221.

Examining the AD Docket

You may examine the AD docket on the Internet at *http://www.regulations.gov* by searching for and locating Docket No. FAA–2015–0084; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (telephone: 800–647–5527) is in the **ADDRESSES** section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Dan Rodina, Aerospace Engineer, International Branch, ANM–116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057–3356; telephone 425–227–2125; fax 425–227–1149.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the **ADDRESSES** section. Include ''Docket No. FAA–2015–0084; Directorate Identifier 2014–NM–181–AD'' at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD based on those comments.

We will post all comments we receive, without change, to *http://www.regulations.gov*, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain Airbus Model A300 B4–2C, B4–103, and B4–203 airplanes; and Model A300 B4–600 and A300 B4–600R series airplanes. The NPRM published in the **Federal Register** on February 13, 2015 (80 FR 7992) (''the NPRM''). The NPRM was prompted by reports indicating that, on airplanes that received a certain repair following crack findings, cracks can re-initiate. The NPRM proposed to require repetitive inspections for cracking of the FR 40 forward fittings for airplanes previously repaired.

Actions Since the NPRM Was Issued

Since we issued the NPRM, we have determined that additional inspections for cracking are necessary and that additional airplanes are affected by the identified unsafe condition.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA Airworthiness Directive 2015–0232R1, dated December 16, 2015 (referred to after this as the Mandatory Continuing Airworthiness Information, or ''the MCAI''), to correct an unsafe condition for certain Airbus Model A300 series airplanes; and Model A300 B4–600, B4–600R and F4–600R series airplanes, and Model A300 C4–605R Variant F airplanes (collectively called Model A300–600 series airplanes). The MCAI states:

> Cracks were found on the lower outboard radius of the centre wing frame 40 forward fitting on in-service aeroplanes.
>
> This condition, if not detected and corrected, could lead to reduced structural integrity of the aeroplane.
>
> To address this unsafe condition, Airbus issued several inspection Service Bulletins (SB) and repair instructions. Consequently, EASA issued AD 2009–0094, which was later superseded by EASA AD 2011–0163 [which

corresponds to FAA AD 2012–25–06, Amendment 39–17287 (77 FR 75833, December 26, 2012) (''AD 2012–25–06'')] and [EASA] AD 2014–0199 [which corresponds to the FAA NPRM], to require repetitive inspections and corrective actions on the affected areas.

Since those [EASA] ADs were issued, additional in-service findings induced Airbus to do a new fatigue analysis, using a detailed Finite Element Model study, which resulted in defining new inspection methods. Prompted by these results, Airbus issued SB A300–57–0261, SB A300–57–6117 and SB A300–57–9034 to introduce these inspections. These new inspection SBs supersede and render obsolete inspection SB A300–53–0268 and SB A300–57–6052 and the All Operators Transmissions (AOT) A300–53A0391, AOT A300–57A6111, AOT A300–53W002–14 and AOT A300–57W003–14.

For the reasons described above, EASA issued AD 2015–0232, superseding [Direction Générale de l'Aviation Civile] DGAC France AD 1998–038–010(B) R1 [which corresponds to FAA AD 98–25–07, Amendment 39–10933 (63 FR 68167, December 10, 1998) (''AD 98–25–07'')] and [DGAC France] AD 2003–189(B), and EASA AD 2011–0163 and [EASA] AD 2014–0199, to require the new inspections of the affected areas within new thresholds and intervals.

This [EASA] AD is revised to clarify the compliance time(s), introducing a Note after paragraph (1), and to alleviate the reporting requirements of paragraph (3).

Required actions include repetitive rototest, ultrasonic, high frequency eddy current, special detailed, and liquid penetrant inspections, as applicable, of the center wing FR 40 lower outboard radius for cracking, and related investigative and corrective actions if necessary. Related investigative actions include rototest, ultrasonic, high frequency eddy current, and liquid penetrant inspections following repairs of cracking.

Corrective actions include oversizing fastener holes and installing new fasteners, doing spotfacing, doing crack-stop holes, and repairing cracking.

The compliance times vary depending on airplane configuration. The initial compliance times range from 3 months to 56,300 flight cycles or 76,000 flight hours (whichever occurs first) after accomplishing certain actions. Repetitive intervals range from 1,400 flight cycles or 3,000 flight hours (whichever occurs first) to 37,500 flight cycles or 50,600 flight hours (whichever occurs first).

You may examine the MCAI in the AD docket on the Internet at *http://www.regulations.gov* by searching for and locating Docket No. FAA–2015–0084.

Related Service Information Under 1 CFR Part 51

Airbus has issued Service Bulletin A300–57–6117, dated May 28, 2015; and Service Bulletin A300–57–0261, dated June 11, 2015. The service information describes procedures for repetitive ultrasonic inspections, rototest inspections, high frequency eddy current inspections, special detailed inspections, and liquid penetrant inspections, and related investigative and corrective actions. These documents are distinct since they apply to different airplane models. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the **ADDRESSES** section.

Comments

We gave the public the opportunity to participate in developing this proposed AD. We considered the comment received.

Request To Suspend Activities on the NPRM Pending New Service Information

United Parcel Service (UPS) requested that we suspend activities on the NPRM pending the issuance of new service information. UPS stated that the new service information will address airplanes that were not identified in the NPRM and will include new inspections.

We acknowledge the commenter's request. We have reviewed the new service information (Airbus Service Bulletin A300–57–6117, dated May 28, 2015; and Airbus Service Bulletin A300–57–0261, dated June 11, 2015) and have revised this SNPRM accordingly. We have updated paragraph (c) of this proposed AD to include all affected airplanes, and we have revised paragraphs (g) and (h) of this proposed AD to refer to the new service information.

FAA's Determination and Requirements of This SNPRM

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all pertinent information and determined an unsafe condition exists and is likely to exist or develop on other products of these same type designs.

Certain changes described above expand the scope of the NPRM. As a result, we have determined that it is necessary to reopen the comment period to provide additional opportunity for the public to comment on this SNPRM.

Costs of Compliance

We estimate that this SNPRM affects 26 airplanes of U.S. registry. We estimate the following costs to comply with this SNPRM.

ESTIMATED COSTS

Action	Labor cost	Cost per product	Cost on U.S. operators
Inspection	Up to 91 work-hours × $85 per hour = $7,735 per inspection cycle.	Up to $7,735 per inspection cycle	Up to $201,110 per inspection cycle.
Reporting	1 work-hour × $85 per hour = $85	$85	$2,210

Paperwork Reduction Act

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB control number. The control number for the collection of information required by this proposed AD is 2120–0056. The paperwork cost associated with this proposed AD has been detailed in the Costs of Compliance section of this document and includes time for reviewing instructions, as well as completing and reviewing the collection of information. Therefore, all reporting associated with this proposed AD is mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at 800 Independence Ave. SW., Washington, DC 20591, ATTN: Information Collection Clearance Officer, AES–200.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. 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.

We are issuing this rulemaking under the authority described in ''Subtitle VII, Part A, Subpart III, Section 44701: General requirements.'' Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect 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.

For the reasons discussed above, I certify this proposed regulation:

1. Is not a ''significant regulatory action'' under Executive Order 12866;

2. Is not a ''significant rule'' under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);

3. Will not affect intrastate aviation in Alaska; and

4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

■ 1. The authority citation for part 39 continues to read as follows:

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

§ 39.13 [Amended]

■ 2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

Airbus: Docket No. FAA–2015–0084; Directorate Identifier 2014–NM–181–AD.

(a) Comments Due Date

We must receive comments by December 27, 2016.

(b) Affected ADs

This AD affects AD 98–25–07, Amendment 39–10933 (63 FR 68167, December 10, 1998) (''AD 98–25–07''); and AD 2012–25–06, Amendment 39–17287 (77 FR 75833, December 26, 2012) (''AD 2012–25–06'').

(c) Applicability

This AD applies to the Airbus airplanes, certificated in any category, identified in paragraphs (c)(1) through (c)(5) of this AD, except airplanes on which Airbus Modification 10221 has been embodied in production.

(1) Model A300 B2–1A, B2–1C, B2K–3C, B2–203, B4–2C, B4–103, and B4–203 airplanes.

(2) Model A300 B4–601, B4–603, B4–620, and B4–622 airplanes.

(3) Model A300 B4–605R and B4–622R airplanes.

(4) Model A300 F4–605R and F4–622R airplanes.

(5) Model A300 C4–605R Variant F airplanes.

(d) Subject

Air Transport Association (ATA) of America Code 57, Wings.

(e) Reason

This AD was prompted by reports of cracks on the lower outboard radius of the center wing frame (FR) 40 forward fitting. We are issuing this AD to detect and correct cracking on the FR 40 forward fittings, which could result in reduced structural integrity of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Repetitive Inspections

Except as provided by paragraph (i)(1) of this AD, at the applicable times specified in paragraph E.(2), ''Compliance,'' of Airbus Service Bulletin A300–57–0261, dated June 11, 2015; or Airbus Service Bulletin A300–57–6117, dated May 28, 2015; accomplish rototest, ultrasonic, high frequency eddy current, special detailed, and liquid penetrant inspections, as applicable, of the center wing FR 40 lower outboard radius for cracking, and do all applicable related investigative actions, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A300–57–0261, dated June 11, 2015; or Airbus Service Bulletin A300–57–6117, dated May 28, 2015; as applicable. Do all applicable related investigative actions before further flight. Repeat the inspections thereafter at the applicable times specified in paragraph E.(2), ''Compliance,'' of Airbus Service Bulletin A300–57–0261, dated June 11, 2015; or Airbus Service Bulletin A300–57–6117, dated May 28, 2015.

(h) Corrective Actions

If, during any inspection required by paragraph (g) of this AD, any crack is found, before next flight, accomplish the applicable corrective actions, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A300–57–0261, dated June 11, 2015; or Airbus Service Bulletin A300–57–6117, dated May 28, 2015; as applicable; except as required by paragraph (i)(2) of this AD.

(i) Service Information Exception

(1) Where the service information specified in paragraph (g) of this AD specifies a compliance time ''from this service bulletin issuance date,'' this AD requires compliance within the specified compliance time after the effective date of this AD.

(2) Where the service information specified in paragraph (h) of this AD specifies to contact Airbus for certain conditions, before further flight, repair using a method approved by the Manager, International Branch, ANM–116, Transport Airplane Directorate, FAA; or the European Aviation Safety Agency (EASA); or Airbus' EASA Design Organization Approval (DOA).

(j) No Terminating Action for This AD

Accomplishing a corrective action required by paragraph (h) of this AD, or accomplishing a preventative action specified in Airbus Service Bulletin A300–57–0260 or A300–57–6116, as applicable, does not terminate the repetitive inspections required by paragraph (g) of this AD.

(k) Terminating Action for Certain Requirements of Other ADs

(1) Accomplishing the actions required by paragraph (g) of this AD terminates the actions required by paragraphs (a) and (b) of AD 98–25–07.

(2) Accomplishing the actions required by paragraph (g) of this AD terminates the actions required by paragraphs (i) and (j) of AD 2012–25–06.

(l) Reporting Requirements

Within 60 days after any inspection required by paragraph (g) of this AD, or within 60 days after the effective date of this AD, whichever occurs later, report any findings, positive or negative, to Airbus Service Bulletin Reporting Online Application on Airbus World (*https://w3.airbus.com/*).

(m) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs):* The Manager, International Branch, ANM–116, Transport Airplane Directorate, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the International Branch, send it to ATTN:

Dan Rodina, Aerospace Engineer, International Branch, ANM–116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057–3356; telephone 425–227–2125; fax 425–227–1149. Information may be emailed to: *9-ANM-116-AMOC-REQUESTS@faa.gov.* Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(2) *Contacting the Manufacturer:* For any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, International Branch, ANM–116, Transport Airplane Directorate, FAA; or the EASA; or Airbus's EASA DOA. If approved by the DOA, the approval must include the DOA-authorized signature.

(3) *Reporting Requirements:* A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2120–0056. Public reporting for this collection of information is estimated to be approximately 5 minutes per response, including the time for reviewing instructions, completing and reviewing the collection of information. All responses to this collection of information are mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW., Washington, DC 20591, Attn: Information Collection Clearance Officer, AES–200.

(n) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA Airworthiness Directive 2015–0232R1, dated December 16, 2015, for related information. This MCAI may be found in the AD docket on the Internet at *http://www.regulations.gov* by searching for and locating Docket No. FAA–2015–0084.

(2) For service information identified in this AD, contact Airbus SAS, Airworthiness Office—EAW, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 44 51; email *account.airworth-eas@airbus.com;* Internet *http://www.airbus.com.* You may view this service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425–227–1221.

Issued in Renton, Washington, on October 31, 2016.

Michael Kaszycki,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 2016–26813 Filed 11–9–16; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2016–9382; Directorate Identifier 2016–CE–032–AD]

RIN 2120–AA64

Airworthiness Directives; Alexander Schleicher GmbH & Co. Gliders

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for Alexander Schleicher GmbH & Co. Model ASK 21 gliders. This proposed AD results from mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as cable slack in gliders equipped with a rudder hand control system leading to a short-term blockage of the rudder control system and reduced control. We are issuing this proposed AD to correct the unsafe condition on these products.

DATES: We must receive comments on this proposed AD by December 27, 2016.

ADDRESSES: You may send comments by any of the following methods:

- *Federal eRulemaking Portal:* Go to *http://www.regulations.gov.* Follow the instructions for submitting comments.
- *Fax:* (202) 493–2251.
- *Mail:* U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- *Hand Delivery:* U.S. Department of Transportation, Docket Operations, M–30, 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 service information identified in this proposed AD, contact Alexander Schleicher GmbH & Co., Segelflugzeugbau, Germany, Alexander Schleicher Str. 1, D–36163 Poppenhausen (Wasserkuppe), telephone: +49 6658 89–0; fax: +49 6658 89–40; email: *info@alexander-schleicher.de;* Internet: *http://www.alexander-schleicher.de/en/flugzeuge/ask-21/.* You may review this referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329–4148.

Examining the AD Docket

You may examine the AD docket on the Internet at *http://www.regulations.gov* by searching for and locating Docket No. FAA–2016–9382; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (telephone (800) 647–5527) is in the **ADDRESSES** section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Jim Rutherford, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329–4165; fax: (816) 329–4090; email: *jim.rutherford@faa.gov.*

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the **ADDRESSES** section. Include ''Docket No. FAA–2016–9382; Directorate Identifier 2016–CE–032–AD'' at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to *http://regulations.gov,* including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA AD No.: 2016–0192, dated September 28, 2016 (referred to after this as ''the MCAI''), to correct an unsafe condition for the specified products. The MCAI states:

A temporary rudder control blockage was reported, involving an ASK 21 sailplane equipped with a rudder hand control system.

The subsequent investigation revealed significant cable slack in the rudder control system.

This condition, if not detected and corrected, could lead to reduced rudder control, possibly resulting in reduced controllability of the sailplane.

To address this potentially unsafe condition, Schleicher issued ASK 21 Technical Note (TN) 38 to provide instructions to amend the ASK 21 Aircraft Flight Manual (AFM), incorporating updated pre-flight inspection instructions to check the rudder control system of sailplanes modified in accordance with the instructions of Schleicher ASK 21 TN 25 (rudder actuated by hand lever for the front pilot seat) or TN 30 (rudder control by hand for the rear pilot seat).

For reasons described above, this AD requires amendment of the applicable Schleicher ASK 21 AFM, revising pre-flight checks of the rudder hand control system.

You may examine the MCAI on the Internet at *http://www.regulations.gov* by searching for and locating Docket No. FAA–2016–9357.

Related Service Information Under 1 CFR Part 51

Alexander Schleicher GmbH & Co. has issued ASK 21 Technical Note No. 38, dated May 31, 2016, The service information describes procedures for inspecting gliders equipped with a rudder hand control system for proper tension and adjustment if necessary. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the **ADDRESSES** section of this NPRM.

FAA's Determination and Requirements of the Proposed AD

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with this State of Design Authority, they have notified us of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all information and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design.

Costs of Compliance

We estimate that this proposed AD will affect 64 products of U.S. registry. We also estimate that it would take about 2 work-hours per product to comply with the basic requirements of this proposed AD. The average labor rate is $85 per work-hour.

Based on these figures, we estimate the cost of the proposed AD on U.S. operators to be $10,880, or $170 per product.

In addition, we estimate that any necessary follow-on actions would take about 1 work-hour for cost of $85 per product. We have no way of determining the number of products that may need these actions.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. 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.

We are issuing this rulemaking under the authority described in ''Subtitle VII, Part A, Subpart III, Section 44701: General requirements.'' Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect 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.

For the reasons discussed above, I certify this proposed regulation:

(1) Is not a ''significant regulatory action'' under Executive Order 12866,

(2) Is not a ''significant rule'' under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),

(3) Will not affect intrastate aviation in Alaska, and

(4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

■ 1. The authority citation for part 39 continues to read as follows:

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

§ 39.13 [Amended]

■ 2. The FAA amends § 39.13 by adding the following new AD:

Alexander Schleicher GmbH & Co.: Docket No. FAA–2016–9382; Directorate Identifier 2016–CE–032–AD.

(a) Comments Due Date

We must receive comments by December 27, 2016.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Alexander Schleicher GmbH & Co. ASK 21 gliders, all serial numbers, certificated in any category, that are modified with a rudder hand control system using either ASK 21 Technical Note No. 25, dated February 16, 1993, or ASK 21 Technical Note No. 30, dated January 22, 2007.

(d) Subject

Air Transport Association of America (ATA) Code 27: Flight Controls.

(e) Reason

This AD was prompted by mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as cable slack in gliders equipped with a rudder hand control system. We are issuing this proposed AD to correct any excess slack in the rudder hand control system, which could result in a short-term blockage of the rudder control system causing reduced control.

(f) Actions and Compliance

Unless already done, do the actions in paragraphs (f)(1) through (3) of this AD:

(1) If the glider is equipped with a rudder actuated by means of a hand lever at the left cockpit wall in the front pilot seat by ASK 21 Technical Note (TN) No. 25, dated February 16, 1993, within the next 60 days after the effective date of this AD, replace the flight manual (FM) and maintenance manual (MM) pages with the following pages in ASK 21 TN No. 38, dated May 31, 2016:

(i) FM: Check List/1, 16a, 19.1a., and 21.

(ii) MM: 13, 15.

(2) If the glider is equipped with a rudder actuated by means of a hand lever at the left cockpit wall in the rear pilot seat by ASK 21 TN No. 30, dated January 22, 2007, within the next 60 days after the effective date of this AD, replace the FM and MM pages with the following pages in ASK 21 TN No. 38, dated May 31, 2016:

(i) FM: Check List/1, 16a, 18a, 19b, 19c, 19.1a, and 21.

(ii) MM: 13, 15.

(3) For all affected gliders, within the next 60 days after the effective date of this AD and repetitively thereafter at intervals not to exceed every 12 months, inspect the rudder cable tension and make any necessary corrections following the instructions from FM page 19.1a, Checking and Adjusting of the Cable Tension, as specified in ASK 21 TN No. 38, dated May 31, 2016.

(4) For all affected gliders, after the effective date of this AD, any glider modified with a rudder hand control system in accordance with ASK 21 TN No. 25 or TN No. 30 must also amend the FM and MM following the instructions in ASK 21 TN No. 38, dated May 31, 2016.

(g) Pilot Authorization

In addition to the provisions of 14 CFR 43.3 and 43.7, the actions required by paragraph (f)(1) through (2) of this AD may be performed by the owner/operator (pilot) holding at least a private pilot certificate and must be entered into the glider records showing compliance with this AD following 14 CFR 43.9 (a)(1) through (4) and 14 CFR 91.417(a)(2)(v). The record must be maintained as required by 14 CFR 91.417, 121.380, or 135.439.

(h) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs):* The Manager, Standards Office, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to ATTN: Jim Rutherford, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329–4165; fax: (816) 329–4090; email: *jim.rutherford@faa.gov.* Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

(2) *Airworthy Product:* For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

(i) Related Information

Refer to MCAI European Aviation Safety Agency (EASA) AD No.: 2016–0192, dated September 28, 2016, for related information. You may examine the MCAI on the Internet at *http://www.regulations.gov* by searching for and locating Docket No. FAA–2016–9382. For service information related to this AD, contact Alexander Schleicher GmbH & Co., Segelflugzeugbau, Germany, Alexander Schleicher Str. 1, D–36163 Poppenhausen (Wasserkuppe), telephone: +49 6658 89–0; fax: +49 6658 89–40; email: *info@alexander-schleicher.de;* Internet: *http://www.alexander-schleicher.de/en/flugzeuge/ask-21/.* You may review this referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329–4148.

Issued in Kansas City, Missouri, on November 2, 2016.

Pat Mullen,

Acting Manager, Small Airplane Directorate, Aircraft Certification Service.

[FR Doc. 2016–27041 Filed 11–9–16; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 71

[Docket No. FAA–2016–9295; Airspace Docket No. 16–AWP–16]

Proposed Amendment of Class E Airspace, Establishment of Class E En Route Airspace; Paso Robles, CA

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This action proposes to modify Class E surface area airspace, Class E airspace extending upward from 700 feet above the surface, and establish Class E en route airspace at Paso Robles, CA. After a review of the airspace, the FAA found redesign necessary to support new Instrument Flight Rules (IFR) standard instrument approach procedures, and en route operations where the Federal airway structure is inadequate, for the safety and management of aircraft operations at the airport. The geographic coordinates of the airport also would be adjusted.

DATES: Comments must be received on or before December 27, 2016.

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; telephone: 1–800–647–5527, or (202) 366–9826. You must identify FAA Docket No. FAA–2016–9295; Airspace Docket No. 16–AWP–16, 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 9:00 a.m. and 5:00 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.

FAA Order 7400.11A, Airspace Designations and Reporting Points, and subsequent amendments can be viewed online at *http://www.faa.gov/air_traffic/publications/.* For further information, you can contact the Airspace Policy Group, Federal Aviation Administration, 800 Independence Avenue SW., Washington, DC 20591; telephone: 202–267–8783. The Order is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of FAA Order 7400.11A at NARA, call 202–741–6030, or go to *http://www.archives.gov/federal_register/code_of_federal-regulations/ibr_locations.html.*

FAA Order 7400.11, Airspace Designations and Reporting Points, is published yearly and effective on September 15.

FOR FURTHER INFORMATION CONTACT: Tom Clark, Federal Aviation Administration, Operations Support Group, Western Service Center, 1601 Lind Avenue SW., Renton, WA 98057; telephone (425) 203–4511.

SUPPLEMENTARY INFORMATION:

Authority for This Rulemaking

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 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 amend Class E airspace at Paso Robles Municipal Airport, Paso Robles, CA.

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.

Persons 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–2016–9295/Airspace Docket No. 15–ANM–6.'' 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 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.regulations.gov.*

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 9:00 a.m. and 5:00 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.

Availability and Summary of Documents Proposed for Incorporation by Reference

This document proposes to amend FAA Order 7400.11A, Airspace Designations and Reporting Points, dated August 3, 2015, and effective September 15, 2016. FAA Order 7400.11A is publicly available as listed in the **ADDRESSES** section of this document. FAA Order 7400.11A lists Class A, B, C, D, and E airspace areas, air traffic service routes, and reporting points.

The Proposal

The FAA is proposing an amendment to Title 14 Code of Federal Regulations (14 CFR) Part 71 by modifying Class E surface area airspace, Class E airspace extending upward from 700 feet above the surface, and establishing Class E en route airspace upward from 1,200 feet above the surface at Paso Robles Municipal Airport, Paso Robles, CA. The FAA is transitioning from a system of ground based navigational aids, which are being decommissioned, to Global Navigation Satellite System (GNSS) for navigation and found airspace redesign necessary to support new GNSS standard instrument approach procedures and en route, point-to-point clearances for which the Federal airway structure is inadequate. The Class E surface area airspace would be slightly increased to contain arrival aircraft using IFR standard instrument approach procedures as they descend below 1,000 feet above the surface, and the language in the regulatory text excluding the Hunter Low A, Hunter Low B, and Roberts Military Operations Areas would be removed since exclusion is not necessary nor currently shown on published aeronautical charts. Also, the Class E airspace upward from 700 feet above the surface would be slightly enlarged north and southeast, and reduced southwest, to only that area necessary to contain IFR arrival aircraft as they descend below 1,500 feet above the surface, and IFR departure aircraft as they climb to 1,200 feet above the surface. Additionally, Class E en route airspace upward from 1,200 feet above the surface would be established to adjoin the Monterey, Lemoore, Bakersfield, and Santa Barbara Class E airspace areas upward from 1,200 feet above the surface, to provide en route controlled airspace where the Federal airway structure is inadequate. Also, this action would remove the existing Class E transitional airspace upward from 1,200 feet above the surface since this would no longer be necessary and would be redundant with the establishment of the larger en route airspace, described above. The geographic coordinates of the airport would be adjusted to be in concert with the FAA's aeronautical database.

Class E airspace designations are published in paragraph 6002, 6005, and 6006, respectively, of FAA Order 7400.11A, dated August 3, 2016 and effective September 15, 2016, which is incorporated by reference in 14 CFR 71.1. The Class D and Class E airspace designations listed in this document will be published subsequently in the Order.

Regulatory Notices and Analyses

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, is non-controversial and unlikely to result in adverse or negative comments. 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, would not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

Environmental Review

This proposal will be subject to an environmental analysis in accordance with FAA Order 1050.1F, ''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(f), 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 7400.11A, Airspace Designations and Reporting Points, dated August 3, 2016, and effective September 15, 2016, is amended as follows:

Paragraph 6002 Class E Airspace Designated as Surface Areas.

* * * * *

AWP CA E2 Paso Robles, CA [Modified]

Paso Robles Municipal Airport, CA
(Lat. 35°40′22″ N., long. 120°37′38″ W.)

That airspace within a 5.7-mile radius of Paso Robles Municipal Airport.

Paragraph 6005 Class E Airspace Areas Extending Upward From 700 Feet or More Above the Surface of the Earth.

* * * * *

AWP CA E5 Paso Robles, CA [Modified]

Paso Robles Municipal Airport, CA

(Lat. 35°40′22″ N., long. 120°37′38″ W.)

That airspace extending upward from 700 feet above the surface within a 10.5-mile radius of Paso Robles Municipal Airport from the 351° bearing of the airport clockwise to the 040° bearing, and within a 5.7-mile radius from the 040° bearing of the airport clockwise to the 128° bearing, and within a 9-mile radius from the 128° bearing of the airport clockwise to the 168° bearing, and within a 7-mile radius from the 168° bearing of the airport clockwise to the 209° bearing, and within a 5.7-mile radius from the 209° bearing of the airport clockwise to the 323° bearing, and within 1.8 miles each side of the 341° bearing from the airport extending to 9.6 miles northwest of the airport.

Paragraph 6006 Class E En Route Airspace.

* * * * *

AWP CA E6 Paso Robles, CA [New]

Paso Robles Municipal Airport, CA
(Lat. 35°40′22″ N., long. 120°37′38″ W.)

That airspace extending upward from 1,200 feet above the surface within the area bounded by lat. 35°34′54″ N., long. 120°4′52″ W.; to lat. 35°43′55″ N., long. 120°4′52″ W.; to lat. 35°43′58″ N., long. 120°20′49″ W.; to lat. 36°8′51″ N., long. 120°39′41″ W.; to lat. 36°23′8″ N., long. 120°42′26″ W.; to lat. 36°23′13″ N., long. 121°3′25″ W.; to lat. 36°0′42″ N., long. 121°33′30″ W.; to lat. 35°37′48″ N., long. 121°21′48″ W.; to lat. 35°25′55″ N., long. 121°2′47″ W.; to lat. 35°32′43″ N., long. 121°2′47″ W.; to lat. 35°32′52″ N., long. 120°40′42″ W.; to lat. 35°22′10″ N., long. 120°32′00″ W; to lat. 35°31′44″ N., long. 120°14′50″ W.; to lat. 35°35″25″ N., long. 120°17′41″ W.; to the point of beginning.

Issued in Seattle, Washington, on November 1, 2016.

Tracey Johnson,

Manager, Operations Support Group, Western Service Center.

[FR Doc. 2016–27109 Filed 11–9–16; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF DEFENSE

Department of the Army

32 CFR Part 637

RIN 0702–AA72

[Docket No. USA–2016–HQ–0017]

Law Enforcement Operations and Investigations

AGENCY: Department of the Army, DoD.

ACTION: Proposed rule.

SUMMARY: The Department of the Army proposes to revise its regulation concerning policies and procedures for the conduct of Army law enforcement operations and investigations. This regulation was last published in the **Federal Register** on June 22, 2005 (70 FR 36029). At that time, the entire regulation was codified. The proposed revisions remove a large portion of the currently codified part that does not apply to the public and is now included in DoD internal guidance. The proposed revision also adds guidance on the requirements for the detention of civilians by Army law enforcement to fill a void in published guidance.

DATES: Consideration will be given to all comments received by: January 9, 2017.

ADDRESSES: You may submit comments, identified by 32 CFR part 637, Docket No. USA–2016–HQ–0017 and or RIN 0702–AA72, by any of the following methods:

- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the instructions for submitting comments.
- *Mail:* Department of Defense, Office of the Deputy Chief Management Officer, Directorate of Oversight and Compliance, 4800 Mark Center Drive, Mailbox #24, Alexandria, VA 22350–1700.

Instructions: All submissions received must include the agency name and docket number or Regulatory Information Number (RIN) 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: Mr. Jeff Pearce, (703) 695–8499.

SUPPLEMENTARY INFORMATION:

Background

This regulation applies to the active component Army and U.S. Army Reserve, Department of the Army Civilian Police, Department of the Army Civilian Detectives, Department of the Army Security Guards, contracted or contractor security force operations (such as detector dog support), Family members, Department of the Army Civilians, and other personnel on Army installations. It also applies to the Army National Guard of the United States when Federalized under Title 10, United States Code. This regulation is required for unit personnel preparing for mobilization and deployment.

The internal guidance is available in AR 190–30, Military Police Investigations, and can be found at *http://www.apd.army.mil/Search/ePubsSearch/ePubsSearchForm.aspx?x=AR.* This regulation discusses policies for conducting law enforcement and specified security operations on Army installations, facilities and activities. Compliance with this regulation assures consistent delivery of protection, law enforcement, and safety assistance to Soldiers, Family members, Department of the Army Civilians, and other personnel on Army installations.

The Army recognized there is a void in internal guidance concerning the conduct of law enforcement operations on installations. As a result, the Army revised AR 190–30, which includes guidance on the operation of detention cells and detention of civilians. Due to the subject matter's impact on the public, the Army is proposing to add provisions in the CFR concerning Detention Cell Operations which provide guidance on the detention of military and civilian personnel by Army law enforcement.

This rule will be included in DoD's retrospective plan, completed in August 2011, and will be reported in future status updates of DoD's retrospective review in accordance with the requirements in Executive Order 13563. DoD's full plan can be accessed at: *http://www.regulations.gov/#!docketDetail;D=DOD-2011-OS-0036.*

Authority for This Regulation

The legal authority for this action is 10 U.S.C. 807—Article 7, Apprehension. This article specifically covers the authority for apprehension or taking of a person into custody.

Costs and Benefits

This rule will have no monetary effect upon the public as it only directs Army law enforcement and installation leadership's efforts in the conduct of their operations. Their efforts under this guidance ensure the effective employment of police and security forces to assist, protect, and defend the communities they serve on Army installations.

Regulatory Flexibility Act

The Department of the Army certifies that the proposed rule is not subject to the Regulatory Flexibility Act because the rule does not have a significant economic impact on a substantial number of small entities within the meaning of the Regulatory Flexibility Act, 5 U.S.C. 601–612.

Unfunded Mandates Reform Act

The Department of the Army determined that this rule does not include a mandate that may result in estimated costs to State, local or tribal governments in the aggregate, or the private sector, of $100 million or more.

National Environmental Policy Act

The Department of the Army has determined that this rule is not covered under the National Environmental Policy Act because the rule does not have a significant impact on the environment.

Paperwork Reduction Act

The Department of the Army has determined that the Paperwork Reduction Act does not apply because the rule does not involve collection of information from the public.

Executive Order 12630 (Government Actions and Interference With Constitutionally Protected Property Rights)

The Department of the Army has determined that Executive Order 12630 does not apply because the rule does not impair private property rights.

Executive Order 12866 (Regulatory Planning and Review) and Executive Order 13563 (Improving Regulation and Regulatory Review)

Although this rule is not ''economically significant'' because it does not have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, it has been deemed ''other significant'' for raising novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in these Executive Orders. For that reason, it has been reviewed by the Office of Management and Budget (OMB).

Executive Order 13045 (Protection of Children From Environmental Health Risk and Safety Risks)

The Department of the Army has determined that Executive Order 13045 does not apply because this substantive action in rulemaking is neither economically significant nor does the action concern the environmental health or safety risks to children.

Executive Order 13132 (Federalism)

The Department of the Army has determined that according to the criteria defined in Executive Order 13132 this rule does not apply because it will not have a substantial effect 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.

List of Subjects in 32 CFR Part 637

Law enforcement, Law enforcement officers, Law enforcement operations, Detention operations.

Thomas S. Blair,

Chief, Law Enforcement Branch.

■ For reasons discussed in the preamble, the Department of the Army proposes to revise 32 CFR part 637 as follows:

PART 637—LAW ENFORCEMENT OPERATIONS AND INVESTIGATIONS

Subpart A—Detention Cell Operations

Sec.
637.1 Objective and policy.

Subpart B—[Reserved]

Authority: 10 U.S.C. 807.

Subpart A—Detention Cell Operations

§ 637.1 Objective and policy.

(a) Objective. Every effort will be taken to ensure that detained personnel remain in custody only when necessary. Persons will remain in custody for minimum periods, under proper supervision. All persons in custody are treated in a humane manner and in an environment which will not impair their health or subject the detainee to unreasonable discomfort.

(b) Policy. Military and civilian personnel apprehended by military police may be detained in a military police detention cell (D-cell) only when necessary to prevent escape or to ensure safety of the detainee or others.

(1) Detention of civilian personnel not subject to the UCMJ is authorized only while the civilian personnel are pending release to civilian authorities. Detention of civilian personnel will be done only in the case of a serious felony and when the individual is a flight risk, or is a risk to self or others, and must be approved by a commissioned officer designated by the senior commander. In no case will detention exceed 12 hours.

(2) Male and female personnel will not be detained in the same cell simultaneously.

(3) The use of other military service or civilian detention facilities to detain personnel in police custody is authorized. When other military service facilities are used, the time limitations and other procedures described above apply. Only those civilian facilities that have been evaluated by the U.S. Marshal Service and deemed appropriate for use will be utilized.

(4) Juveniles will not be detained in Army LE D-cells.

Subpart B—[Reserved]

[FR Doc. 2016–27163 Filed 11–9–16; 8:45 am]
BILLING CODE 500–03–P

DEPARTMENT OF HOMELAND SECURITY

Coast Guard

33 CFR Part 117

[Docket No. USCG–2016–0523]

RIN 1625–AA09

Drawbridge Operation Regulation; Rice Creek, Putnam County, FL

AGENCY: Coast Guard, DHS.

ACTION: Notice of proposed rulemaking.

SUMMARY: The Coast Guard proposes to modify the operating schedule that governs the CSX Railroad Bridge across the Rice Creek, mile 0.8, in Palatka, Putnam County, FL.

This proposed rule would change the existing open on demand during the day and 24 hour advance notice for a bridge opening during the night, to 24 hour advance notice for an opening at all times. This proposal is being made due to the minimal drawbridge openings requested over the past several years. This modification would allow the bridge owner to leave the bridge unmanned other than when an opening is requested and it would have little to no effect on navigation.

DATES: Comments and related material must reach the Coast Guard on or before January 9, 2017.

ADDRESSES: You may submit comments identified by docket number USCG–2016–0523 using Federal eRulemaking Portal at *http://www.regulations.gov.*

See the ''Public Participation and Request for Comments'' portion of the **SUPPLEMENTARY INFORMATION** section below for instructions on submitting comments.

FOR FURTHER INFORMATION CONTACT: If you have questions on this proposed rule, call or email Mr. Rod Elkins with the Coast Guard; telephone 305–415–6989, email *rodney.j.elkins@uscg.mil.*

SUPPLEMENTARY INFORMATION:

I. Table of Abbreviations

CFR Code of Federal Regulations
DHS Department of Homeland Security
FR Federal Register
NPRM Notice of proposed rulemaking
§ Section
U.S.C. United States Code

II. Background, Purpose and Legal Basis

On May 18th, 2015, CSX Transportation requested the Coast Guard consider allowing the CSX Railroad Bridge across Rice Creek to be converted from a movable bridge to a fixed bridge. Their request was made due to the minimal drawbridge openings requested over the past several years. The Coast Guard determined that converting the bridge to a fixed structure was not reasonable to navigation, because it would restrict vessels from using the waterway. CSX then requested modifying the bridge operations to 24 hour advance notice at all times. CSX provided the Coast Guard a summary of bridge opening logs that show eight openings in 2015, three openings in 2014, and three openings in 2013. The data supporting the request will be included in the electronic docket for this proposed rulemaking.

The CSX Railroad Bridge across the Rice Creek, mile 0.8, in Palatka, Putnam County, FL is a swing bridge. It has a vertical clearance of 2 feet at mean high water in the closed position and a horizontal clearance of 30 feet.

Presently, in accordance with 33 CFR 117.324, the Rice Creek CSX Railroad Swing Bridge is required to open on signal for the passage of vessels from 8 a.m. to 4 p.m., daily. From 4:01 p.m. to 7:59 a.m., daily, the bridge shall open with a 24-hour advance notice to CSX.

III. Discussion of Proposed Rule

The Coast Guard proposes to modify the operating schedule that governs the CSX Railroad Bridge across Rice Creek, mile 0.8, in Palatka, Putnam County, FL.

This proposed regulation would implement a 24 hour advance notice to CSX for an opening at all times. This proposed change will still allow vessels to pass through the bridge while taking into account the reasonable needs of other modes of transportation.

IV. Regulatory Analyses

We developed this proposed rule after considering numerous statutes and Executive Orders related to rulemaking. Below we summarize our analyses based on these statutes and Executive Orders and we also discuss First Amendment rights of protestors.

A. Regulatory Planning and Review

Executive Orders 12866 and 13563 direct agencies to assess the costs and benefits of available regulatory alternatives and, if regulation is necessary, to select regulatory approaches that maximize net benefits. Executive Order 13563 emphasizes the importance of quantifying both costs and benefits, of reducing costs, of harmonizing rules, and of promoting flexibility. This NPRM has not been designated a ''significant regulatory action,'' under Executive Order 12866. Accordingly, the NPRM has not been reviewed by the Office of Management and Budget.

This regulatory action determination is based on the limited impact that it is anticipated to have on vessel traffic on Rice Creek as there are infrequent requests to open the bridge while taking into account the needs of rail traffic. The bridge will be able to open with the requisite amount of advanced notice. Vessels that can transit under the bridge without an opening may do so.

B. Impact on Small Entities

The Regulatory Flexibility Act of 1980 (RFA), 5 U.S.C. 601–612, as amended, requires federal agencies to consider the potential impact of regulations on small entities during rulemaking. The term ''small entities'' comprises small businesses, not-for-profit organizations that are independently owned and operated and are not dominant in their fields, and governmental jurisdictions with populations of less than 50,000. The Coast Guard certifies under 5 U.S.C. 605(b) that this proposed rule would not have a significant economic impact on a substantial number of small entities. While some owners or operators of vessels intending to transit the bridge may be small entities, for the reasons stated in section IV.A above this proposed rule would not have a significant economic impact on any vessel owner or operator.

If you think that your business, organization, or governmental jurisdiction qualifies as a small entity and that this rule would have a significant economic impact on it, please submit a comment (see **ADDRESSES**) explaining why you think it qualifies and how and to what degree this rule would economically affect it.

Under section 213(a) of the Small Business Regulatory Enforcement Fairness Act of 1996 (Pub. L. 104–121), we want to assist small entities in understanding this proposed rule. If the rule would affect your small business, organization, or governmental jurisdiction and you have questions concerning its provisions or options for compliance, please contact the person listed in the **FOR FURTHER INFORMATION CONTACT**, above. The Coast Guard will not retaliate against small entities that question or complain about this proposed rule or any policy or action of the Coast Guard.

C. Collection of Information

This proposed rule would call for no new collection of information under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501–3520.).

D. Federalism and Indian Tribal Government

A rule has implications for federalism under Executive Order 13132, Federalism, if it has a substantial direct effect 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. We have analyzed this proposed rule under that Order and have determined that it is consistent with the fundamental federalism principles and preemption requirements described in Executive Order 13132.

Also, this proposed rule does not have tribal implications under Executive Order 13175, Consultation and Coordination with Indian Tribal Governments, because it would not have a substantial direct effect 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. If you believe this proposed rule has implications for federalism or Indian tribes, please contact the person listed in the **FOR FURTHER INFORMATION CONTACT** section above.

E. Unfunded Mandates Reform Act

The Unfunded Mandates Reform Act of 1995 (2 U.S.C. 1531–1538) requires Federal agencies to assess the effects of their discretionary regulatory actions. In particular, the Act addresses actions that may result in the expenditure by a State, local, or tribal government, in the aggregate, or by the private sector of $100,000,000 (adjusted for inflation) or more in any one year. Though this proposed rule will not result in such an expenditure, we do discuss the effects of this proposed rule elsewhere in this preamble.

F. Environment

We have analyzed this proposed rule under Department of Homeland Security Management Directive 023–01 and Commandant Instruction M16475.lD, which guides the Coast Guard in complying with the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321–4370f), and have made a preliminary determination that this action is one of a category of actions which do not individually or cumulatively have a significant effect on the human environment. This proposed

rule promulgates the operating regulations or procedures for drawbridges. Normally such actions are categorically excluded from further review, under figure 2–1, paragraph (32)(e), of the Instruction.

Under figure 2–1, paragraph (32)(e), of the Instruction, an environmental analysis checklist and a categorical exclusion determination are not required for this rule. We seek any comments or information that may lead to the discovery of a significant environmental impact from this proposed rule.

G. Protest Activities

The Coast Guard respects the First Amendment rights of protesters. Protesters are asked to contact the person listed in the **FOR FURTHER INFORMATION CONTACT** section to coordinate protest activities so that your message can be received without jeopardizing the safety or security of people, places or vessels.

V. Public Participation and Request for Comments

We view public participation as essential to effective rulemaking, and will consider all comments and material received during the comment period. Your comment can help shape the outcome of this rulemaking. If you submit a comment, please include the docket number for this rulemaking, indicate the specific section of this document to which each comment applies, and provide a reason for each suggestion or recommendation.

We encourage you to submit comments through the Federal eRulemaking Portal at *http://www.regulations.gov.* If your material cannot be submitted using *http://www.regulations.gov,* contact the person in the **FOR FURTHER INFORMATION CONTACT** section of this document for alternate instructions.

We accept anonymous comments. All comments received will be posted without change to *http://www.regulations.gov* and will include any personal information you have provided. For more about privacy and the docket, you may review a Privacy Act notice regarding the Federal Docket Management System in the March 24, 2005, issue of the **Federal Register** (70 FR 15086).

Documents mentioned in this notice, and all public comments, are in our online docket at *http://www.regulations.gov* and can be viewed by following that Web site's instructions. Additionally, if you go to the online docket and sign up for email alerts, you will be notified when comments are posted or a final rule is published.

List of Subjects in 33 CFR Part 117

Bridges.

For the reasons discussed in the preamble, the Coast Guard proposes to amend 33 CFR part 117 as follows:

PART 117—DRAWBRIDGE OPERATION REGULATIONS

■ 1. The authority citation for part 117 continues to read as follows:

Authority: 33 U.S.C. 499; 33 CFR 1.05–1; Department of Homeland Security Delegation No. 0170.1.

■ 2. Amend § 117.324 to read as follows:

§ 117.324 Rice Creek.

The CSX Railroad Swing Bridge, mile 0.8, in Putnam County, shall open with a 24-hour advance notice to CSX at 1–800–232–0142.

Dated: November 4, 2016.

S.A. Buschman,

Rear Admiral, U.S. Coast Guard, Commander, Seventh Coast Guard District.

[FR Doc. 2016–27176 Filed 11–9–16; 8:45 am]

BILLING CODE 9110–04–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–HQ–OAR–2016–0598; FRL–9955–00–OAR]

RIN 2060–AT16

Interstate Transport of Fine Particulate Matter: Revision of Federal Implementation Plan Requirements for Texas

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to withdraw the federal implementation plan (FIP) provisions that require affected electricity generating units (EGUs) in Texas to participate in Phase 2 of the Cross-State Air Pollution Rule (CSAPR) trading programs for annual emissions of sulfur dioxide (SO_2) and nitrogen oxides (NO_X). Withdrawal of the FIP requirements is intended to address a decision of the U.S. Court of Appeals for the District of Columbia Circuit (D.C. Circuit) remanding the CSAPR Phase 2 SO_2 budget for Texas to the EPA for reconsideration. The EPA is also proposing to determine that, following withdrawal of the FIP requirements, sources in Texas will not contribute significantly to nonattainment in, or interfere with maintenance by, any other state with regard to the 1997 national ambient air quality standard (NAAQS) for fine particulate matter ($PM_{2.5}$), and that the EPA therefore will have no obligation to issue new FIP requirements for Texas sources to address transported $PM_{2.5}$ pollution under Clean Air Act (CAA) section 110(a)(2)(D)(i)(I) with regard to that NAAQS. Finally, the proposal includes a sensitivity analysis showing that the set of actions the EPA has taken or expects to take in response to the D.C. Circuit's decision, including the removal of Texas EGUs from the two CSAPR trading programs as well as the recent removal of Florida EGUs from Phase 2 of the CSAPR trading programs for ozone-season NO_X emissions, would not adversely impact the analytic demonstration for the Agency's 2012 determination that CSAPR participation meets the Regional Haze Rule's criteria to qualify as an alternative to the application of best available retrofit technology (BART). No changes to the Regional Haze Rule are proposed as part of this rulemaking.

DATES: Comments must be received on or before December 12, 2016. To request a public hearing, please contact the person listed in the **FOR FURTHER INFORMATION CONTACT** section below by November 17, 2016. The EPA does not plan to conduct a public hearing unless requested.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–HQ–OAR–2016–0598, at *http://www.regulations.gov.* Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from *Regulations.gov.* The EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.,* on the web, cloud, or other file sharing system). For additional submission methods, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit

http://www2.epa.gov/dockets/commenting-epa-dockets.

FOR FURTHER INFORMATION CONTACT: Robert L. Miller, Clean Air Markets Division, Office of Atmospheric Programs, U.S. Environmental Protection Agency, MC 6204M, 1200 Pennsylvania Avenue NW., Washington, DC 20460; telephone number: (202) 343–9077; email address: *miller.robertl@epa.gov.*

SUPPLEMENTARY INFORMATION:

Regulated Entities. Entities regulated under CSAPR are fossil fuel-fired boilers and stationary combustion turbines that serve generators producing electricity for sale, including combined cycle units and units operating as part of systems that cogenerate electricity and other useful energy output. Regulated categories and entities include:

Category	NAICS * Code	Examples of potentially regulated industries
Industry	221112	Fossil fuel-fired electric power generation.

* North American Industry Classification System.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated. To determine whether your facility is affected by this action, you should carefully examine the applicability provisions in 40 CFR 97.404 and 97.704. If you have questions regarding the applicability of CSAPR to a particular entity, consult the person listed in the **FOR FURTHER INFORMATION CONTACT** section above.

Outline. The following outline is provided to aid in locating information in this preamble.

I. Overview

The EPA promulgated CSAPR in 2011 in order to address the obligations of states—and of the EPA when states have not met their obligations—under CAA section 110(a)(2)(D)(i)(I) to prohibit air pollution contributing significantly to nonattainment in, or interfering with maintenance by, any other state with regard to several NAAQS, including the 1997 annual $PM_{2.5}$ NAAQS.[1] To address Texas' transport obligation under CAA section 110(a)(2)(D)(i)(I) with regard to this NAAQS, CSAPR established FIP requirements for affected EGUs in Texas, including emissions budgets that apply to the EGUs' collective annual emissions of SO_2 and NO_X. In July 2015, the D.C. Circuit issued a decision on a range of challenges to CSAPR in *EME Homer City Generation, L.P.* v. *EPA (EME Homer City II)* denying most claims but remanding several CSAPR emissions budgets to the EPA for reconsideration, including the Phase 2 SO_2 budget for Texas.[2]

In this action, the EPA proposes to address the remand of the Texas Phase 2 SO_2 budget by withdrawing the FIP provisions requiring Texas EGUs to participate in the CSAPR SO_2 Group 2 Trading Program and the CSAPR NO_X Annual Trading Program in Phase 2, which begins with 2017 emissions.[3] Although the court's decision specifically remanded only Texas' Phase 2 SO_2 budget, the court's rationale for remanding that budget also implicates Texas' Phase 2 annual NO_X budget because the SO_2 and annual NO_X budgets were developed through an integrated analysis and were promulgated to meet a common $PM_{2.5}$ transport obligation under CAA section 110(a)(2)(D)(i)(I). Withdrawal of the FIP provisions is intended to address the remand by eliminating the requirement for Texas EGUs to comply with the EPA-established Phase 2 budgets.[4]

Removal of Texas EGUs from the CSAPR trading programs for SO_2 and annual NO_X as proposed would make it necessary to use other means to address any remaining transport obligation for Texas under CAA section 110(a)(2)(D)(i)(I) with regard to the 1997 $PM_{2.5}$ NAAQS. In this action, based on a reevaluation of $PM_{2.5}$ data in the CSAPR final rule record in light of the D.C. Circuit's reasoning in another portion of the *EME Homer City II* decision, the EPA is proposing to determine that Texas would not have any such remaining $PM_{2.5}$ transport obligation in Phase 2 of CSAPR. Accordingly, in the absence of a Texas transport obligation with regard to the 1997 $PM_{2.5}$ NAAQS, the EPA is also proposing to determine that the Agency will have no obligation to issue new FIP requirements for Texas sources to address transported $PM_{2.5}$ pollution under CAA section 110(a)(2)(D)(i)(I) with regard to this NAAQS.[5]

[1] Federal Implementation Plans; Interstate Transport of Fine Particulate Matter and Ozone and Correction of SIP Approvals, 76 FR 48208 (August 8, 2011) (codified as amended at 40 CFR 52.38 and 52.39 and 40 CFR part 97).

[2] *EME Homer City Generation, L.P.* v. *EPA (EME Homer City II),* 795 F.3d 118, 138 (D.C. Cir. 2015). The court also remanded the Phase 2 SO_2 budgets for three other states and the Phase 2 ozone-season NO_X budgets for eleven states, including Texas. *Id.*

[3] With regard to each of the other remanded budgets, the EPA either has already withdrawn or expects to withdraw the FIP provisions requiring the EGUs in the affected state to participate in the corresponding CSAPR federal trading programs in Phase 2 through other actions, as discussed in section III.

[4] The D.C. Circuit also remanded the CSAPR Phase 2 ozone-season NO_X budget established for Texas EGUs with regard to the 1997 ozone NAAQS. *EME Homer City II,* 795 F.3d at 138. As discussed in section III, in another action the EPA has withdrawn the FIP requirements for Texas EGUs regarding the 1997 ozone NAAQS and has promulgated new FIP requirements for those EGUs regarding the 2008 ozone NAAQS. This proposal has no effect on any CSAPR FIP requirements for Texas EGUs concerning ozone-season NO_X emissions.

[5] Reevaluation of $PM_{2.5}$ data in the CSAPR final rule record in light of the D.C. Circuit's reasoning would similarly support a determination that Texas would have no $PM_{2.5}$ transport obligation under CAA section 110(a)(2)(D)(i)(I) with regard to the 2006 $PM_{2.5}$ NAAQS. However, the EPA is not proposing to make a determination in this action as to any obligation of Texas with regard to that NAAQS because Texas EGUs are not subject to CSAPR requirements with regard to that NAAQS.

Participation in CSAPR is relied on by numerous states as an alternative to meeting source-specific BART requirements under the Regional Haze Rule.[6] In accordance with the provisions of the Regional Haze Rule, the EPA's 2012 determination that implementation of CSAPR meets the criteria for a BART alternative was based on an analytic demonstration that implementation of CSAPR would result in greater reasonable progress than BART toward restoring natural visibility conditions in relevant locations. This proposal includes a sensitivity analysis showing that if the set of actions the EPA has taken or expects to take in response to the D.C. Circuit's remand of various CSAPR Phase 2 budgets had been reflected in that analytic demonstration, the revised analysis still would have demonstrated that implementation of CSAPR in the remaining covered states meets the criteria for a BART alternative for those states. Accordingly, based on consideration of this analysis, the EPA sees no reason to propose any revision to the current Regional Haze Rule provision allowing states whose EGUs continue to participate in a CSAPR trading program for a given pollutant to rely on CSAPR participation as a BART alternative for its BART-eligible EGUs for that pollutant.

At the same time, however, if and when this proposal is finalized, Texas will no longer be eligible to rely on CSAPR participation as an alternative to certain regional haze obligations including the determination and application of source-specific SO_2 BART. Any such remaining obligations are not addressed in this proposed action and would be addressed through other state implementation plan (SIP) or FIP actions as appropriate.[7]

Sections II.A and II.B provide background on CSAPR and on CSAPR participation as a BART alternative, respectively. The proposed withdrawal of the FIP provisions requiring Texas EGUs to participate in the CSAPR federal trading programs for SO_2 and annual NO_X is addressed in section III. Section IV discusses the proposal to determine that, following finalization of the proposed withdrawal of the CSAPR FIP requirements related to $PM_{2.5}$, Texas would have no remaining transport obligation under CAA section 110(a)(2)(D)(i)(I) with regard to the 1997 $PM_{2.5}$ NAAQS, and the EPA accordingly would have no obligation to issue new FIP requirements for Texas sources to address such a transport obligation. The sensitivity analysis of the 2012 analytic demonstration supporting CSAPR participation as a BART alternative is described in section V.

II. Background

A. History and Summary of CSAPR

The EPA initially promulgated CSAPR in 2011 to address the obligations of states—and of the EPA when states have not met their obligations—under CAA section 110(a)(2)(D)(i)(I), often referred to as the ''good neighbor'' provision, to prohibit transported air pollution contributing significantly to nonattainment in, or interfering with maintenance by, any other state with regard to the 1997 annual $PM_{2.5}$ NAAQS, the 2006 24-hour $PM_{2.5}$ NAAQS, and the 1997 8-hour ozone NAAQS.[8] To reduce transported $PM_{2.5}$ pollution, CSAPR sets limits on annual emissions of NO_X and SO_2 as precursors to $PM_{2.5}$. To reduce transported ozone pollution, CSAPR sets limits on ozone-season emissions of NO_X as a precursor to ozone.

CSAPR's emissions limitations are defined in terms of emissions ''budgets'' for the collective emissions from affected EGUs in each covered state. The emissions limitations are phased in, with the Phase 1 and Phase 2 budgets originally scheduled to apply starting in January 2012 and January 2014, respectively. Affected EGUs are subject to FIP provisions requiring them to participate in one or more of several CSAPR federal allowance trading programs established as flexible mechanisms to achieve compliance with the emissions budgets. CSAPR also contains provisions under which the EPA will approve optional SIP revisions that modify or replace the CSAPR FIP requirements while allowing states to continue to meet their transport obligations using either the CSAPR federal trading programs or integrated CSAPR state trading programs that apply emissions budgets of the same or greater stringency.[9]

A number of state, industry, and other petitioners challenged CSAPR in the D.C. Circuit, which stayed and then vacated the rule, ruling on only a subset of petitioners' claims. However, in April 2014 the Supreme Court reversed the vacatur and remanded to the D.C. Circuit for resolution of petitioners' remaining claims.[10] The D.C. Circuit then granted the EPA's motion to lift the stay and to toll the rule's deadlines by three years.[11] Consequently, implementation of CSAPR Phase 1 began in January 2015 and implementation of Phase 2 is scheduled to begin in January 2017.

Following the Supreme Court remand, the D.C. Circuit conducted further proceedings to address petitioners' remaining claims. In July 2015, the court issued a decision denying most of the claims but remanding the Phase 2 SO_2 emissions budgets for Alabama, Georgia, South Carolina, and Texas and the Phase 2 ozone-season NO_X budgets for eleven states to the EPA for reconsideration.[12] Petitions challenging CSAPR amendments promulgated in 2011 and 2012 are currently being held in abeyance pending completion of the EPA's proceedings in response to the D.C. Circuit's remand.[13]

Since receipt of the D.C. Circuit's 2015 decision, the EPA has engaged the affected states to determine appropriate next steps to address the decision with regard to each state. The EPA expects that potentially material changes to the scope of CSAPR coverage resulting from the D.C. Circuit's remand will be limited to Texas, based on the withdrawal of FIP requirements proposed here, and, as discussed below, to Florida, based on the withdrawal of FIP requirements recently finalized in another action. With regard to the remanded Phase 2 SO_2 budgets, as discussed in section III, the EPA expects that EGUs in Alabama, Georgia, and South Carolina will continue to participate in CSAPR trading programs for SO_2 and annual NO_X pursuant to approved SIP revisions (with equally or more stringent emissions budgets), making Texas the only state whose EGUs would no longer participate in these programs because of the remand.

[6] *See* Regional Haze: Revisions to Provisions Governing Alternatives to Source-Specific Best Available Retrofit Technology (BART) Determinations, Limited SIP Disapprovals, and Federal Implementation Plans, 77 FR 33642 (June 7, 2012) (CSAPR-Better-than-BART rule).

[7] The EPA notes that under 40 CFR 51.308(e)(4), CSAPR implementation is available as a NO_X BART alternative for a state whose EGUs are subject to CSAPR requirements for either annual NO_X emissions or ozone-season NO_X emissions. *See* 77 FR at 33652; *see also supra* note 4.

[8] *See generally* 76 FR 48208.

[9] *See* 40 CFR 52.38, 52.39. States also retain the ability to submit SIP revisions to meet their transport-related obligations using mechanisms other than the CSAPR federal trading programs or integrated state trading programs.

[10] *EPA* v. *EME Homer City Generation, L.P.,* 134 S. Ct. 1584 (2014), *reversing* 696 F.3d 7 (D.C. Cir. 2012).

[11] Order, *EME Homer City Generation, L.P.* v. *EPA,* No. 11–1302 (D.C. Cir. issued October 23, 2014).

[12] *EME Homer City II,* 795 F.3d at 138.

[13] *Public Service Co. of Oklahoma* v. *EPA,* No. 12–1023 (D.C. Cir.) (challenging amendments published at 76 FR 80760 (December 27, 2011)); *Wisconsin Public Service Corp.* v. *EPA,* No. 12–1163 (D.C. Cir.) (challenging amendments published at 77 FR 10324 (February 21, 2012)); *Utility Air Regulatory Group* v. *EPA,* No. 12–1346 (D.C. Cir.) (challenging amendments published at 77 FR 34830 (June 12, 2012)).

With regard to the remanded ozone-season NO_X budgets, in September 2016 the EPA promulgated a final rule updating CSAPR to address states' good neighbor obligations with regard to the 2008 ozone NAAQS.[14] The rule also responded to the remand of the original Phase 2 ozone-season NO_X budgets established to address transport obligations with regard to the 1997 ozone NAAQS by withdrawing the FIP provisions requiring EGUs in the eleven states with remanded budgets to comply with those budgets for emissions after 2016. The EPA determined that none of those eleven states will have a remaining transport obligation under CAA section 110(a)(2)(D)(i)(I) with regard to the 1997 ozone NAAQS, but for eight of those states, including Texas, the rule established new budgets to address transport obligations with regard to the more stringent 2008 ozone NAAQS. EGUs in the three states with remanded Phase 2 ozone-season NO_X budgets for which the EPA did not establish new budgets—Florida, North Carolina, and South Carolina—are no longer required to participate in a CSAPR trading program for ozone-season NO_X emissions to address ozone transport obligations after 2016. However, because EGUs in North Carolina and South Carolina[15] are expected to continue to participate in a CSAPR trading program for annual NO_X emissions in order to address $PM_{2.5}$ transport obligations, Florida is expected to be the only state originally covered by CSAPR for NO_X emissions for which all such coverage is ending as a result of the EPA's set of actions to address the remand.

Texas EGUs are currently subject to CSAPR FIP provisions requiring participation in the CSAPR SO_2 Group 2 Trading Program and the CSAPR NO_X Annual Trading Program. Texas EGUs are also subject to FIP provisions requiring participation in other CSAPR federal trading programs for ozone-season NO_X emissions. This proposal would withdraw the FIP provisions requiring Texas EGUs to participate in the CSAPR federal trading programs for SO_2 and annual NO_X emissions after 2016, but would have no effect on any CSAPR FIP requirements applicable to Texas EGUs relating to ozone-season NO_X emissions after 2016, which, as discussed in the preceding paragraph, were promulgated in the recently finalized CSAPR Update rule and were not subject to the D.C. Circuit's remand.

B. CSAPR Participation as a BART Alternative

The Regional Haze Rule implements CAA requirements for the protection of visibility, focusing on visibility impairment that is caused by the emissions of air pollutants from numerous sources located over a wide geographic area.[16] CAA section 169A(a)(1) sets a national goal of achieving natural visibility conditions in certain Class I areas.[17] CAA section 169A(b)(2) requires states to revise their SIPs to contain such measures as may be necessary to make reasonable progress toward this national goal, including requirements for the application of best available retrofit technology (BART) by any BART-eligible sources[18] that emit any air pollutant that may reasonably be anticipated to cause or contribute to visibility impairment in a Class I area. The air pollutants that may cause or contribute to visibility impairment include both SO_2 and NO_X. Under CAA section 110(c), where the EPA disapproves or finds that a state has failed to make such a SIP submittal, the EPA must promulgate a FIP addressing these requirements.

The Regional Haze Rule's BART provisions generally direct states to identify all BART-eligible sources; determine which of those BART-eligible sources are subject to BART requirements because the sources emit air pollutants that may reasonably be anticipated to cause or contribute to visibility impairment in a Class I area; determine source-specific BART for each source that is subject to BART requirements, based on an analysis taking specified factors into consideration; and include emission limitations reflecting those BART determinations in their SIPs.[19] However, the rule also provides each state with the flexibility to adopt an allowance trading program or other alternative measure instead of requiring source-specific BART controls, so long as the alternative measure is demonstrated to achieve greater reasonable progress than BART toward the national goal of achieving natural visibility conditions in Class I areas.[20]

The Regional Haze Rule also sets out criteria for demonstrating that an alternative measure achieves greater reasonable progress than source-specific BART. The regulations include a specific so-called ''better-than-BART'' test that may be satisfied in one of two ways: (1) If the distribution of emissions under the alternative measure is not substantially different than under BART and the alternative measure results in greater emission reductions; or (2) if the distribution of emissions is significantly different and an air quality modeling study for the best and worst 20 percent of days shows an improvement in visibility from the alternative measure relative to BART.[21] In order for the alternative measure to pass this ''better-than-BART'' test based on such an air quality modeling study, the modeling must demonstrate that two criteria (referred to below as ''prongs'') are met: first, visibility does not decline in any Class I area, and second, there is an overall improvement in visibility, determined by comparing the average differences in visibility conditions under BART and the alternative measure across all affected Class I areas. In addition to the specific test, the regulations also include a more general test that allows states (or the EPA) to demonstrate that an alternative measure provides for greater reasonable progress than BART based on the clear weight of evidence.[22]

In 2012, the EPA amended the Regional Haze Rule to provide that participation by a state's EGUs in a CSAPR trading program for a given pollutant—either a CSAPR federal trading program implemented through a CSAPR FIP or an integrated CSAPR state trading program implemented through an approved CSAPR SIP revision—qualifies as a BART alternative for those EGUs for that pollutant.[23] In

[14] Cross-State Air Pollution Rule Update for the 2008 Ozone NAAQS, 81 FR 74504 (October 26, 2016) (CSAPR Update rule).

[15] North Carolina EGUs remain subject to FIP provisions requiring participation in a CSAPR trading program for annual NO_X emissions. The EPA's expectation that South Carolina EGUs will continue to participate in a CSAPR program for annual NO_X emissions is based on South Carolina's commitment to submit a SIP revision that will include such requirements, as noted above and discussed in section III.

[16] 40 CFR 51.308 and 51.309. Earlier this year, the EPA proposed amendments to other portions of the Regional Haze Rule but did not propose any substantive amendments to the provisions related to BART. Protection of Visibility: Amendments to Requirements for State Plans, 81 FR 26942 (May 4, 2016).

[17] The 156 mandatory Class I federal areas in which visibility has been determined to be an important value are listed at subpart D of 40 CFR part 81. For brevity, these areas are referred to here simply as ''Class I areas.''

[18] A BART-eligible source is generally a source in any one of 26 specified categories, including fossil fuel-fired steam electric plants, that was not in operation prior to August 7, 1962; was in existence on August 7, 1977; and has the potential to emit 250 tons per year of any air pollutant. *See* 40 CFR 51.301.

[19] 40 CFR 51.308(e)(1).

[20] 40 CFR 51.308(e)(2).

[21] 40 CFR 51.308(e)(3).

[22] 40 CFR 51.308(e)(2)(i)(E).

[23] 40 CFR 51.308(e)(4); *see also generally* 77 FR 33642. Legal challenges to the CSAPR-Better-than-BART rule from state, industry, and other petitioners are pending. *Utility Air Regulatory*

Continued

promulgating the amendment, the EPA relied on an analytic demonstration of an improvement in visibility from CSAPR implementation relative to BART based on an air quality modeling study, in accordance with the second approach to the specific better-than-BART test summarized above. Since the EPA promulgated this amendment, numerous states covered by CSAPR have come to rely on the provision through either SIPs or FIPs.[24]

For purposes of the 2012 analytic demonstration that CSAPR provides for greater reasonable progress than BART, the EPA treated Texas EGUs as subject to CSAPR for SO_2 and annual NO_X (as well as ozone-season NO_X) and treated Florida EGUs as subject to CSAPR for ozone-season NO_X. The EPA recognizes that the treatment of these EGUs in the analysis would have been different if the Florida FIP withdrawal recently finalized and the Texas FIP withdrawal proposed in this action had been known before the demonstration was prepared. In order to address any potential concern about continuing to rely on CSAPR participation as a BART alternative for EGUs in the remaining CSAPR states, the EPA is providing a sensitivity analysis explicitly addressing the potential effect on the 2012 analytic demonstration if the treatment of Texas and Florida EGUs had been consistent with the EPA's expectations for the updated scope of CSAPR coverage following the D.C. Circuit's remand. As discussed in section V below, the analysis supports the continued conclusion that CSAPR participation would achieve greater reasonable progress than BART despite such a change in the treatment of Texas and Florida EGUs. Consequently, the proposed FIP withdrawal does not suggest any reason to consider amending the current Regional Haze Rule provision authorizing the use of CSAPR participation as a BART alternative for BART-eligible EGUs for a given pollutant in states whose EGUs continue to participate in a CSAPR trading program for that pollutant.

III. Withdrawal of Certain CSAPR FIP Requirements for Texas EGUs

As summarized in section I above, the EPA proposes to respond to the D.C. Circuit's remand of the CSAPR Phase 2 SO_2 budget for Texas by withdrawing the FIP provisions requiring Texas EGUs to participate in the CSAPR federal trading programs for SO_2 and annual NO_X emissions with regard to emissions occurring after 2016. This section discusses the rationale for this proposed action.

In the CSAPR final rule, the EPA determined that 23 states, including Texas, had transport obligations with regard to the 1997 annual $PM_{2.5}$ NAAQS, the 2006 24-hour $PM_{2.5}$ NAAQS, or both, and established SO_2 and annual NO_X emissions budgets for each of the states.[25] The first step in the EPA's analysis was to identify $PM_{2.5}$ receptors that were projected to have difficulty attaining or maintaining either the 1997 NAAQS or the 2006 NAAQS in 2012 without emission reductions from CSAPR. In the second step, the EPA identified states that contribute more than a threshold amount of $PM_{2.5}$ pollution (*i.e.,* one percent of the NAAQS) for at least one of those NAAQS to at least one of the identified nonattainment or maintenance receptors in a different state—in other words, a ''linkage'' was determined. In the third step, the EPA projected the SO_2 and annual NO_X emission reductions and the remaining emissions that would be achieved by EGUs in all modeled states at a range of control cost levels as well as the resulting improvements in air quality at each of the identified $PM_{2.5}$ receptors. For annual NO_X, the EPA evaluated a range of control cost levels up to $2,500 per ton, and for SO_2, the EPA evaluated a range of control cost levels up to $10,000 per ton in combination with a NO_X control cost level of $500 per ton. The EPA then set SO_2 and annual NO_X emissions budgets for EGUs in each of the 23 covered states at the remaining emissions corresponding to a combination of SO_2 and annual NO_X control cost levels at which the air quality problems at all, or most, of the receptors linked to that state were projected to be resolved. The budgets were implemented through FIP provisions requiring the affected EGUs in each covered state to participate in allowance trading programs.

In the case of seven states, including Alabama, Georgia, South Carolina, and Texas, the $PM_{2.5}$ air quality problems at all linked receptors were projected to be resolved at an SO_2 control cost level of $500 per ton. The CSAPR SO_2 budgets for these states were therefore set based on the projected SO_2 emissions remaining after the reductions achievable at that control cost level. For the other 16 states covered by CSAPR for $PM_{2.5}$, the air quality problems at all linked receptors were not projected to be resolved until (or after) an SO_2 control cost level of $2,300 per ton, and the CSAPR SO_2 budgets were set based on the projected SO_2 emissions remaining after the reductions achievable at that higher cost level. For all 23 states linked to a $PM_{2.5}$ receptor, the CSAPR annual NO_X budgets were set based on the projected NO_X emissions remaining after the reductions achievable at a control cost level of $500 per ton. The EPA promulgated FIP provisions requiring EGUs in the 16 states whose SO_2 budgets were set based on a $2,300-per-ton SO_2 control cost level to participate in the CSAPR SO_2 Group 1 Trading Program, requiring EGUs in the seven states whose SO_2 budgets were set based on a $500-per-ton SO_2 control cost level to participate in the CSAPR SO_2 Group 2 Trading Program, and requiring EGUs in all 23 states to participate in the CSAPR NO_X Annual Trading Program.

Petitioners challenged the EPA's use of a $500-per-ton control cost level to set the SO_2 budgets for Alabama, Georgia, South Carolina, and Texas, citing an analysis the EPA had prepared for the CSAPR proposal projecting that the air quality problems at certain $PM_{2.5}$ receptors would be resolved at SO_2 control cost levels below $500 per ton. In its July 2015 decision, the D.C. Circuit agreed that because modeling in the rulemaking record from the CSAPR proposal indicated that air quality problems at all $PM_{2.5}$ receptors linked to these four states could have been resolved at SO_2 control costs below $500 per ton, the Phase 2 SO_2 budgets set in the CSAPR final rule based on control costs of $500 per ton may be more stringent than necessary to address the four states' $PM_{2.5}$ transport obligations. The court therefore found the Phase 2 SO_2 budgets for these four states invalid and remanded them to the EPA for reconsideration.[26]

In this action, the EPA is proposing to respond to the remand of the Phase 2 SO_2 budget for Texas by withdrawing the FIP provisions requiring Texas EGUs to participate in the CSAPR SO_2 Group 2 Trading Program and the CSAPR NO_X Annual Trading Program with regard to emissions during Phase 2 of those

Group v. *EPA,* No. 12–1342 (D.C. Cir. filed August 6, 2012).

[24] The EPA has promulgated FIPs relying on CSAPR participation for BART purposes for Georgia, Indiana, Iowa, Kentucky, Michigan, Missouri, Ohio, Pennsylvania, South Carolina, Tennessee, Virginia, and West Virginia, 77 FR at 33654, and Nebraska, 77 FR 40150, 40151 (July 6, 2012). The EPA has approved Minnesota's SIP relying on CSAPR participation for BART purposes. 77 FR 34801, 34806 (June 12, 2012).

[25] The EPA also determined in CSAPR and a related supplemental rule that 25 states, including Texas, had transport obligations with regard to the 1997 8-hour ozone NAAQS. In all, 28 states were determined to have transport obligations related to either $PM_{2.5}$, ozone, or both. The EPA's process for determining states' emissions limitations under CSAPR and the associated CSAPR FIP requirements is described at length in the preamble to the CSAPR final rule. *See generally* 77 FR at 48222–71.

[26] *EME Homer City II,* 795 F.3d at 128–29.

programs, which is now scheduled to begin in 2017. Withdrawal of the FIP provisions related to the SO_2 trading program encompasses withdrawal of the requirement for Texas EGUs to comply with the remanded Phase 2 SO_2 budget, thereby addressing the specific rule provision remanded by the court. The EPA is proposing to withdraw the FIP provisions related to annual NO_X in addition to the FIP provisions related to SO_2 because, as just discussed, the CSAPR FIP requirements for SO_2 and annual NO_X applicable to the EGUs in each covered state were determined through an integrated analysis and were promulgated in combination to remedy that state's $PM_{2.5}$ transport obligation. The court's finding that CSAPR's Phase 2 requirements may be more stringent than necessary to address Texas' $PM_{2.5}$ transport obligation therefore implicates the state's Phase 2 budgets for both SO_2 and annual NO_X.

The proposed withdrawal of the FIP requirements would be consistent with the approach the EPA has taken in response to previous judicial remands regarding obligations of individual states under other EPA rules addressing multiple states' transport obligations. For example, in *Michigan* v. *EPA,* the court found that the EPA had failed to adequately support the inclusion of Wisconsin in the NO_X SIP Call.[27] The EPA responded to that remand by amending the rule to exclude Wisconsin.[28] Similarly, in *North Carolina* v. *EPA,* the court found that the EPA had failed to adequately support the inclusion of Minnesota in the Clean Air Interstate Rule (CAIR) with regard to the 1997 annual $PM_{2.5}$ NAAQS as well as the corresponding CAIR FIP provisions applicable to Minnesota units.[29] The EPA responded to that remand by indefinitely staying CAIR's $PM_{2.5}$ transport obligation for Minnesota as well as the CAIR FIP provisions requiring Minnesota units to participate in CAIR's federal trading programs for SO_2 and annual NO_X.[30]

The proposed withdrawal of FIP requirements is also consistent with the actions the EPA either has already taken or expects to take to address the D.C. Circuit's remand of other CSAPR Phase 2 budgets. With regard to the remanded Phase 2 ozone-season NO_X budgets for eleven states, the EPA withdrew the FIP provisions requiring compliance with those budgets in a rule promulgated earlier this year updating CSAPR to address states' transport obligations with regard to the 2008 ozone NAAQS. Specifically, the EPA amended the FIP provisions applicable to EGUs in the eleven states with remanded budgets to eliminate the CSAPR FIP requirements related to the 1997 ozone NAAQS with regard to emissions occurring after 2016, coincident with the transition from CSAPR Phase 1 to CSAPR Phase 2.[31] The EPA determined that none of the eleven states would have remaining transport obligations under CAA section 110(a)(2)(D)(i)(I) with regard to the 1997 ozone NAAQS following the FIP withdrawal.[32] However, the EPA also determined that eight of the states have transport obligations under that section with regard to the more stringent 2008 ozone NAAQS, and established new CSAPR ozone-season NO_X budgets for those states related to that NAAQS starting with emissions occurring in 2017.[33]

With regard to the remanded Phase 2 SO_2 budgets for Alabama, Georgia, and South Carolina, the EPA either has addressed or expects to address the remand through withdrawal of the relevant FIP requirements in the context of SIP approval actions for these states. As discussed in section II.A above, the CSAPR regulations provide each covered state with the option to meet its transport obligations through SIP revisions replacing the federal trading programs and requiring the state's EGUs to participate in integrated CSAPR state trading programs that apply emissions budgets of the same or greater stringency.[34] Under the CSAPR regulations, when such a SIP revision is approved, the corresponding FIP provisions are automatically withdrawn. As discussed in section II.B above, the Regional Haze Rule allows states to rely on CSAPR participation for a given pollutant—through either a CSAPR federal trading program or an integrated CSAPR state trading program—as a BART alternative for that pollutant.

Before proposing this action, the EPA communicated with officials in Alabama, Georgia, South Carolina, and Texas regarding the EPA's intent to respond to the remand of the Phase 2 SO_2 budgets by withdrawing the FIP provisions requiring the states' EGUs to participate in the CSAPR federal trading programs for SO_2 and annual NO_X.[35] The EPA explained that the state would lose its ability to rely on CSAPR participation as a BART alternative for SO_2 and/or NO_X if its EGUs no longer participated in the CSAPR trading programs, but that the state could preserve that ability, if desired, by submitting a CSAPR SIP revision replacing the CSAPR federal trading programs with integrated CSAPR state trading programs applying state-established budgets no less stringent than the remanded federally-established budgets.[36] Alabama, Georgia, and South Carolina have indicated their preference to pursue the SIP revision option. The EPA has already approved Alabama's CSAPR SIP revision, and the FIP provisions requiring its EGUs to participate in the CSAPR federal trading programs for SO_2 and annual NO_X, including the requirements to comply with the federally-established SO_2 and annual NO_X budgets, have therefore been automatically withdrawn.[37] Georgia and South Carolina have committed to submit CSAPR SIP revisions,[38] and the EPA is not

[27] 213 F.3d 663, 681 (D.C. Cir. 2000). Both the court's decision and the EPA's response were limited to the NO_X SIP Call's requirements related to the 1979 1-hour ozone NAAQS, because the rule's parallel requirements related to the 1997 8-hour ozone NAAQS had already been indefinitely stayed as to all states.

[28] Interstate Ozone Transport: Response to Court Decisions on the NO_X SIP Call, NO_X SIP Call Technical Amendments, and Section 126 Rules, 69 FR 21604, 21636–37 (April 21, 2004).

[29] 531 F.3d 896, 926–28 (D.C. Cir. 2008).

[30] Administrative Stay of Clean Air Interstate Rule for Minnesota; Administrative Stay of Federal Implementation Plan to Reduce Interstate Transport of Fine Particulate Matter and Ozone for Minnesota, 74 FR 56721, 56722 (November 3, 2009).

[31] *See* 81 FR at 74576.

[32] *See* 81 FR at 74524.

[33] *Id.*

[34] *See* 40 CFR 52.38 and 52.39.

[35] *See* memo entitled ''The U.S. Environmental Protection Agency's Plan for Responding to the Remand of the Cross-State Air Pollution Rule Phase 2 SO_2 Budgets for Alabama, Georgia, South Carolina and Texas'' from Janet G. McCabe, EPA Acting Assistant Administrator for Air and Radiation, to EPA Regional Air Division Directors (June 27, 2016), available at *https://www3.epa.gov/airtransport/CSAPR/pdfs/CSAPR_SO2_Remand_Memo.pdf* and in the docket for this proposed action. The memo directs the Regional Air Division Directors to share the memo with state officials. The EPA also communicated orally with officials in Alabama, Georgia, South Carolina, and Texas in advance of the memo.

[36] Although the D.C. Circuit remanded the states' Phase 2 SO_2 budgets because it determined that the budgets may be more stringent than necessary to address the states' identified $PM_{2.5}$ transport obligations, nothing in the court's decision affects the states' authority to seek incorporation into their SIPs of state-established budgets as stringent as the remanded federally-established budgets or limits the EPA's authority to approve such SIP revisions. *See* CAA sections 116, 110(k)(3).

[37] Air Plan Approval; Alabama; Cross-State Air Pollution Rule, 81 FR 59869 (August 31, 2016).

[38] *See* letters to Heather McTeer Toney, Regional Administrator, EPA Region 4, from Judson H. Turner, Director of the Environmental Protection Division, Georgia Department of Natural Resources (May 26, 2016) and from Myra C. Reece, Director of Environmental Affairs, South Carolina Department of Health and Environmental Control (April 19, 2016), available in the docket for this proposed action. The EPA has conditionally approved the CAA section 110(a)(2)(D)(i)(II) prong 4 visibility element for multiple NAAQS in the Georgia and South Carolina SIPs based on each state's commitment to submit a CSAPR SIP revision. 81 FR 65899, 65900 (September 26, 2016)

Continued

proposing withdrawal of the CSAPR FIP provisions for their EGUs based on the expectation that such withdrawal will be automatically accomplished as a result of SIP approval actions.[39] Because Texas has not indicated an intent to submit a CSAPR SIP revision, the EPA is proceeding with this proposed action to withdraw the FIP requirements for Texas EGUs, consistent with the intended approach previously communicated to officials for all four states.

The EPA requests comment on the proposed withdrawal of the FIP provisions requiring Texas EGUs to participate in the CSAPR trading programs for SO_2 and annual NO_X with regard to emissions occurring after 2016.

IV. Texas' Good Neighbor Obligation With Regard to the 1997 Annual $PM_{2.5}$ NAAQS

Withdrawal of the CSAPR FIP requirements as proposed in section III above would revive the need to consider Texas' transport obligation under CAA section 110(a)(2)(D)(i)(I) with regard to the 1997 annual $PM_{2.5}$ NAAQS and to address any remaining obligation through other means. As summarized in section I above, the EPA proposes to determine that Texas would have no remaining transport obligation under this section with regard to this NAAQS following withdrawal of the FIP requirements, and consequently also proposes to determine that the EPA will have no obligation to issue new FIP requirements as to Texas's transport obligation under CAA section 110(a)(2)(D)(i)(I) with regard to the 1997 annual $PM_{2.5}$ NAAQS after withdrawal of the current FIP requirements. This section discusses the rationale for these proposed determinations.

In the CSAPR rulemaking, one of the receptors that the EPA projected would have difficulty attaining and maintaining both the 1997 annual $PM_{2.5}$ NAAQS and the 2006 24-hour $PM_{2.5}$ NAAQS was a receptor located in Madison County, Illinois (monitor ID 171191007).[40] The modeling for the CSAPR final rule showed that Texas was projected to contribute more than the threshold amount of $PM_{2.5}$ pollution necessary in order to be considered ''linked'' to the Madison County receptor for annual $PM_{2.5}$.[41] Based on the linkage for the 1997 annual NAAQS, the EPA consequently determined emissions limitations for SO_2 and annual NO_X from Texas EGUs and promulgated FIP requirements reflecting these emission limitations.[42] These are the FIP requirements that the EPA is now proposing to withdraw in order to address the D.C. Circuit's remand of the Phase 2 SO_2 budget for Texas.

In evaluating what, if any, remaining transport obligation Texas would have under CAA section 110(a)(2)(D)(i)(I) with regard to the 1997 $PM_{2.5}$ NAAQS following withdrawal of the current FIP requirements as proposed, the EPA has reexamined data in the CSAPR final rule record in light of the D.C. Circuit's other holdings in *EME Homer City II,* specifically the court's rationale for remanding several Phase 2 ozone-season NO_X budgets. In the CSAPR rulemaking, for purposes of identifying receptors projected to have air quality problems and determining states that were linked to those receptors and which therefore may have transport obligations, the EPA used air quality projections for the year 2012, which was also the intended start year for implementation of the Phase 1 budgets. The CSAPR final rule record also contained air quality projections for 2014, which was the intended start year for implementation of the Phase 2 budgets. The 2014 modeling results showed that some ozone receptors projected to have air quality problems in 2012 would no longer be projected to have air quality problems in 2014 before considering the emission reductions from CSAPR, and petitioners argued that the EPA therefore lacked authority to establish Phase 2 ozone-season NO_X emissions limitations for EGUs in states linked solely to those ozone receptors. The D.C. Circuit agreed and held the Phase 2 ozone-season NO_X budgets for ten states invalid on that basis.[43]

Although not discussed in the court's decision, the CSAPR final rule record contains projections of 2014 air quality for the Madison County $PM_{2.5}$ receptor that are analogous to the projections of 2014 air quality for the ozone receptors described above. Specifically, the 2014 modeling results projected that the Madison County receptor would have a maximum design value for annual $PM_{2.5}$ of 15.02 micrograms per cubic meter ($\mu g/m^3$) before considering the emissions reductions from CSAPR.[44] This projected value is below the value of 15.05 $\mu g/m^3$ that the EPA used to determine whether a particular $PM_{2.5}$ receptor should be identified as having air quality problems that may trigger transport obligations in upwind states with regard to the 1997 annual $PM_{2.5}$ NAAQS.[45] The Madison County receptor was the only $PM_{2.5}$ receptor with projected air quality problems to which Texas was found to be linked based on the EPA's air quality modeling for the CSAPR final rule. Therefore, given that the Madison County receptor was projected to no longer have air quality problems sufficient to trigger transport obligations with regard to the 1997 annual $PM_{2.5}$ NAAQS in the EPA's 2014 base case modeling for the CSAPR final rule, and given the D.C. Circuit's holding discussed above with regard to the Phase 2 ozone-season NO_X budgets, the EPA proposes to find that, as of Phase 2 of CSAPR, Texas would not significantly contribute to nonattainment in, or interfere with maintenance by, any other state of the 1997 annual $PM_{2.5}$ NAAQS following withdrawal of the current CSAPR FIP requirements applicable to Texas EGUs with regard to that NAAQS. Accordingly, the EPA also proposes to determine that the Agency has no obligation to issue new FIP requirements as to Texas under CAA section 110(a)(2)(D)(i)(I) with regard to the 1997 annual $PM_{2.5}$ NAAQS after withdrawal of the current FIP provisions requiring Texas EGUs to participate in Phase 2 of the CSAPR federal trading programs for SO_2 and annual NO_X.

The EPA requests comment on the proposed determinations that Texas will no longer have any remaining transport obligation under CAA section 110(a)(2)(D)(i)(I) with regard to the 1997 $PM_{2.5}$ NAAQS following finalization of the proposed withdrawal of the FIP provisions requiring Texas EGUs to participate in the SO_2 and annual NO_X trading programs during Phase 2 of CSAPR, and that the EPA accordingly will have no obligation to issue new FIP requirements for Texas sources to address such a transport obligation.

(Georgia); 81 FR 56512, 56513 (August 22, 2016) (South Carolina).

[39] If the EPA does not receive the expected SIP submittal from either of these states by the deadline provided in its respective commitment letter or disapproves such a SIP submittal, the EPA will propose to withdraw the FIP provisions requiring that state's EGUs to participate in the CSAPR federal trading programs for SO_2 and annual NO_X, consistent with the action proposed here for Texas EGUs.

[40] 76 FR at 48233, 48235.

[41] 76 FR at 48241.

[42] The modeling for the CSAPR final rule also linked Texas to the Madison County receptor with regard to the 2006 24-hour $PM_{2.5}$ NAAQS, but the EPA did not rely on the linkage with regard to that NAAQS as a basis for establishing CSAPR FIP requirements for Texas EGUs. *See* 76 FR at 48243, 48214.

[43] *EME Homer City II,* 795 F.3d at 129–30. The court also remanded the Phase 2 ozone-season NO_X budget for an eleventh state (Texas), but on different grounds.

[44] *See* projected 2014 base case maximum design value for Madison County, Illinois receptor 171191007 at B–41 of the Air Quality Modeling Final Rule Technical Support Document, Docket ID No. EPA–HQ–OAR–2009–0491–4140 (June 2011) (CSAPR Final Rule Technical Support Document), available in the docket for this proposed action.

[45] 76 FR at 48233.

V. Sensitivity Analysis Regarding CSAPR Participation as a BART Alternative

As summarized in section II.B above, in 2012 the EPA amended the Regional Haze Rule to authorize states whose EGUs participate in CSAPR trading programs for a given pollutant to rely on CSAPR participation as a BART alternative for that pollutant, basing that determination on an analytic demonstration that implementation of CSAPR as expected to take effect at the time of the 2012 revision would achieve greater reasonable progress than BART toward the national goal of natural visibility conditions in Class I areas. This section discusses a sensitivity analysis to the 2012 analytic demonstration showing that the analysis would have supported the same conclusion if the actions the EPA has proposed to take or has already taken in response to the D.C. Circuit's remand of various CSAPR Phase 2 budgets—specifically, the withdrawal of $PM_{2.5}$-related CSAPR Phase 2 FIP requirements for Texas EGUs proposed in this action and the recently finalized withdrawal of ozone-related CSAPR Phase 2 FIP requirements for Florida EGUs—were reflected in that analysis.

A. Summary of 2012 CSAPR-Better-Than-BART Analytic Demonstration

When promulgating the 2012 CSAPR-Better-than-BART rule, the EPA relied on an analysis showing that CSAPR implementation meets the Regional Haze Rule's criteria for a demonstration of greater reasonable progress than BART toward natural visibility conditions as set forth in 40 CFR 51.308(e)(3).[46] The analytic demonstration included an air quality modeling study whose results passed the two-pronged test described in section II.B above. The first prong ensures that the alternative program will not cause a decline in visibility at any affected Class I area. The second prong ensures that the alternative program results in improvements in average visibility across all affected Class I areas as compared to adopting source-specific BART. Together, these tests ensure that the alternative program provides for greater visibility improvement than would source-specific BART.

In the air quality modeling study conducted for the 2012 analytic demonstration, the EPA projected visibility conditions in affected Class I areas[47] based on 2014 emissions projections for two control scenarios and used this modeling in conjunction with the 2014 base case emissions projections and air quality modeling from the CSAPR final rule record.[48] One control scenario represents ''Nationwide BART'' and the other control scenario represents ''CSAPR + BART-elsewhere.'' The Nationwide BART scenario reflects projected SO_2 and NO_X emissions from all EGUs nationwide (except Alaska and Hawaii) after the application of source-specific BART controls to all BART-eligible EGUs. In the CSAPR + BART-elsewhere scenario, EGU SO_2 and NO_X emissions reductions attributable to CSAPR were applied throughout the 28-state CSAPR region wherever EGUs are subject to CSAPR requirements for the respective pollutants, and BART controls for SO_2 and NO_X were applied to all BART-eligible EGUs outside the CSAPR region as well as to BART-eligible EGUs in the CSAPR region that are not subject to CSAPR requirements for the respective pollutants.[49] The latter scenario reflects the fact that source-specific BART would remain a regional haze SIP element in states and for pollutants not covered by CSAPR requirements. In the base case, neither BART controls nor the EGU SO_2 and NO_X emissions reductions attributable to CSAPR were reflected.

For all BART-eligible EGUs in the Nationwide BART scenario and for BART-eligible EGUs not subject to CSAPR for a particular pollutant in the CSAPR + BART-elsewhere scenario, the modeled emission rates were the presumptive EGU BART limits for SO_2 and NO_X as specified in the BART Guidelines,[50] unless an actual emission rate at a given unit with existing controls was lower, in which case the lower emission rate was modeled.[51] The estimates of CSAPR annual NO_X and SO_2 emissions from EGUs for the CSAPR + BART-elsewhere control scenario were based on the CSAPR Phase 2 budgets promulgated in the CSAPR final rule, except that proposed rather than final ozone-season NO_X budgets were used for several states because their budgets were not final at the time the modeling for the CSAPR + BART-elsewhere scenario was performed.[52]

For the CSAPR-Better-than-BART final rule, the EPA also conducted an additional sensitivity analysis to address instances where certain CSAPR budgets were increased after promulgation of the original CSAPR final rule.[53] The overall magnitude of the SO_2 budget increases (for nine states) was 129,295 tons per year, with budget increases for Texas and Georgia accounting for approximately 70 percent of that total. In addition, there was an overall increase in annual NO_X budgets (for thirteen states) of 49,818 tons per year. In the sensitivity analysis, the EPA noted the dominance of sulfate impacts on visibility for each control scenario and relatedly noted that the vast majority of the projected visibility improvements in the CSAPR + BART-elsewhere scenario were attributable to the SO_2 reductions in that scenario, which were much larger than the SO_2 reductions in the Nationwide BART scenario.[54] This was especially true in the sixteen Class I areas that were identified as being most impacted by Texas and Georgia (all in the South). The EPA also concluded that the impact on the modeled visibility impacts at Class I areas from the overall NO_X budget increases would be negligible. The EPA therefore focused the sensitivity analysis on the increases in the SO_2 budgets for Texas and Georgia and considered highly conservative assumptions for the air quality impacts

[46] *See* Technical Support Document for Demonstration of the Transport Rule as a BART Alternative, Docket ID No. EPA–HQ–OAR–2011–0729–0014 (December 2011) (2011 CSAPR/BART Technical Support Document), available in the docket for this proposed action.

[47] The EPA identified two possible sets of ''affected Class I areas'' to consider for purposes of the study and found that implementation of CSAPR met the criteria for a BART alternative whichever set was considered. *See* 77 FR at 33650.

[48] For additional detail on the 2014 base case, see the CSAPR Final Rule Technical Support Document, *supra* note 44.

[49] Specifically, because Arkansas, Florida, Louisiana, Mississippi, and Oklahoma were covered by CSAPR only to address ozone transport obligations, for the CSAPR + BART-elsewhere case, EGUs in these states were assumed to be subject to CSAPR requirements for ozone-season NO_X emissions and source-specific BART for SO_2 (for BART-eligible EGUs). EGUs in the remaining CSAPR states, all of which were covered by CSAPR to address $PM_{2.5}$ transport obligations, were assumed to be subject to CSAPR requirements for both annual NO_X and SO_2, and were also assumed to be subject to CSAPR ozone-season NO_X requirements where applicable.

[50] Appendix Y to 40 CFR part 51—Guidelines for BART Determinations under the Regional Haze Rule.

[51] For more details on the emissions and modeling of the scenarios, see the 2011 CSAPR/BART Technical Support Document, *supra* note 46.

[52] The use of proposed rather than final budgets for ozone-season NO_X emissions for Iowa, Kansas, Michigan, Missouri, Oklahoma, and Wisconsin had no material effect on the overall emissions projections, because for each of the states except Oklahoma, the analysis also reflected a final, comparably stringent budget for annual NO_X emissions, and while Oklahoma has no CSAPR budget for annual NO_X emissions, its final Phase 2 ozone-season NO_X budget was unchanged from the proposal.

[53] *See* memo entitled ''Sensitivity Analysis Accounting for Increases in Texas and Georgia Transport Rule State Emissions Budgets,'' Docket ID No. EPA–HQ–OAR–2011–0729–0323 (May 29, 2012) (2012 CSAPR/BART sensitivity analysis memo), available in the docket for this proposed action.

[54] *Id.* at 1–2.

that would result from those budget increases in order to ensure that the conclusions from the modeling analysis remained robust in light of all the budget increases.

The CSAPR-Better-than-BART modeling analysis showed that the CSAPR + BART-elsewhere alternative passed both prongs of the two-pronged test described in section II.B above and that CSAPR implementation therefore met the Regional Haze Rule's criteria for a BART alternative. The first prong of the test—*i.e.,* whether the proposed BART alternative would result in a decline in visibility in any Class I area—was evaluated by comparing projected visibility conditions under the CSAPR + BART-elsewhere case and the base case. The CSAPR + BART-elsewhere scenario did not show visibility degradation relative to the base case at any of the affected Class I areas on either the 20 percent best or the 20 percent worst visibility days. The second prong of the test—*i.e.,* whether the proposed BART alternative would result in an overall improvement in visibility across all affected Class I areas relative to BART—was evaluated by comparing projected visibility conditions under the CSAPR + BART-elsewhere case and the Nationwide BART case. The CSAPR + BART-elsewhere scenario passed this prong of the test based on the fact that, on average, modeled visibility improvement at the affected Class I areas was greater under the CSAPR + BART-elsewhere scenario than under the Nationwide BART scenario on both the 20 percent best and the 20 percent worst visibility days.

B. Impact on 2012 Analytic Demonstration of Actions Responding to the Remand of CSAPR Phase 2 Budgets

As discussed in section II.A above, although in *EME Homer City II* the D.C. Circuit remanded the CSAPR Phase 2 SO_2 budgets for four states and the CSAPR Phase 2 ozone-season NO_X budgets for eleven states, the EPA expects that with regard to most of these states the remand will result in no material change to the scope of CSAPR coverage. In the case of the remanded Phase 2 SO_2 budgets for Alabama, Georgia, and South Carolina, the states are expected to continue to ensure that their EGUs comply with comparably stringent CSAPR SO_2 and annual NO_X requirements through SIP revisions. In the case of the remanded Phase 2 ozone-season NO_X budgets, eight of the states with remanded budgets (including Texas) will continue to be subject to CSAPR to address ozone transport obligations with regard to the more stringent 2008 ozone NAAQS, and North Carolina and South Carolina, although no longer covered by CSAPR to address ozone transport obligations, will continue to be subject to CSAPR annual NO_X requirements in order to address their $PM_{2.5}$ transport obligations. In considering the potential impact of the remand of Phase 2 budgets on the 2012 CSAPR-Better-than-BART analytic demonstration, the EPA therefore believes that only two changes have potential relevance: The withdrawal of the FIP provisions subjecting Florida EGUs to CSAPR ozone-season NO_X requirements that has already been finalized, and the withdrawal of FIP provisions subjecting Texas EGUs to CSAPR SO_2 and annual NO_X requirements that is proposed in this action.

With regard to the change in CSAPR requirements for Florida EGUs, the EPA believes that the change would have no material impact on the 2012 analytic demonstration. Because Florida EGUs are no longer subject to any CSAPR requirements for NO_X emissions during Phase 2, Florida is no longer eligible to rely on CSAPR participation as a NO_X BART alternative.[55] If this information had been available at the time of the 2012 CSAPR-Better-than-BART analytic demonstration, the treatment of Florida EGUs in the base case and in the Nationwide BART scenario would not have changed, but in the CSAPR + BART-elsewhere scenario Florida EGUs would have been treated as subject to NO_X BART instead of being treated as subject to CSAPR ozone-season NO_X requirements. The Nationwide BART scenario already includes projections of the annual NO_X emissions from Florida EGUs under NO_X BART. The difference between the projected annual NO_X emissions of Florida EGUs in these two scenarios is only 5,300 tons, which represents an increase of approximately seven percent of the total annual NO_X emissions from Florida EGUs and approximately three tenths of one percent of the total annual NO_X emissions from EGUs in all modeled states in the CSAPR + BART-elsewhere scenario.[56] Consistent with the sensitivity analysis supporting the 2012 analytic demonstration that showed the dominance of sulfate impacts on visibility (especially in the South), small increases in Florida NO_X emissions are expected to have a negligible impact on visibility impairment in nearby Class I areas. The EPA believes that this relatively small increase in NO_X emissions in the CSAPR + BART-elsewhere case would have been too small to cause any change in the results of either prong of the two-pronged CSAPR-Better-than-BART test.

With regard to the changes in CSAPR requirements for Texas EGUs, the EPA believes that the changes would have no adverse impact on the 2012 analytic demonstration. Following withdrawal of the FIP provisions as proposed, Texas EGUs would no longer be subject to CSAPR requirements for SO_2 emissions and Texas would therefore be ineligible to rely on CSAPR as an SO_2 BART alternative. Texas EGUs would also no longer be subject to CSAPR requirements for annual NO_X emissions, but because the EGUs would continue to be subject to CSAPR requirements for ozone-season NO_X emissions, Texas would remain eligible to rely on CSAPR as a NO_X BART alternative.[57] If this information had been available at the time of the 2012 CSAPR-Better-than-BART demonstration, the treatment of Texas EGUs in the base case and in the Nationwide BART case would not have changed, but in the CSAPR + BART-elsewhere case Texas EGUs would have been treated as subject to SO_2 BART instead of being treated as subject to CSAPR SO_2 requirements. For NO_X, Texas EGUs would have been treated as being subject to CSAPR requirements for ozone-season NO_X emissions only instead of being treated as subject to CSAPR requirements for both ozone-season and annual NO_X emissions.

The Nationwide BART scenario already includes projections of the SO_2 emissions from Texas EGUs under BART. Some of the CSAPR states are projected to have lower emissions for a given pollutant in the CSAPR + BART-elsewhere scenario compared to the Nationwide BART scenario. This occurs in CSAPR states where the majority of the EGUs are not BART-eligible and/or where there were many EGUs with available cost-effective controls (at the time of the analysis for the CSAPR rulemaking). However, in other CSAPR states, the presumptive BART limits lead to estimated emissions for a given pollutant that are lower than what was

[55] The EPA has already approved the incorporation into Florida's SIP of determinations regarding source-specific NO_X BART. 77 FR 71111, 71113–14 (November 29, 2012); 78 FR 53250, 53267 (August 29, 2013).

[56] *See* the 2011 CSAPR/BART Technical Support Document, *supra* note 46, at table 2–5. The projected amounts of annual NO_X emissions from Florida EGUs are 81,000 tons in the Nationwide BART scenario and 75,700 tons in the CSAPR + BART-elsewhere scenario. The difference between these amounts is 5,300 tons. The quotient of 5,300 divided by 81,000 is 6.5%. The total projected amount of annual NO_X emissions from all states in the table in the CSAPR + BART-elsewhere scenario is 1,755,900 tons (1,217,500 + 538,400). The quotient of 5,300 divided by 1,755,900 is 0.3%.

[57] *See* 40 CFR 51.308(e)(4); *see also supra* note 7.

projected in the CSAPR + BART-elsewhere scenario. This can occur in CSAPR states that have numerous BART-eligible EGUs. In the case of Texas, the projected SO_2 emissions from affected EGUs in the modeled Nationwide BART scenario (139,300 tons per year) are considerably lower than the projected SO_2 emissions from the affected EGUs in the CSAPR + BART-elsewhere scenario (266,600 tons per year as modeled, and up to approximately 317,100 tons, as addressed in the 2012 CSAPR/BART sensitivity analysis memo).[58] Treating Texas EGUs in the CSAPR + BART-elsewhere scenario as subject to SO_2 BART instead of CSAPR SO_2 requirements would therefore have reduced projected SO_2 emissions by between 127,300 tons and approximately 177,800 tons in this scenario, thereby improving projected air quality in this scenario relative to projected air quality in both the Nationwide BART scenario and the base case scenario (in which the projected SO_2 emissions from Texas EGUs would not change).[59] At the lower end of this range, a reduction in SO_2 emissions of 127,300 tons would represent a reduction of over four percent of the total SO_2 emissions from EGUs in all modeled states in the CSAPR + BART-elsewhere scenario.[60] The EPA has previously observed that the visibility improvements from CSAPR relative to BART are primarily attributable to the greater reductions in SO_2 emissions from CSAPR across the overall modeled region in the CSAPR + BART-elsewhere scenario relative to the Nationwide BART scenario.[61] In the 2012 CSAPR-Better-than-BART analytic demonstration as relied on for purposes of the CSAPR-Better-than-BART rule, in which Texas SO_2 emissions for the CSAPR + BART-elsewhere scenario were represented at their higher projected CSAPR levels instead of at their lower projected BART levels, the difference in SO_2 emission reductions for the overall modeled region between the CSAPR + BART-elsewhere scenario and the Nationwide BART scenario was approximately 773,000 tons after accounting for the increases in CSAPR SO_2 budgets promulgated after the CSAPR final rule.[62] An additional SO_2 reduction of 127,300 tons or more in the CSAPR + BART-elsewhere scenario—the result of revising this scenario to represent Texas EGUs as subject to SO_2 BART requirements instead of CSAPR SO_2 requirements—would increase this 773,000 ton differential, which already favors implementation of CSAPR relative to BART, by more than fifteen percent.

The modeling performed for the 2012 analytic demonstration does not include projections of NO_X emissions from Texas EGUs in a scenario where the EGUs are assumed to be subject to CSAPR requirements for ozone-season NO_X but not annual NO_X emissions. However, in the base case used for the analytic demonstration—*i.e.,* without any NOx requirements from either CSAPR or BART—the projected annual NO_X emissions from Texas EGUs were only 2,600 tons higher than the annual NO_X emissions projected for the CSAPR + BART-elsewhere case in which it was assumed that the EGUs were subject to CSAPR requirements for both ozone-season and annual NO_X emissions.[63] The EPA believes this information indicates that if Texas EGUs had been modeled as subject to CSAPR requirements for ozone-season NO_X but not annual NO_X emissions, the projected NO_X emissions would likely have been at most a few thousand tons higher than the emissions already modeled in the CSAPR + BART-elsewhere scenario. An increase of 2,600 tons—that is, the full difference between the projected annual NO_X emissions from Texas EGUs under the CSAPR + BART-elsewhere scenario and a case with no CSAPR (or BART) NO_X requirements at all—would represent approximately two percent of the total annual NO_X emissions from Texas EGUs and less than two tenths of one percent of the total annual NO_X emissions from EGUs in all modeled states in the CSAPR + BART-elsewhere scenario.[64] Consistent with the sensitivity analysis supporting the 2012 analytic demonstration that showed the dominance of sulfate impacts on visibility (especially in the South), small increases in Texas NO_X emissions are expected to have a negligible impact on visibility impairment in nearby Class I areas. The EPA believes that this relatively small increase in NO_X emissions in the CSAPR + BART-elsewhere case would have been too small to cause any change in the results of either prong of the two-pronged CSAPR-Better-than-BART test.

In summary, if the information regarding the remanded CSAPR Phase 2 SO_2 budget for Texas and the consequent proposed withdrawal of FIP requirements for Texas EGUs had been available at the time of the 2012 CSAPR-Better-than-BART analytic demonstration, the EPA believes that the CSAPR + BART-elsewhere scenario likely would have reflected SO_2 emissions from Texas EGUs that would have been 127,300 or more tons per year lower than the emissions that were used instead, and likely would have reflected annual NO_X emissions from Texas EGUs that would have been at most a few thousand tons per year higher than the emissions that were used instead. Given the greater importance of SO_2 emissions relative to NO_X emissions in the 2012 analytic comparison, as noted above, and given that emissions would not have changed in the Nationwide BART or base case scenarios, it is a logical conclusion that the modeled visibility improvement in the CSAPR + BART-elsewhere scenario would have been even larger relative to the other scenarios than what was modeled in the 2012 analytic demonstration as reflected in the CSAPR-Better-than-BART rule. There is therefore no need to do any new modeling or more complicated sensitivity analysis. The lower SO_2 emissions in Texas would clearly have led to more visibility improvement on the best and worst visibility days in the nearby Class I areas.[65] Since the ''original'' CSAPR + BART-elsewhere scenario passed both prongs of the better-than-BART test (compared to the

[58] For the projected annual SO_2 emissions from Texas EGUs for all scenarios, see the 2011 CSAPR/BART Technical Support Document, *supra* note 46, at table 2–4. As discussed in section V.A above, certain CSAPR budgets were increased after promulgation of the CSAPR final rule (and the increases were addressed in the 2012 CSAPR/BART sensitivity analysis memo, *supra* note 53). The increase in the Texas SO_2 budget was 50,517 tons which, when added to the Texas SO_2 emissions projected in the CSAPR + BART-elsewhere scenario of 266,600 tons, yields total potential SO_2 emissions from Texas EGUs of approximately 317,100 tons.

[59] The difference between 266,600 and 139,300 is 127,300. The difference between 317,100 and 139,300 is 177,800.

[60] The total projected amount of annual SO_2 emissions from all states in the table in the CSAPR + BART-elsewhere scenario is 2,918,500 tons (2,416,900 + 501,600). *See* the 2011 CSAPR/BART Technical Support Document, *supra* note 46, at table 2–4. The quotient of 127,300 divided by 2,918,500 is 4.3%.

[61] *See* the 2012 CSAPR/BART sensitivity analysis memo, *supra* note 53, at 1–2.

[62] *Id.*

[63] *See* the 2011 CSAPR/BART Technical Support Document, *supra* note 46, at table 2–5. The projected amounts of annual NO_X emissions from Texas EGUs are 142,100 tons in the base case scenario and 139,500 tons in the CSAPR + BART-elsewhere scenario. The difference between these amounts is 2,600 tons.

[64] The quotient of 2,600 divided by 139,500 is 1.9%. The total projected amount of annual NO_X emissions from all states in the CSAPR + BART-elsewhere scenario is 1,755,900 tons. *See supra* note 56. The quotient of 2,600 divided by 1,755,900 is 0.15%.

[65] As documented in the 2012 CSAPR/BART sensitivity analysis memo, *supra* note 53, sulfate is the main constituent contributing to visibility impairment at the Class I areas affected by Texas' emissions, making Texas' SO_2 emissions the dominant contributor to visibility impairment in these areas.

Nationwide BART scenario and the base case scenario), a modified CSAPR + BART-elsewhere scenario without Texas in the CSAPR region would without question also have passed both prongs of the better-than-BART test. In fact, if the modeling analysis had reflected the withdrawal of FIP provisions for Texas EGUs proposed in this action, the EPA expects that CSAPR implementation would have passed the better-than-BART test even more easily, again supporting the use of CSAPR implementation as a BART alternative for all states whose EGUs participate in the CSAPR trading programs.

The EPA requests comment on this discussion and the sensitivity analysis showing that the 2012 analytic demonstration supporting the conclusion that CSAPR participation qualifies as a BART alternative would not be adversely affected by modifying the assumptions to reflect the actions that have been or are expected to be taken in response to the D.C. Circuit's remand of CSAPR Phase 2 budgets, including the proposed withdrawal of FIP provisions requiring Texas EGUs to participate in the CSAPR SO_2 and annual NO_X trading programs.

VI. Statutory and Executive Order Reviews

Additional information about these statutes and Executive Orders can be found at *http://www2.epa.gov/laws-regulations/laws-and-executive-orders.*

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 and therefore was not submitted to the Office of Management and Budget (OMB) for review.

B. Paperwork Reduction Act

This action does not impose any new information collection burden under the Paperwork Reduction Act. The OMB has previously approved the information collection activities contained in the existing regulations and has assigned OMB control number 2060–0667. The withdrawal of the FIP provisions proposed in this action will eliminate monitoring, recordkeeping, and reporting requirements for Texas sources under the CSAPR SO_2 Group 2 Trading Program and the CSAPR NO_X Annual Trading Program. However, this action will cause no material change in information collection burden related to NO_X because all of the sources will continue to be subject to very similar NOx monitoring and reporting requirements under the CSAPR NO_X Ozone Season Group 2 Trading Program and/or the Acid Rain Program. Further, for most of the sources, this action will also cause no change in information collection burden related to SO_2 because the same SO_2 monitoring and reporting requirements will continue to apply to the sources under the Acid Rain Program. Approximately eight Texas sources currently reporting under CSAPR include units that are not subject to the Acid Rain Program and therefore will no longer be required to continuously monitor and report SO_2 emissions to the EPA, but these units combust only gaseous or liquid fuels and currently use default values or periodic sampling instead of continuous emission monitoring systems to measure SO_2 concentrations. Consequently, the EPA expects this action to cause little change in information collection burden related to SO_2.

C. Regulatory Flexibility Act

I certify that this action will not have a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act. In making this determination, the impact of concern is any significant adverse economic impact on small entities. An agency may certify that a rule will not have a significant economic impact on a substantial number of small entities if the rule relieves regulatory burden, has no net burden, or otherwise has a positive economic effect on the small entities subject to the rule. This action withdraws existing regulatory requirements for some entities and does not impose new requirements on any entity. We have therefore concluded that this action will either relieve or have no net regulatory burden for all directly regulated small entities.

D. Unfunded Mandates Reform Act

This action does not contain any unfunded mandate as described in the Unfunded Mandates Reform Act, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. The action imposes no enforceable duty on any state, local, or tribal governments or the private sector. This action simply eliminates certain federal regulatory requirements that the D.C. Circuit has held invalid.

E. Executive Order 13132: Federalism

This action 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. This action simply eliminates certain federal regulatory requirements that the D.C. Circuit has held invalid.

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

This action does not have tribal implications as specified in Executive Order 13175. 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. This action simply eliminates certain federal regulatory requirements that the D.C. Circuit has held invalid. Thus, Executive Order 13175 does not apply to this action. Consistent with the EPA Policy on Consultation and Coordination with Indian Tribes, the EPA consulted with tribal officials while developing CSAPR. A summary of that consultation is provided in the preamble for CSAPR, 76 FR 48208, 48346 (August 8, 2011).

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

The EPA interprets Executive Order 13045 as applying only to those regulatory actions that concern environmental health or safety risks that the EPA has reason to believe may disproportionately affect children, per the definition of ''covered regulatory action'' in section 2–202 of the Executive Order. This action is not subject to Executive Order 13045 because it simply eliminates certain federal regulatory requirements that the D.C. Circuit has held invalid.

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

This action is not subject to Executive Order 13211, because it is not a significant regulatory action under Executive Order 13211.

I. National Technology Transfer Advancement Act

This rulemaking does not involve technical standards.

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

The EPA believes that this action is not subject to Executive Order 12898 because it does not establish an environmental health or safety standard. This action simply eliminates certain federal regulatory requirements that the

D.C. Circuit has held invalid. Consistent with Executive Order 12898 and the EPA's environmental justice policies, the EPA considered effects on low-income populations, minority populations, and indigenous peoples while developing CSAPR. The process and results of that consideration are described in the preamble for CSAPR, 76 FR 48208, 48347–52 (August 8, 2011).

List of Subjects in 40 CFR Part 52

Environmental protection, Administrative practice and procedure, Air pollution control, Incorporation by reference, Intergovernmental relations, Nitrogen oxides, Ozone, Particulate matter, Regional haze, Reporting and recordkeeping requirements, Sulfur dioxide.

Dated: November 3, 2016.

Gina McCarthy,

Administrator.

For the reasons stated in the preamble, part 52 of chapter I of title 40 of the *Code of Federal Regulations* is proposed to be amended as follows:

PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

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

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

Subpart A—General Provisions

■ 2. Section 52.38 is amended by revising paragraph (a)(2), paragraph (a)(4) introductory text, paragraph (a)(5) introductory text, and paragraph (a)(6) to read as follows:

§ 52.38 What are the requirements of the Federal Implementation Plans (FIPs) for the Cross-State Air Pollution Rule (CSAPR) relating to emissions of nitrogen oxides?

(a) * * *

(2)(i) The provisions of subpart AAAAA of part 97 of this chapter apply to sources in each of the following States and Indian country located within the borders of such States with regard to emissions occurring in 2015 and each subsequent year: Alabama, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Maryland, Michigan, Minnesota, Missouri, Nebraska, New Jersey, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Virginia, West Virginia, and Wisconsin.

(ii) The provisions of subpart AAAAA of part 97 of this chapter apply to sources in each of the following States and Indian country located within the borders of such States with regard to emissions occurring in 2015 and 2016 only: Texas.

* * * * *

(4) Notwithstanding the provisions of paragraph (a)(1) of this section, a State listed in paragraph (a)(2)(i) of this section may adopt and include in a SIP revision, and the Administrator will approve, regulations revising subpart AAAAA of part 97 of this chapter as follows and not making any other substantive revisions of that subpart:

* * * * *

(5) Notwithstanding the provisions of paragraph (a)(1) of this section, a State listed in paragraph (a)(2)(i) of this section may adopt and include in a SIP revision, and the Administrator will approve, as correcting the deficiency in the SIP that is the basis for the CSAPR Federal Implementation Plan set forth in paragraphs (a)(1), (a)(2)(i), and (a)(3) and (4) of this section with regard to sources in the State (but not sources in any Indian country within the borders of the State), regulations that are substantively identical to the provisions of the CSAPR NO_X Annual Trading Program set forth in §§ 97.402 through 97.435 of this chapter, except that the SIP revision:

* * * * *

(6) Following promulgation of an approval by the Administrator of a State's SIP revision as correcting the SIP's deficiency that is the basis for the CSAPR Federal Implementation Plan set forth in paragraphs (a)(1), (a)(2)(i), and (a)(3) and (4) of this section, the provisions of paragraph (a)(2)(i) of this section will no longer apply to sources in the State, unless the Administrator's approval of the SIP revision is partial or conditional, and will continue to apply to sources in any Indian country within the borders of the State, provided that if the CSAPR Federal Implementation Plan was promulgated as a partial rather than full remedy for an obligation of the State to address interstate air pollution, the SIP revision likewise will constitute a partial rather than full remedy for the State's obligation unless provided otherwise in the Administrator's approval of the SIP revision.

* * * * *

■ 3. Section 52.39 is amended by revising paragraph (c), paragraph (h) introductory text, paragraph (i) introductory text, and paragraph (j) to read as follows:

§ 52.39 What are the requirements of the Federal Implementation Plans (FIPs) for the Cross-State Air Pollution Rule (CSAPR) relating to emissions of sulfur dioxide?

* * * * *

(c)(1) The provisions of subpart DDDDD of part 97 of this chapter apply to sources in each of the following States and Indian country located within the borders of such States with regard to emissions occurring in 2015 and each subsequent year: Alabama, Georgia, Kansas, Minnesota, Nebraska, and South Carolina.

(2) The provisions of subpart DDDDD of part 97 of this chapter apply to sources in each of the following States and Indian country located within the borders of such States with regard to emissions occurring in 2015 and 2016 only: Texas.

* * * * *

(h) Notwithstanding the provisions of paragraph (a) of this section, a State listed in paragraph (c)(1) of this section may adopt and include in a SIP revision, and the Administrator will approve, regulations revising subpart DDDDD of part 97 of this chapter as follows and not making any other substantive revisions of that subpart:

* * * * *

(i) Notwithstanding the provisions of paragraph (a) of this section, a State listed in paragraph (c)(1) of this section may adopt and include in a SIP revision, and the Administrator will approve, as correcting the deficiency in the SIP that is the basis for the CSAPR Federal Implementation Plan set forth in paragraphs (a), (c)(1), (g), and (h) of this section with regard to sources in the State (but not sources in any Indian country within the borders of the State), regulations that are substantively identical to the provisions of the CSAPR SO_2 Group 2 Trading Program set forth in §§ 97.702 through 97.735 of this chapter, except that the SIP revision:

* * * * *

(j) Following promulgation of an approval by the Administrator of a State's SIP revision as correcting the SIP's deficiency that is the basis for the CSAPR Federal Implementation Plan set forth in paragraphs (a), (b), (d), and (e) of this section or paragraphs (a), (c)(1), (g), and (h) of this section, the provisions of paragraph (b) or (c)(1) of this section, as applicable, will no longer apply to sources in the State, unless the Administrator's approval of the SIP revision is partial or conditional, and will continue to apply to sources in any Indian country within the borders of the State, provided that if the CSAPR Federal Implementation Plan was promulgated as a partial rather than full remedy for an obligation of the State to address interstate air pollution, the SIP revision likewise will constitute a partial rather than full remedy for the State's obligation unless provided

otherwise in the Administrator's approval of the SIP revision.

* * * * *

Subpart SS—Texas

■ 4. Section 52.2283 is amended by revising paragraph (c)(1) and removing and reserving paragraph (c)(2) to read as follows:

§ 52.2283 Interstate pollutant transport provisions; What are the FIP requirements for decreases in emissions of nitrogen oxides?

* * * * *

(c)(1) The owner and operator of each source and each unit located in the State of Texas and Indian country within the borders of the State and for which requirements are set forth under the CSAPR NO_X Annual Trading Program in subpart AAAAA of part 97 of this chapter must comply with such requirements with regard to emissions occurring in 2015 and 2016.

(2) [Reserved]

* * * * *

■ 5. Section 52.2284 is amended by revising paragraph (c)(1) and removing and reserving paragraph (c)(2) to read as follows:

§ 52.2284 Interstate pollutant transport provisions; What are the FIP requirements for decreases in emissions of sulfur dioxide?

* * * * *

(c)(1) The owner and operator of each source and each unit located in the State of Texas and Indian country within the borders of the State and for which requirements are set forth under the CSAPR SO_2 Group 2 Trading Program in subpart DDDDD of part 97 of this chapter must comply with such requirements with regard to emissions occurring in 2015 and 2016.

(2) [Reserved]

[FR Doc. 2016–27197 Filed 11–9–16; 8:45 am]

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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 79 and 80

[EPA–HQ–OAR–2016–0041; FRL–9955–04–OAR]

RIN 2060–AS66

Public Hearing for the Renewables Enhancement and Growth Support Rule

AGENCY: Environmental Protection Agency (EPA).

ACTION: Announcement of public hearing.

SUMMARY: The Environmental Protection Agency (EPA) is announcing a public hearing to be held in Chicago, Illinois on December 6, 2016, on its proposal for the ''Renewables Enhancement and Growth Support (REGS) Rule.'' The public can view the proposal at *https://www.epa.gov/renewable-fuel-standard-program/proposed-renewables-enhancement-and-growth-support-regs-rule.* Comments submitted at the public hearing will contribute to the REGS Rule proposal that the EPA will publish at a later date in the **Federal Register**.

DATES: The public hearing will be held on December 6, 2016, at the location noted below under **ADDRESSES**. The hearing will begin at 9:00 a.m. Central Standard Time and end when all parties present who wish to speak have had an opportunity to do so. Parties wishing to testify at the hearing should notify the contact person listed under **FOR FURTHER INFORMATION CONTACT** by November 22, 2016. Additional information regarding the hearing appears below under **SUPPLEMENTARY INFORMATION**.

ADDRESSES: The hearing will be held at the following location: Palmer House Hilton Hotel, 17 East Monroe Street, Chicago, IL 60603; telephone number: (312) 726–7500. A complete set of documents related to the proposal will be available for public inspection through the Federal eRulemaking Portal: *http://www.regulations.gov,* Docket ID No. EPA–HQ–OAR–2016–0041. Documents can also be viewed at the EPA Docket Center, located at William Jefferson Clinton Building West, Room 3334, 1301 Constitution Ave. NW., Washington, DC between 8:30 a.m. and 4:30 p.m., Monday through Friday, excluding legal holidays.

FOR FURTHER INFORMATION CONTACT: Julia MacAllister, Office of Transportation and Air Quality, Assessment and Standards Division, Environmental Protection Agency, 2000 Traverwood Drive, Ann Arbor, MI 48105; telephone number: (734) 214–4131; email address: *RFS_Hearing@epa.gov.*

SUPPLEMENTARY INFORMATION: The EPA has proposed amendments to update both its Renewable Fuel Standard (RFS) and other fuels regulations in the Renewables Enhancement and Growth Support (REGS) Rule to reflect changes in the marketplace and to promote the growing use of both ethanol fuels (conventional and advanced) and non-ethanol advanced and cellulosic biofuels. In addition, the REGS rule includes a number of other regulatory changes, clarifications, and technical corrections to the RFS program and other fuels regulations. The proposal for the REGS rule will be published separately in the **Federal Register**. The pre-publication version can be found at *https://www.epa.gov/renewable-fuel-standard-program/proposed-renewables-enhancement-and-growth-support-regs-rule.*

Public Hearing: The public hearing will provide interested parties the opportunity to present data, views, or arguments concerning the proposal (which can be found at *https://www.epa.gov/renewable-fuel-standard-program/proposed-renewables-enhancement-and-growth-support-regs-rule*). The EPA may ask clarifying questions during the oral presentations but will not respond to the presentations at that time. Written statements and supporting information submitted during the comment period will be considered with the same weight as any oral comments and supporting information presented at the public hearing. Written comments must be received by the last day of the comment period, as specified in the notice of proposed rulemaking.

How can I get copies of this document, the proposed rule, and other related information?

The EPA has established a docket for this action under Docket ID No. EPA–HQ–OAR–2016–0041. The EPA has also developed a Web site for the Renewables Enhancement and Growth Support (REGS) rule, including the proposal, at the address given above. Please refer to the notice of proposed rulemaking for detailed information on accessing information related to the proposal.

Dated: October 27, 2016.

Christopher Grundler,

Director, Office of Transportation and Air Quality, Office of Air and Radiation.

[FR Doc. 2016–26965 Filed 11–9–16; 8:45 am]

BILLING CODE 6560–50–P

Notices

Federal Register
Vol. 81, No. 218
Thursday, November 10, 2016

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

Office of the Secretary

Notice of Appointment of Members to the National Agricultural Research, Extension, Education, and Economics Advisory Board

AGENCY: Research, Education, and Economics, USDA.

ACTION: Appointment of members.

SUMMARY: In accordance with the Federal Advisory Committee Act, the United States Department of Agriculture announces the appointment of members made by the Secretary of Agriculture to fill 7 vacancies on the National Agricultural Research, Extension, Education, and Economics Advisory Board.

DATES: Appointments by the Secretary of Agriculture are for 2, or 3 year terms effective October 1, 2016.

ADDRESSES: National Agricultural Research, Extension, Education, and Economics Advisory Board; Research Extension, Education, and Economics Advisory Board Office, Room 332A, The Whitten Building, U.S. Department of Agriculture; STOP 0301; 1400 Independence Avenue SW., Washington, DC 20250–2255.

FOR FURTHER INFORMATION CONTACT: Michele Esch, Executive Director, Research, Education, and Economics Advisory Board, 1400 Independence Avenue SW., Room 332A, The Whitten Building, Washington, DC 20250–2255 Telephone: 202–720–3684. Fax: 202–720–6199, email: *nareeeab@ars.usda.gov*. Committee Web site: *www.nareeeab.ree.usda.gov*.

SUPPLEMENTARY INFORMATION: Section 802 of the Federal Agricultural Improvement and Reform Act of 1996 authorized the creation of the National Agricultural Research, Extension, Education, and Economics Advisory Board. The Board is composed of 25 members, each representing a specific category related to agriculture. The Board was first appointed in September 1996 and at the time one-third of the original members were appointed for one, two, and three-year term, respectively. Due to the staggered appointments, the terms for 7 of the 25 members expired September 30, 2016.

Each member is appointed by the Secretary of Agriculture to a specific category on the Board, including farming or ranching, food production and processing, forestry research, crop and animal science, land-grant institutions, non-land grant college or university with a historic commitment to research in the food and agricultural sciences, food retailing and marketing, rural economic development, and natural resource and consumer interest groups, among many others. Appointees by vacancy category of the 7 appointments are as follows:

Category F. National Food Animal Science Society: Govind Kannan (Re-appointment), Dean and Director, College of Agriculture, Family Sciences and Technology, Fort Valley State University, Fort Valley, GA;

Category G. National Crop, Soil, Agronomy, Horticulture, or Weed Science Society: Roch Gaussoin, Professor and Department Head, Department of Agronomy and Horticulture, University of Nebraska, Lincoln, NE;

Category L. 1890 Land-Grant Colleges and Universities: Kenrett Jefferson-Moore, Professor, North Carolina A&T, Greensboro, NC;

Category M. 1994 Equity in Education Land-Grant Institutions: Michael Oltrogge, President, Nebraska Indian Community College, Macy, NE;

Category P. American Colleges of Veterinary Medicine: Mark Lawrence, Professor and Associate Dean, Research and Graduate Studies, College of Veterinary Medicine, Mississippi State University, Mississippi, MS;

Category T. Rural Economic Development: Robin Beck, Owner, Rockin' Sheep Products LLC, Livermore Falls, ME;

Category U. National Consumer Interest Group: Richard De Los Santos, Coordinator for Horticulture, Produce, and Forestry Marketing, Austin, TX.

Dated: November 2, 2016.

Ann Bartuska,

Deputy Under Secretary, Research, Education, and Economics.

[FR Doc. 2016–27161 Filed 11–9–16; 8:45 am]

BILLING CODE 3410–03–P

DEPARTMENT OF COMMERCE

International Trade Administration

[A–570–010, C–570–011, A–583–853]

Certain Crystalline Silicon Photovoltaic Products From the People's Republic of China and From Taiwan: Notice of Initiation of Changed Circumstances Reviews, and Consideration of Revocation of the Antidumping and Countervailing Duty Orders in Part

AGENCY: Enforcement and Compliance, International Trade Administration, Department of Commerce.

SUMMARY: Based on a request from PulseTech Products Corporation (''PulseTech'') the Department of Commerce (the ''Department'') is initiating changed circumstances reviews to consider the possible revocation, in part, of the antidumping duty (''AD'') order on certain crystalline silicon photovoltaic products from Taiwan and the AD and countervailing duty (''CVD'') orders on certain crystalline silicon photovoltaic products from the People's Republic of China (''PRC'') (together, the ''Orders'') with respect to solar panels incorporated in certain battery charging and maintaining units, as described below.

DATES: Effective Date: November 10, 2016.

FOR FURTHER INFORMATION CONTACT: Magd Zalok, Robert Bolling, or Howard Smith, AD/CVD Operations, Office IV, Enforcement and Compliance, International Trade Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue NW., Washington, DC 20230; telephone: (202) 482–4162, (202) 482–3434, or (202) 482–5193, respectively.

SUPPLEMENTARY INFORMATION:

Background

On February 18, 2015, the Department published an AD order on certain crystalline silicon photovoltaic products

from Taiwan,[1] and AD and CVD orders on certain crystalline silicon photovoltaic products from the PRC.[2]

On April 20, 2016, PulseTech Products Corporation (''PulseTech''), an importer of the subject merchandise, requested revocation, in part, of the Orders pursuant to section 751(b)(1) of the Tariff Act of 1930, as amended (''the Act'') and 19 CFR 351.216(b),[3] with respect to certain solar panels. In subsequent submissions filed between May 12, 2016, and September 2, 2016, PulseTech modified the description of one of the products covered by its request, ultimately describing the product as solar panels that are:

(1) less than 300,000 mm2 in surface area; (2) less than 27.1 watts in power; (3) coated across their entire surface with a polyurethane doming resin; and (4) joined to a battery charging and maintaining unit (which is an acrylonitrile butadiene styrene (''ABS'') box that incorporates a light emitting diode (''LED'')) by coated wires that include a connector to permit the incorporation of an extension cable. The battery charging and maintaining unit utilizes high-frequency triangular pulse waveforms designed to maintain and extend the life of batteries through the reduction of lead sulfate crystals. The above-described battery charging and maintaining unit is currently available under the registered trademark ''SolarPulse.''

On September 6, 2016, SolarWorld Americas, Inc. (''Petitioner'') stated that it agrees with the scope exclusion language proposed by PulseTech for the above-referenced solar panels incorporated into certain battery charging and maintaining units.[4]

PulseTech also requested revocation, in part, of the Orders with respect to other stand-alone solar panels. However, PulseTech withdrew its request for CCRs with respect to the stand-alone panels.[5]

[1] *See Certain Crystalline Silicon Photovoltaic Products from Taiwan: Antidumping Duty Order,* 80 FR 8596 (February 18, 2015).

[2] *See Certain Crystalline Silicon Photovoltaic Products from the People's Republic of China: Antidumping Duty Order; and Amended Final Affirmative Countervailing Duty Determination and Countervailing Duty Order,* 80 FR 8592 (February 18, 2015).

[3] *See* April 20, 2016 letter from PulseTech Products Corporation Re: Resubmission of Requests for Changed Circumstances Review—Certain Crystalline Silicon Photovoltaic Products from the People's Republic of China and from Taiwan (''PulseTech Request for CCRs'').

[4] *See* September 6, 2016 letter from Petitioner Re: Certain Crystalline Silicon Photovoltaic Products from the People's Republic of China and Taiwan: Changed Circumstances Review Request—Letter of No Opposition.

[5] *See* PulseTech's October 28, 2016, submission.

Scope of the Antidumping and Countervailing Duty Orders on Certain Crystalline Silicon Photovoltaic Products From the People's Republic of China

The merchandise covered by these orders are modules, laminates and/or panels consisting of crystalline silicon photovoltaic cells, whether or not partially or fully assembled into other products, including building integrated materials. For purposes of these orders, subject merchandise includes modules, laminates and/or panels assembled in the PRC consisting of crystalline silicon photovoltaic cells produced in a customs territory other than the PRC.

Subject merchandise includes modules, laminates and/or panels assembled in the PRC consisting of 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.

Excluded from the scope of these orders 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 these orders are modules, laminates and/or panels assembled in the PRC, consisting of crystalline silicon photovoltaic cells, not exceeding 10,000mm2 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 cells. Where more than one module, laminate and/or panel is permanently integrated into a consumer good, the surface area for purposes of this exclusion shall be the total combined surface area of all modules, laminates and/or panels that are integrated into the consumer good. Further, also excluded from the scope of these orders are any products covered by the existing antidumping and countervailing duty orders on crystalline silicon photovoltaic cells, whether or not assembled into modules, laminates and/or panels, from the PRC.[6]

Merchandise covered by these orders is currently classified in the Harmonized Tariff Schedule of the United States (''HTSUS'') under subheadings 8501.61.0000, 8507.20.8030, 8507.20.8040, 8507.20.8060, 8507.20.8090, 8541.40.6020, 8541.40.6030 and 8501.31.8000. These HTSUS subheadings are provided for convenience and customs purposes; the written description of the scope of these orders is dispositive.

Scope of the Antidumping Duty Order on Certain Crystalline Silicon Photovoltaic Products From Taiwan

The merchandise covered by this order is crystalline silicon photovoltaic cells, and modules, laminates and/or panels consisting of crystalline silicon photovoltaic cells, whether or not partially or fully assembled into other products, including building integrated materials.

Subject merchandise includes 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.

Modules, laminates, and panels produced in a third-country from cells produced in Taiwan are covered by this order. However, modules, laminates, and panels produced in Taiwan from cells produced in a third-country are not covered by this order.

Excluded from the scope of this order 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 order are crystalline silicon photovoltaic cells, not exceeding 10,000mm2 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 cells. 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.

Further, also excluded from the scope of this order are any products covered

[6] *See Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules, From the People's Republic of China: Amended Final Determination of Sales at Less Than Fair Value, and Antidumping Duty Order,* 77 FR 73018 (December 7, 2012); *Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules, From the People's Republic of China: Countervailing Duty Order,* 77 FR 73017 (December 7, 2012).

by the existing antidumping and countervailing duty orders on crystalline silicon photovoltaic cells, whether or not assembled into modules, from the PRC.[7] Also excluded from the scope of this order are modules, laminates, and panels produced in the PRC from crystalline silicon photovoltaic cells produced in Taiwan that are covered by an existing proceeding on such modules, laminates, and panels from the PRC.

Merchandise covered by this order is currently classified in the HTSUS under subheadings 8501 .61.0000, 8507.20.8030, 8507.20.8040, 8507.20.8060, 8507.20.8090, 8541.40.6020, 8541.40.6030 and 8501.31.8000. These HTSUS subheadings are provided for convenience and customs purposes; the written description of the scope of this order is dispositive.

Initiation of Changed Circumstances Reviews, and Consideration of Revocation of the Orders in Part

Pursuant to section 751(b) of the Act, the Department will conduct a changed circumstances review upon receipt of a request from an interested party[8] which shows changed circumstances sufficient to warrant a review of an order.[9] Based on the information provided by PulseTech, the Department has determined that there exist changed circumstances sufficient to warrant changed circumstances reviews of the AD order on certain crystalline silicon photovoltaic products from Taiwan, and the AD and CVD orders on certain crystalline silicon photovoltaic products from the PRC. Also, because this changed circumstances request was filed less than 24 months after the date of publication of notice of the final determinations in the investigations covering certain crystalline silicon photovoltaic products from the PRC and Taiwan, pursuant to 19 CFR 351.216(c), the Department must determine whether good cause for the conduct of these reviews exists. We find that Petitioner's affirmative statement of no interest in the Orders with respect to solar panels incorporated into certain battery-charging and maintaining units, as described above, constitutes good cause for the conduct of these reviews.

Section 782(h)(2) of the Act and 19 CFR 351.222(g)(1)(i) provide that the Department may revoke an order (in whole or in part) if it determines that producers accounting for substantially all of the production of the domestic like product have expressed a lack of interest in the order, in whole or in part. In addition, in the event the Department determines that expedited action is warranted, 19 CFR 351.221(c)(3)(ii) permits the Department to combine the notices of initiation and preliminary results. In its administrative practice, the Department has interpreted ''substantially all'' to mean producers accounting for at least 85 percent of the total U.S. production of the domestic like product covered by the order.[10]

Petitioner states that it agrees with the exclusion request; however, because Petitioner did not indicate whether it accounts for substantially all of the domestic production of certain crystalline silicon photovoltaic products, we are providing interested parties with the opportunity to address the issue of domestic industry support with respect to this requested partial revocation of the Orders, and we are not combining this notice of initiation with a preliminary determination pursuant to 19 CFR 351.221(c)(3)(ii). As explained below, interested parties will have an opportunity to address the requested partial revocation for solar panels incorporated into certain battery-charging and maintaining units, described above.

Public Comment

Interested parties are invited to provide comments and/or factual information regarding these changed circumstances reviews, including comments concerning industry support. Comments and factual information may be submitted to the Department no later than 14 days after the date of publication of this notice. Rebuttal comments and rebuttal factual information may be filed with the Department no later than 10 days after the comments and/or factual information are filed.[11] All submissions must be filed electronically using Enforcement and Compliance's AD and CVD Centralized Electronic Service System (''ACCESS'').[12] An electronically filed document must be received successfully in its entirety by ACCESS, by 5 p.m. Eastern Time on the due dates set forth in this notice.

The Department will issue the preliminary results of these changed circumstances reviews, which will set forth the factual and legal conclusions upon which the preliminary results are based, and, in accordance with 19 CFR 351.221(c)(3)(i), will include a description of any action proposed because of those results. Pursuant to 19 CFR 351.221(b)(4)(ii), interested parties will have an opportunity to comment on the preliminary results of these reviews. In accordance with 19 CFR 351.216(e), the Department intends to issue the final results of these AD and CVD changed circumstance reviews within 270 days after the date on which the reviews are initiated, or within 45 days if all parties to the proceeding agree to the outcome of the review.

This initiation is published in accordance with section 751(b)(1) of the Act and 19 CFR 351.221(b)(1).

Dated: November 2, 2016.

Paul Piquado,

Assistant Secretary for Enforcement and Compliance.

[FR Doc. 2016–26985 Filed 11–9–16; 8:45 am]

BILLING CODE 3510–DS–P

[7] *See Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules, From the People's Republic of China: Amended Final Determination of Sales at Less Than Fair Value, and Antidumping Duty Order,* 77 FR 73018 (December 7, 2012); *Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules, From the People's Republic of China: Countervailing Duty Order,* 77 FR 73017 (December 7, 2012).

[8] PulseTech stated in its Request for CCRs and its May 2, 2016 entry of appearance that it is an importer of subject merchandise and as such is an interested party pursuant to 19 CFR 351.102(b)(29).

[9] *See* 19 CFR 351.216.

[10] *See, e.g., Certain Cased Pencils From the People's Republic of China: Initiation and Preliminary Results of Antidumping Duty Changed Circumstances Review, and Intent To Revoke Order in Part,* 77 FR 42276 (July 18, 2012), unchanged in *Certain Cased Pencils From the People's Republic of China: Final Results of Antidumping Duty Changed Circumstances Review, and Determination To Revoke Order, in Part,* 77 FR 53176 (August 31, 2012).

[11] Submission of rebuttal factual information must comply with 19 CFR 351.301(b)(2).

[12] *See,* generally, 19 CFR 351.303.

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648–XE988

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to a Dock Replacement Project in Unalaska, Alaska

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice; proposed incidental harassment authorization; request for comments.

SUMMARY: NMFS has received a request from the City of Unalaska (COU), for authorization to take marine mammals incidental to construction activities as part of a dock expansion project at the

existing Unalaska Marine Center (UMC) Dock in Unalaska, Alaska. Pursuant to the Marine Mammal Protection Act (MMPA), NMFS is requesting comments on its proposal to issue an incidental harassment authorization (IHA) to the COU to incidentally take marine mammals, by Level B Harassment only, during the specified activity.

DATES: Comments and information must be received no later than December 12, 2016.

ADDRESSES: Comments on the COU's IHA application (application) should be addressed to Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service. Physical comments should be sent to 1315 East-West Highway, Silver Spring, MD 20910 and electronic comments should be sent to *ITP.Fiorentino@noaa.gov.*

Instructions: Comments sent by any other method, to any other address or individual, or received after the end of the comment period, may not be considered by NMFS. Comments received electronically, including all attachments, must not exceed a 25-megabyte file size. Attachments to electronic comments will be accepted in Microsoft Word or Excel or Adobe PDF file formats only. All comments received are a part of the public record and will generally be posted for public viewing on the Internet at *www.nmfs.noaa.gov/pr/permits/incidental/construction.htm* without change. All personal identifying information (*e.g.,* name, address), confidential business information, or otherwise sensitive information submitted voluntarily by the sender will be publicly accessible.

FOR FURTHER INFORMATION CONTACT: John Fiorentino, Office of Protected Resources, NMFS, (301) 427–8401.

SUPPLEMENTARY INFORMATION:

Availability

An electronic copy of the COA's application and supporting documents, as well as a list of the references cited in this document, may be obtained by visiting the Internet at: *http://www.nmfs.noaa.gov/pr/permits/incidental/construction.htm.* In case of problems accessing these documents, please call the contact listed under **FOR FURTHER INFORMATION CONTACT**.

National Environmental Policy Act (NEPA)

NMFS is preparing an Environmental Assessment (EA) for the proposed issuance of an IHA, pursuant to NEPA, to determine whether or not this proposed activity may have significant direct, indirect and cumulative effects on the human environment. This analysis will be completed prior to the issuance or denial of this proposed IHA. We will review all comments submitted in response to this notice as we complete the NEPA process, prior to a final decision on the incidental take authorization request. The EA will be posted at *http://www.nmfs.noaa.gov/pr/permits/incidental/construction.htm* when it is finalized.

Background

Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq.*) direct the Secretary of Commerce to allow, upon request by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified area, the incidental, but not intentional, taking of small numbers of marine mammals, providing that certain findings are made and the necessary prescriptions are established.

The incidental taking of small numbers of marine mammals may be allowed only if NMFS (through authority delegated by the Secretary) finds that the total taking by the specified activity during the specified time period will (i) have a negligible impact on the species or stock(s) and (ii) not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses (where relevant). Further, the permissible methods of taking and requirements pertaining to the mitigation, monitoring and reporting of such taking must be set forth.

The allowance of such incidental taking under section 101(a)(5)(A), by harassment, serious injury, death, or a combination thereof, requires that regulations be established. Subsequently, a Letter of Authorization may be issued pursuant to the prescriptions established in such regulations, providing that the level of taking will be consistent with the findings made for the total taking allowable under the specific regulations. Under section 101(a)(5)(D), NMFS may authorize such incidental taking by harassment only, for periods of not more than one year, pursuant to requirements and conditions contained within an IHA. The establishment of these prescriptions requires notice and opportunity for public comment.

NMFS has defined ''negligible impact'' in 50 CFR 216.103 as ''. . . an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival.'' Except with respect to certain activities not pertinent here, section 3(18) of the MMPA defines ''harassment'' as: ''. . . any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild (Level A harassment); or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering (Level B harassment).''

Summary of Request

On March 22, 2016, we received a request from the COU for authorization to take marine mammals incidental to pile driving and pile removal associated with construction activities that would expand the existing UMC Dock in Dutch Harbor in the City of Unalaska, on Amaknak Island, Alaska. The COU submitted a revised version of the request on July 30, 2016, which was deemed adequate and complete. In August 2016, NMFS released its Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (the Guidance, available at *http://www.nmfs.noaa.gov/pr/acoustics/guidelines.htm*) which provides technical guidance for assessing the effects of anthropogenic sound on the hearing of marine mammal species under the jurisdiction of NMFS. The Guidance establishes new thresholds for predicting auditory injury, which equates to Level A harassment under the MMPA. The COA was able to update relevant portions of their application to incorporate re-calculated Level A harassment zones for vibratory and impact pile driving activities based on the updated acoustic thresholds described in the Guidance. The results of those calculations (*i.e.,* revised distances to Level A harassment thresholds) were provided to NMFS by the COU in September 2016 and have been included in this proposed IHA.

The COU proposes to demolish portions of the existing UMC dock and install a new dock between March 1, 2017 and November 1, 2017. The use of both vibratory and impact pile driving during pile removal and installation is expected to produce underwater sound at levels that have the potential to result in behavioral harassment of marine mammals. Species with the expected potential to be present during all or a portion of the in-water work window include Steller sea lion (*Eumetopias jubatus*), harbor seal (*Phoca vitulina*), humpback whale (*Megaptera novaeangliae*), and killer whale (*Orcinus orca*).

Description of the Specified Activity

Overview

In order to meet the increasing needs of the international shipping industry and increase vessel berthing capacity, a substantial upgrade of aging UMC facilities is necessary. The proposed project will replace the existing pile supported docks located at UMC Dock Positions III and IV with a modern high-capacity sheet pile bulkhead dock that extends from the existing bulkhead dock at Position V to the U.S. Coast Guard (USCG) Dock.

COU port operations saw numerous factory trawler offloads occurring at Dock Positions III and IV in 2013. These operations require more length at the face of the dock and greater uplands area than is available with the current infrastructure. The existing pile-supported docks are aging structures in shallower water that no longer meet the needs of the Port and require increasing levels of maintenance and monitoring costs. Both docks are also severely constrained by the limited uplands area available for offloading and loading operations.

Dock Position III is a timber pile-supported dock with approximately 160 feet of dock face that was constructed in the 1960's by the U.S. Army Corps of Engineers (USACE). This dock has been used for the Alaska Marine Highway System, vessel moorage, and factory trawler offloads. However, use of this structure is severely limited due to the low load-carrying capacity of the dock. The bullrails, deck surface, and bollards have deteriorated with age and the entire structure is in need of replacement or extensive renovations.

Dock Position IV is a steel-pile-supported, concrete deck structure with an approximate length of 200 feet that was constructed in the 1980s by the State of Alaska. Similar to Dock Position III, use of this dock is limited due to the low load capacity of the structure. Erosion has damaged an abutment underneath the dock, which is very difficult to repair and has the potential for further damage to adjacent portions of the dock.

The dock face of Dock Positions III and IV does not align with the larger sections of the UMC facility, significantly limiting overall usable moorage space. The proposed project aligns the new dock structures with the adjacent facilities, eliminates two angle breaks, provides substantially more usable moorage, and provides much deeper water at the dock face. The sheet pile dock will encompass the area between Dock Position V and the adjacent USCG Dock, providing maximum use of the available berthing area and upland storage space. The new dock alignment will allow larger, deeper vessels as well as simultaneous use of the other UMC facilities.

Dates and Duration

In-water and over-water construction of Phase 1 (all sheet pile installation, all in-water pipe pile installation, most upland pipe pile installation, and fill placement) is planned to occur between approximately March 1, 2017 and November 1, 2017. Phase 2 is planned to occur between approximately May 1, 2018 and October 1, 2018. Some of the upland pipe pile for utilities may be driven in upland fill away from the dock face during Phase 2. The COU proposes to use the following general construction sequence, subject to adjustment by the construction contractor's means and methods:

Construction Phase 1 (2017):

- Mobilization of equipment and demolition of the existing dock Positions III and IV and removal of any existing riprap/obstructions (March–May 2017).
- Development of the quarry for materials.
- Installation (and later removal) of temporary support piles for contractor's template structures and barge support.
- Installation of the new sheet pile bulkhead dock. This includes driving sheet piles, placing fill within the cell to grade, and compaction of fill
- Installation of fender and platform support piles in the water adjacent to the dock and miscellaneous support piles within the completed sheet pile cells.
- Installation of pre-assembled fender systems (energy absorbers, sleeve piles, steel framing, and fender panels).
- Installation of the crane support piles
- Installation of temporary utilities and gravel surface to provide functional dock capability for the 2017/2018 season.

Construction Phase 2 (2018):

- Installation of concrete grade beam for crane rails, utility vaults, and dock surfacing.
- Installation of electrical, sewer, fuel, water, and storm drainage utilities.

Pile removal and pile driving is expected to occur between March 1 and November 1, 2017. In the summer months (April–September), 12-hour workdays in extended daylight will likely be used. In winter months (October–March), shorter 8-hour to 10-hour workdays in available daylight will likely be achievable. Work windows may be extended or shortened if or when electrical lighting is used. The daily construction window for pile driving or removal will begin no sooner than 30 minutes after sunrise to allow for initial marine mammal monitoring to take place, and will end 30 minutes before sunset to allow for pre-activity monitoring. It is assumed that sound associated with the pile driving and removal activities will be put into the water approximately 50 percent of the total estimated project duration of 245 days (2,940 hours for 12-hour workdays). The remaining 50 percent of the project duration will be spent on activities that provide distinct periods without noise from pile driving or drilling such as installing templates and braces, moving equipment, threading sheet piles, pulling piles (without vibration), etc. During this time, a much smaller area will be monitored to ensure that animals are not injured by equipment or materials.

Specific Geographic Region

The UMC Dock is located in Dutch Harbor in the City of Unalaska, on Amaknak Island, Alaska (see Figure 5 of the application). Dutch Harbor is separated from the adjacent Iliuliuk Bay by a spit. The dock is located in Section 35, Township 72 South, Range 118 West, of the Seward Meridian. Tidelands in this vicinity are owned by the COU. Some of the adjacent uplands are owned by the COU and some are leased by the COU from Ounalashka Corporation. Adjacent infrastructure includes Ballyhoo Road and the Latitude 54 Building in which the COU Department of Ports and Harbors offices and facilities are currently housed. Neighboring docks include the USCG Dock and the existing UMC OCSP dock positions. Other marine facilities within Dutch Harbor include Delta Western Fuel, the Resolve-Magone Dock, North Pacific Fuel, the Kloosterboer Dock, and the COU's Light Cargo Dock and Spit Dock facilities, as shown in Figure 5 of the application. APL Limited is located within Iliuliuk Bay, and the entrance channel to Iliuliuk Harbor is south of Dutch Harbor.

Detailed Description of Activities

The COU proposes to install an OPEN CELL SHEET PILE™ (OCSP) dock at UMC Dock Position III and IV, replacing the existing pile-supported structure and providing a smooth transition between the UMC facility and the USCG dock. The OCSP dock will be constructed of PS31 flat sheet piles (web thickness of 0.5 inches and width between interlocks of 19.69 inches). In order to replace the existing timber pile-supported dock, the dock construction

would include installation of the following:

- Approximately forty (40) 30-inch diameter steel fender and transition platform support piles;
- Approximately thirty (30) 30-inch diameter miscellaneous steel support piles
- Approximately one hundred fifty (150) 30-inch diameter steel crane rail support piles (approximately 25 of which are above the high tide line (HTL));
- Approximately two hundred (150) 18-inch steel piles (H or round) used for temporary support of the sheet pile during construction (to be removed prior to completion);
- Approximately 1,800 PS31 flat sheet piles (approximately 100 of which are above the high tide line (HTL)); and
- Placement of approximately 110,000 cubic yards of clean fill.

The anticipated project quantities are shown in Table 1.

Concurrent with the dock construction, a material source will be developed in the hillside adjacent to Dock Position VII. The quarry will provide material for dock fill and other future projects, and the cleared area will be used for COU port offices and associated parking after the quarry is completed. The quarry will be developed through blasting benches in the rock face, with each bench being approximately 25 feet high, with the total height being approximately 125 feet. Quarry materials will be transported the short distance to the adjacent project site using heavy equipment.

TABLE 1—TOTAL PROJECT QUANTITIES

Item	Size and type, location	Below mean high water (MHW) (El. = 3.4)	Below high tide line (HTL) (El. = 4.7)	Total
Surface Area of Dock (Acres)		2.1	2.3	3.1
Surface Area of Water Filled (Acres)		2.1	2.8	2.8
Gravel Fill (Cubic Yards)	Clean Fill; Within dock	74,000	80,000	110,000
Piles to be Removed (Each)	Steel	195	195	195
	Timber	55	55	55
Estimated Temporary Piles (Each)	18″ Steel Pile; Within dock	150	150	150
Steel Piles—Fender and Platform Support (Each).	30″ Steel; In front of bulkhead	40	40	40
Miscellaneous Support Piles (Each)	30″ Steel; Within dock	30	30	30
Crane Rail Support Piles (Each)	30″ Steel; Within dock	125	125	150
Proposed Sheet Piles (Each)	PS31 Sheet Pile; Dock face	1,400	1,700	1,800

The existing structure will be demolished by removing the concrete deck, steel superstructure, and attached appurtenances and structures and then extracting the existing steel support piles with a vibratory hammer. Sheet pile will also be installed with a vibratory hammer. Pile driving may occur from shore or from a stationary barge platform, depending on the Contractor's selected methods. After cells are completely enclosed, they will be incrementally filled with clean material using bulldozers and wheel loaders. Fill will be placed primarily from shore, but some may be placed from the barge if needed. Fill will be compacted using vibratory compaction methods, described below. After all the sheet piles are installed and the cells are filled and compacted, fender piles, crane rail piles, mooring cleats, concrete surfacing, and other appurtenances will be installed.

As described, the project requires the removal and installation of various types and sizes of piles with the use of a vibratory hammer and impact hammer. These activities have the potential to result in Level B harassment (behavioral disruption) only, as a monitoring plan will be implemented to reduce the potential for exposure to Level A harassment (harassment resulting in injury). The rest of the in-water components of the project are provided here for completeness. Note that many of the support piles will be installed to an elevation below MHW or HTL; however, they will be installed within the enclosed fill of the sheet pile dock rather than in the water.

Utilities will be installed during Phase II, and include addition/extension of water, sewer, fuel, electrical, and storm drain. Authorization to construct the sewer and storm drain extension, as well as a letter of non-objection for the storm drain, will be obtained from the State of Alaska Department of Environmental Conservation (ADEC).

Each element is further described below.

Demolition of Existing Infrastructure

Demolition of the existing dock and removal of any existing riprap or obstructions will be performed with track excavators, loaders, cranes, barges, cutting equipment, a vibratory hammer (for pile extraction), and labor forces. The existing dock (consisting of steel support piles, steel superstructure, and concrete deck) will be completely removed for construction of the new dock. Vibratory pile removal will generally consist of clamping the vibratory hammer to the pile and vibrating the hammer while extracting to a point where the pile is temporarily secured and removal can be completed with crane line rigging under tension. The pile is then completely removed from the water by hoisting with crane line rigging and placing on the ground or deck of the barge.

The contractor will be required to dispose of (or salvage) demolished items in accordance with all federal, state, and local regulations. Dewatering will not be required, as all extraction will take place from the existing dock, from shore, and/or from a work barge.

Quarry Development

Concurrent with dock construction, a material source will be developed in the hillside adjacent to the UMC facility. The quarry will provide fill material for the dock and future projects. Material will be extracted from the quarry in a configuration that provides additional upland space for port operations. Flat uplands area will be used for COU port offices after the quarry is completed. The quarry will be developed through blasting benches in the rock face, with each bench approximately 25 feet high and the total height approximately 125 feet.

Temporary Support Piles

Temporary support piles for pile driving template structures will be

installed to aid with construction and will be removed after the permanent sheet piles or support piles have been installed. Figure 3 shows temporary support piles and templates being used during pile installation. Temporary support piles will likely be steel H-piles (18-inch or smaller) or steel round piles (18-inch diameter or smaller). It is estimated that up to ten (10) temporary support piles will be used per cell during construction of the sheet pile structure. Installation methods for the temporary support piles will be similar to the fender support piles (described below).

Sheet Pile Installation

The new sheet pile bulkhead dock consists of twenty-two (22) OCSP cells. The sheet pile structures will be installed utilizing a crane and vibratory hammer. It is anticipated that the largest size vibratory hammer used for the project will be an APE 200–6 (eccentric moment of 6,600 inch-pounds) or comparable vibratory hammer from another manufacturer such as ICE or HPSI. After all the piles for a sheet pile cell have been installed, clean rock fill will be placed within the cell. This process will continue sequentially until all of the sheet pile cells are installed and backfilled.

Dock Fill Placement

Fill will be transported from the adjacent quarry to the project site using loaders, dump trucks, and dozers and may be temporarily stockpiled within the project footprint as needed. It will be placed within the cells from the shore (or occasionally a barge) using the same equipment and will be finished using roller compactors, graders, or vibracompaction. Vibracompaction would be achieved through the repeated insertion and removal through vibratory hammering of an H-pile probe, causing fill materials to settle into place.

Fender and Platform Support Piles

Fender support piles will be installed adjacent to (and offshore of) the sheet pile cells and cut to elevation. The fender piles will first be driven with a vibratory hammer and, if capacity/embedment is not achieved, finally driven with an impact hammer until proper embedment and capacity is reached (likely 20-foot embedment). Pre-assembled fender systems (energy absorbers, sleeve piles, steel framing, and fender panels) will be lifted and installed onto fender support piles via crane.

In addition to the fender supports, miscellaneous support piles needed to support the suspended concrete platform at the transitions between Position II/III and IV/V will be installed and cut to elevation. Installation methods for the miscellaneous support piles will be similar to the fender support piles. Approximately forty (40) 30-inch steel piles will be driven for the fenders and transition platform.

Miscellaneous Support Piles

Support piles for upland utilities and other structures will be driven after sheet pile cells are completed. Though the piles will be driven beyond the current MHW line, the cells will be filled and compacted at the time of placement, making this upland pile driving. Approximately thirty (30) steel support piles are needed for dock infrastructure.

Crane Rail Support Piles

Approximately one hundred fifty (150) steel support piles will be driven to support the weight of a new crane rail and dock crane. Pile driving will be performed primarily within the completely filled and compacted sheet pile cells. A few of the support piles may be driven in the water at the transition areas.

Dock Surfacing and Other Concrete Elements

The new dock uplands area will be surfaced with concrete pavement. The crane rail beam and utility vaults will be constructed from cast-in-place concrete. The surfacing and structures will be installed using forms and reinforcement steel. This work will take place at or near the surface of the dock and will be above water.

Utilities

Temporary utilities will be installed to provide functional dock capability for the 2017/2018 season. Typical utility installation equipment such as track excavators, wheel loaders, and compaction equipment will be used. Permanent electrical, water, and storm drainage utilities will be installed during Phase 2 to provide full dock capability. Installation methods will require equipment similar to that used to install the temporary utilities. All storm water (and any other wastewater) from the dock will be processed through the COU stormwater system and necessary separator devices.

Details of all planned construction work, and photos of many of the construction techniques described above, can be found in Section 1 of the application.

Description of Marine Mammals in the Area of the Specified Activity

Marine waters near Unalaska Island support many species of marine mammals, including pinnipeds and cetaceans; however, the number of species regularly occurring within Dutch Harbor, including near the project location is limited due to the high volume of vessel traffic in and around the harbor. Due to this, Steller sea lion, harbor seal, humpback whale, and killer whale are the only species within NMFS jurisdiction that are being included in the COA's IHA request. Sightings of other marine mammals within Dutch Harbor are extremely rare, and therefore, no further descriptions of the other marine mammals are included in the COA's application or in this notice of proposed authorization.

We have reviewed COA's species descriptions—which summarize available information regarding status and trends, distribution and habitat preferences, behavior and life history, and auditory capabilities of the potentially affected species—for accuracy and completeness and refer the reader to Sections 3 and 4 of the application. Please also refer to NMFS' Web site (*www.nmfs.noaa.gov/pr/species/mammals/*) for generalized species accounts.

Table 2 lists the marine mammal species with the potential for occurrence in the vicinity of the project during the project timeframe and summarizes key information regarding stock status and abundance. Please see NMFS' Stock Assessment Reports (SAR; Muto *et al.,* 2016), available at *http://www.nmfs.noaa.gov/pr/sars,* for more detailed accounts of these stocks' status and abundance.

TABLE 2—MARINE MAMMALS POTENTIALLY PRESENT IN THE VICINITY OF THE PROJECT LOCATION

Species	Stock	MMPA status	ESA Status	Occurrence in/near project	Seasonality	Abundance
Harbor seal (*Phoca vitulina richardsi*).	Aleutian Islands	Protected	.....	Common	Year-round	5,772

TABLE 2—MARINE MAMMALS POTENTIALLY PRESENT IN THE VICINITY OF THE PROJECT LOCATION—Continued

Species	Stock	MMPA status	ESA Status	Occurrence in/ near project	Seasonality	Abundance
Steller sea lion (*Eumetopias jubatus*).	Western Distinct Population Segment (DPS).	Depleted, Strategic.	Endangered ..	Common	Year-round	49,497
Killer whale (*Orcinus orca*) ...	Eastern North Pacific, Alaska Resident.	Protected	.....	Unknown	Summer, Fall	2,347
Killer whale (*Orcinus orca*) ...	Gulf of Alaska, Aleutian Islands, and Bering Sea Transient.	Protected	.....	Unknown	Year- round ...	587
Humpback whale (*Megaptera novaeangliae*).	Central North Pacific	Depleted, Strategic.	n/a*	Seasonal	Summer	10,103
Humpback whale (*Megaptera novaeangliae*).	Western North Pacific	Depleted, Strategic.	n/a*	Seasonal	Summer	1,107

* The newly defined DPSs (81 FR 62259) do not currently align with the stocks under the MMPA.

Potential Effects of the Specified Activity on Marine Mammals

This section includes a summary and discussion of the ways that components of the specified activity may impact marine mammals. The ''Estimated Take by Incidental Harassment'' section later in this document will include a quantitative analysis of the number of individuals that are expected to be taken by this activity. The ''Negligible Impact Analysis'' section will include the analysis of how this specific activity will impact marine mammals and will consider the content of this section, the ''Estimated Take by Incidental Harassment'' section, the ''Proposed Mitigation'' section, and the ''Anticipated Effects on Marine Mammal Habitat'' section to draw conclusions regarding the likely impacts of this activity on the reproductive success or survivorship of individuals and from that on the affected marine mammal populations or stocks. In the following discussion, we provide general background information on sound and marine mammal hearing before considering potential effects to marine mammals from sound produced by the construction techniques proposed for use.

Description of Sound Sources

Sound travels in waves, the basic components of which are frequency, wavelength, velocity, and amplitude. Frequency is the number of pressure waves that pass by a reference point per unit of time and is measured in hertz (Hz) or cycles per second. Wavelength is the distance between two peaks of a sound wave; lower frequency sounds have longer wavelengths than higher frequency sounds and attenuate (decrease) more rapidly in shallower water. Amplitude is the height of the sound pressure wave or the 'loudness' of a sound and is typically measured using the decibel (dB) scale. A dB is the ratio between a measured pressure (with sound) and a reference pressure (sound at a constant pressure, established by scientific standards). It is a logarithmic unit that accounts for large variations in amplitude; therefore, relatively small changes in dB ratings correspond to large changes in sound pressure. When referring to sound pressure levels (SPLs; the sound force per unit area), sound is referenced in the context of underwater sound pressure to 1 microPascal (μPa). One pascal is the pressure resulting from a force of one newton exerted over an area of one square meter. The source level (SL) represents the sound level at a distance of 1 m from the source (referenced to 1 μPa). The received level is the sound level at the listener's position. Note that all underwater sound levels in this document are referenced to a pressure of 1 μPa and all airborne sound levels in this document are referenced to a pressure of 20 μPa.

Root mean square (rms) is the quadratic mean sound pressure over the duration of an impulse, and is calculated by squaring all of the sound amplitudes, averaging the squares, and then taking the square root of the average (Urick, 1983). Rms accounts for both positive and negative values; squaring the pressures makes all values positive so that they may be accounted for in the summation of pressure levels (Hastings and Popper, 2005). This measurement is often used in the context of discussing behavioral effects, in part because behavioral effects, which often result from auditory cues, may be better expressed through averaged units than by peak pressures.

When underwater objects vibrate or activity occurs, sound-pressure waves are created. These waves alternately compress and decompress the water as the sound wave travels. Underwater sound waves radiate in all directions away from the source (similar to ripples on the surface of a pond), except in cases where the source is directional. The compressions and decompressions associated with sound waves are detected as changes in pressure by aquatic life and man-made sound receptors such as hydrophones.

Even in the absence of sound from the specified activity, the underwater environment is typically loud due to ambient sound. Ambient sound is defined as environmental background sound levels lacking a single source or point (Richardson *et al.,* 1995), and the sound level of a region is defined by the total acoustical energy being generated by known and unknown sources. These sources may include physical (*e.g.,* waves, earthquakes, ice, atmospheric sound), biological (*e.g.,* sounds produced by marine mammals, fish, and invertebrates), and anthropogenic sound (*e.g.,* vessels, dredging, aircraft, construction). A number of sources contribute to ambient sound, including the following (Richardson *et al.,* 1995):

- *Wind and waves:* The complex interactions between wind and water surface, including processes such as breaking waves and wave-induced bubble oscillations and cavitation, are a main source of naturally occurring ambient noise for frequencies between 200 Hz and 50 kHz (Mitson, 1995). In general, ambient sound levels tend to increase with increasing wind speed and wave height. Surf noise becomes important near shore, with measurements collected at a distance of 8.5 km from shore showing an increase of 10 dB in the 100 to 700 Hz band during heavy surf conditions.
- *Precipitation:* Sound from rain and hail impacting the water surface can become an important component of total noise at frequencies above 500 Hz, and possibly down to 100 Hz during quiet times.
- *Biological:* Marine mammals can contribute significantly to ambient noise levels, as can some fish and shrimp. The frequency band for biological

contributions is from approximately 12 Hz to over 100 kHz.

• *Anthropogenic:* Sources of ambient noise related to human activity include transportation (surface vessels and aircraft), dredging and construction, oil and gas drilling and production, seismic surveys, sonar, explosions, and ocean acoustic studies. Shipping noise typically dominates the total ambient noise for frequencies between 20 and 300 Hz. In general, the frequencies of anthropogenic sounds are below 1 kHz and, if higher frequency sound levels are created, they attenuate rapidly (Richardson *et al.,* 1995). Sound from identifiable anthropogenic sources other than the activity of interest (*e.g.,* a passing vessel) is sometimes termed background sound, as opposed to ambient sound.

The sum of the various natural and anthropogenic sound sources at any given location and time—which comprise ''ambient'' or ''background'' sound—depends not only on the source levels (as determined by current weather conditions and levels of biological and shipping activity) but also on the ability of sound to propagate through the environment. In turn, sound propagation is dependent on the spatially and temporally varying properties of the water column and sea floor, and is frequency-dependent. As a result of the dependence on a large number of varying factors, ambient sound levels can be expected to vary widely over both coarse and fine spatial and temporal scales. Sound levels at a given frequency and location can vary by 10–20 dB from day to day (Richardson *et al.,* 1995). The result is that, depending on the source type and its intensity, sound from the specified activity may be a negligible addition to the local environment or could form a distinctive signal that may affect marine mammals.

In-water construction activities associated with the project would include impact pile driving and vibratory pile driving. The sounds produced by these activities fall into one of two general sound types: impulsive and non-impulsive (defined in the following). The distinction between these two sound types is important because they have differing potential to cause physical effects, particularly with regard to hearing (*e.g.,* Ward, 1997 in Southall *et al.,* 2007). Please see Southall *et al.,* (2007) for an in-depth discussion of these concepts.

Impulsive sound sources (*e.g.,* explosions, gunshots, sonic booms, impact pile driving) produce signals that are brief (typically considered to be less than one second), broadband, atonal transients (ANSI, 1986; Harris, 1998; NIOSH, 1998; ISO, 2003; ANSI, 2005) and occur either as isolated events or repeated in some succession. Impulsive sounds are all characterized by a relatively rapid rise from ambient pressure to a maximal pressure value followed by a rapid decay period that may include a period of diminishing, oscillating maximal and minimal pressures, and generally have an increased capacity to induce physical injury as compared with sounds that lack these features.

Non-impulsive sounds can be tonal, narrowband, or broadband, brief or prolonged, and may be either continuous or non-continuous (ANSI, 1995; NIOSH, 1998). Some of these non-impulsive sounds can be transient signals of short duration but without the essential properties of pulses (*e.g.,* rapid rise time). Examples of non-impulsive sounds include those produced by vessels, aircraft, machinery operations such as drilling or dredging, vibratory pile driving, down-the-hole drilling, and active sonar systems. The duration of such sounds, as received at a distance, can be greatly extended in a highly reverberant environment.

Impact hammers operate by repeatedly dropping a heavy piston onto a pile to drive the pile into the substrate. Sound generated by impact hammers is characterized by rapid rise times and high peak levels, a potentially injurious combination (Hastings and Popper, 2005). Vibratory hammers install piles by vibrating them and allowing the weight of the hammer to push them into the sediment. Vibratory hammers produce significantly less sound than impact hammers. Peak SPLs may be 180 dB or greater, but are generally 10 to 20 dB lower than SPLs generated during impact pile driving of the same-sized pile (Oestman *et al.,* 2009). Rise time is slower, reducing the probability and severity of injury, and sound energy is distributed over a greater amount of time (Nedwell and Edwards, 2002; Carlson *et al.,* 2005).

Marine Mammal Hearing

Hearing is the most important sensory modality for marine mammals, and exposure to sound can have deleterious effects. To appropriately assess these potential effects, it is necessary to understand the frequency ranges marine mammals are able to hear. Current data indicate that not all marine mammal species have equal hearing capabilities (*e.g.,* Richardson *et al.,* 1995; Wartzok and Ketten, 1999; Au and Hastings, 2008). To reflect this, Southall *et al.* (2007) recommended that marine mammals be divided into functional hearing groups based on measured or estimated hearing ranges on the basis of available behavioral data, audiograms derived using auditory evoked potential techniques, anatomical modeling, and other data. The lower and/or upper frequencies for some of these functional hearing groups have been modified from those designated by Southall *et al.* (2007), and the revised generalized hearing ranges are presented in the new Guidance. The functional hearing groups and the associated frequencies are indicated in Table 3 below.

TABLE 3—MARINE MAMMAL HEARING GROUPS AND THEIR GENERALIZED HEARING RANGE

Hearing group	Generalized hearing range*
Low-frequency (LF) cetaceans (baleen whales)	7 Hz to 35 kHz.
Mid-frequency (MF) cetaceans (dolphins, toothed whales, beaked whales, bottlenose whales)	150 Hz to 160 kHz.
High-frequency (HF) cetaceans (true porpoises, *Kogia,* river dolphins, cephalorhynchid, *Lagenorhynchus cruciger* and *L. australis*).	275 Hz to 160 kHz.
Phocid pinnipeds (PW) (underwater) (true seals)	50 Hz to 86 kHz.
Otariid pinnipeds (OW) (underwater) (sea lions and fur seals)	60 Hz to 39 kHz.

* Represents the generalized hearing range for the entire group as a composite (*i.e.,* all species within the group), where individual species' hearing ranges are typically not as broad. Generalized hearing range chosen based on ~65 dB threshold from normalized composite audiogram, with the exception for lower limits for LF cetaceans (Southall *et al.,* 2007) and PW pinniped (approximation).

Acoustic Effects, Underwater

Potential Effects of Pile Driving Sound—The effects of sounds from pile driving might result in one or more of the following: temporary or permanent hearing impairment, non-auditory physical or physiological effects, behavioral disturbance, and masking (Richardson *et al.,* 1995; Gordon *et al.,* 2004; Nowacek *et al.,* 2007; Southall *et al.,* 2007). The effects of pile driving on marine mammals are dependent on several factors, including the size, type, and depth of the animal; the depth, intensity, and duration of the pile driving sound; the depth of the water column; the substrate of the habitat; the standoff distance between the pile and the animal; and the sound propagation properties of the environment. Impacts to marine mammals from pile driving activities are expected to result primarily from acoustic pathways. As such, the degree of effect is intrinsically related to the received level and duration of the sound exposure, which are in turn influenced by the distance between the animal and the source. The further away from the source, the less intense the exposure should be. The substrate and depth of the habitat affect the sound propagation properties of the environment. Shallow environments are typically more structurally complex, which leads to rapid sound attenuation. In addition, substrates that are soft (*e.g.,* sand) would absorb or attenuate the sound more readily than hard substrates (*e.g.,* rock) which may reflect the acoustic wave. Soft porous substrates would also likely require less time to drive the pile, and possibly less forceful equipment, which would ultimately decrease the intensity of the acoustic source.

In the absence of mitigation, impacts to marine species would be expected to result from physiological and behavioral responses to both the type and strength of the acoustic signature (Viada *et al.,* 2008). The type and severity of behavioral impacts are more difficult to define due to limited studies addressing the behavioral effects of impulsive sounds on marine mammals. Potential effects from impulsive sound sources can range in severity from effects such as behavioral disturbance or tactile perception to physical discomfort, slight injury of the internal organs and the auditory system, or mortality (Yelverton *et al.,* 1973).

Hearing Impairment and Other Physical Effects—Marine mammals exposed to high intensity sound repeatedly or for prolonged periods can experience hearing threshold shift (TS), which is the loss of hearing sensitivity at certain frequency ranges (Kastak *et al.,* 1999; Schlundt *et al.,* 2000; Finneran *et al.,* 2002, 2005). TS can be permanent (PTS), in which case the loss of hearing sensitivity is not recoverable, or temporary (TTS), in which case the animal's hearing threshold would recover over time (Southall *et al.,* 2007). Marine mammals depend on acoustic cues for vital biological functions (*e.g.,* orientation, communication, finding prey, avoiding predators); thus, TTS may result in reduced fitness in survival and reproduction. However, this depends on the frequency and duration of TTS, as well as the biological context in which it occurs. TTS of limited duration, occurring in a frequency range that does not coincide with that used for recognition of important acoustic cues, would have little to no effect on an animal's fitness. Repeated sound exposure that leads to TTS could cause PTS. PTS constitutes injury, but TTS does not (Southall *et al.,* 2007). The following subsections discuss in somewhat more detail the possibilities of TTS, PTS, and non-auditory physical effects.

Temporary Threshold Shift—TTS is the mildest form of hearing impairment that can occur during exposure to a strong sound (Kryter, 1985). While experiencing TTS, the hearing threshold rises, and a sound must be stronger in order to be heard. In terrestrial mammals, TTS can last from minutes or hours to days (in cases of strong TTS). For sound exposures at or somewhat above the TTS threshold, hearing sensitivity in both terrestrial and marine mammals recovers rapidly after exposure to the sound ends. Few data on sound levels and durations necessary to elicit mild TTS have been obtained for marine mammals, and none of the published data concern TTS elicited by exposure to multiple pulses of sound. Available data on TTS in marine mammals are summarized in Southall *et al.* (2007) and more recently in Finneran (2016).

Marine mammal hearing plays a critical role in communication with conspecifics, and interpretation of environmental cues for purposes such as predator avoidance and prey capture. Depending on the degree (elevation of threshold in dB), duration (*i.e.,* recovery time), and frequency range of TTS, and the context in which it is experienced, TTS can have effects on marine mammals ranging from discountable to serious. For example, a marine mammal may be able to readily compensate for a brief, relatively small amount of TTS in a non-critical frequency range that occurs during a time where ambient noise is lower and there are not as many competing sounds present. Alternatively, a larger amount and longer duration of TTS sustained during time when communication is critical for successful mother/calf interactions could have more serious impacts.

Currently, TTS data only exist for four species of cetaceans (bottlenose dolphin, beluga whale, harbor porpoise, and Yangtze finless porpoise) and three species of pinnipeds (northern elephant seal, harbor seal, and California sea lion) exposed to a limited number of sound sources (*i.e.,* mostly tones and octave-band noise) in laboratory settings (*e.g.,* Finneran, 2016; Finneran *et al.,* 2002; Finneran and Schlundt, 2010, 2013; Nachtigall *et al.,* 2004; Kastaket *et al.,* 2005; Lucke *et al.,* 2009; Popov *et al.,* 2011). In general, harbor seals and harbor porpoises have a lower TTS onset than other measured pinniped or cetacean species (Kastak *et al.,* 2005; Kastelein *et al.,* 2011, 2012a, 2012b, 2013a, 2013b, 2014a, 2014b, 2015a, 2015b, 2015c, 2016). Additionally, the existing marine mammal TTS data come from a limited number of individuals within these species. There are no data available on noise-induced hearing loss for mysticetes. For summaries of data on TTS in marine mammals or for further discussion of TTS onset thresholds, please see Southall et al. (2007), Finneran and Jenkins (2012), and Finneran (2016).

Permanent Threshold Shift—When PTS occurs, there is physical damage to the sound receptors in the ear. In severe cases, there can be total or partial deafness, while in other cases the animal has an impaired ability to hear sounds in specific frequency ranges (Kryter 1985). There is no specific evidence that exposure to pulses of sound can cause PTS in any marine mammal. However, given the possibility that mammals close to a sound source might incur TTS, there has been further speculation about the possibility that some individuals might incur PTS. Single or occasional occurrences of mild TTS are not indicative of permanent auditory damage, but repeated or (in some cases) single exposures to a level well above that causing TTS onset might elicit PTS.

Relationships between TTS and PTS thresholds have not been studied in marine mammals but are assumed to be similar to those in humans and other terrestrial mammals. Available data from humans and other terrestrial mammals indicate that a 40 dB threshold shift approximates PTS onset (see Ward *et al.,* 1958; Ward *et al.,* 1959; Ward, 1960; Kryter *et al.,* 1966; Miller, 1974; Ahroon *et al.,* 1996; Henderson et al., 2008). Southall *et al.,* (2007) also

recommended this definition of PTS onset.

PTS onset acoustic thresholds for marine mammals have not been directly measured and must be extrapolated from available TTS onset measurements. Thus, based on cetacean measurements from TTS studies (see Southall *et al.,* 2007; Finneran, 2015; Finneran, 2016 (found in Appendix A of the Guidance)) a threshold shift of 6 dB is considered the minimum threshold shift clearly larger than any day-to-day or session-to-session variation in a subject's normal hearing ability and is typically the minimum amount of threshold shift that can be differentiated in most experimental conditions (Finneran *et al.,* 2000; Schlundt *et al.,* 2000; Finneran *et al.,* 2002).

Measured source levels from impact pile driving can be as high as 214 dB rms. Although no marine mammals have been shown to experience TTS or PTS as a result of being exposed to pile driving activities, captive bottlenose dolphins and beluga whales exhibited changes in behavior when exposed to strong pulsed sounds (Finneran *et al.,* 2000, 2002, 2005). The animals tolerated high received levels of sound before exhibiting aversive behaviors. Experiments on a beluga whale showed that exposure to a single watergun impulse at a received level of 207 kilopascal (kPa) (30 psi) peak-to-peak (p-p), which is equivalent to 228 dB p-p, resulted in a 7 and 6 dB TTS in the beluga whale at 0.4 and 30 kHz, respectively. Thresholds returned to within 2 dB of the pre-exposure level within four minutes of the exposure (Finneran *et al.,* 2002). Although the source level of pile driving from one hammer strike is expected to be much lower than the single watergun impulse cited here, animals being exposed for a prolonged period to repeated hammer strikes could receive more sound exposure in terms of sound exposure level (SEL) than from the single watergun impulse (estimated at 188 dB re 1 μPa^2-s) in the aforementioned experiment (Finneran *et al.,* 2002). However, in order for marine mammals to experience TTS or PTS, the animals have to be close enough to be exposed to high intensity sound levels for a prolonged period of time. Based on the best scientific information available, these SPLs are below the thresholds that could cause TTS or the onset of PTS.

Non-auditory Physiological Effects—Non-auditory physiological effects or injuries that theoretically might occur in marine mammals exposed to strong underwater sound include stress, neurological effects, bubble formation, resonance effects, and other types of organ or tissue damage (Cox *et al.,* 2006; Southall *et al.,* 2007). Studies examining such effects are limited. In general, little is known about the potential for pile driving to cause auditory impairment or other physical effects in marine mammals. Available data suggest that such effects, if they occur at all, would presumably be limited to short distances from the sound source and to activities that extend over a prolonged period. The available data do not allow identification of a specific exposure level above which non-auditory effects can be expected (Southall *et al.,* 2007) or any meaningful quantitative predictions of the numbers (if any) of marine mammals that might be affected in those ways. Marine mammals that show behavioral avoidance of pile driving, including some odontocetes and some pinnipeds, are especially unlikely to incur auditory impairment or non-auditory physical effects.

Disturbance Reactions

Behavioral disturbance may include a variety of effects, including subtle changes in behavior (*e.g.,* minor or brief avoidance of an area or changes in vocalizations), more conspicuous changes in similar behavioral activities, and more sustained and/or potentially severe reactions, such as displacement from or abandonment of high-quality habitat. Behavioral responses to sound are highly variable and context-specific and any reactions depend on numerous intrinsic and extrinsic factors (*e.g.,* species, state of maturity, experience, current activity, reproductive state, auditory sensitivity, time of day), as well as the interplay between factors (*e.g.,* Richardson *et al.,*1995; Wartzok *et al.,* 2003; Southall *et al.,* 2007; Weilgart, 2007; Archer *et al.,*2010). Behavioral reactions can vary not only among individuals but also within an individual, depending on previous experience with a sound source, context, and numerous other factors (Ellison *et al.,* 2012), and can vary depending on characteristics associated with the sound source (*e.g.,* whether it is moving or stationary, number of sources, distance from the source). Please see Appendices B–C of Southall *et al.* (2007) for a review of studies involving marine mammal behavioral responses to sound.

Habituation can occur when an animal's response to a stimulus wanes with repeated exposure, usually in the absence of unpleasant associated events (Wartzok *et al.,* 2003). Animals are most likely to habituate to sounds that are predictable and unvarying. It is important to note that habituation is appropriately considered as a ''progressive reduction in response to stimuli that are perceived as neither aversive nor beneficial,'' rather than as, more generally, moderation in response to human disturbance (Bejder *et al.,* 2009). The opposite process is sensitization, when an unpleasant experience leads to subsequent responses, often in the form of avoidance, at a lower level of exposure. Behavioral state may affect the type of response as well. For example, animals that are resting may show greater behavioral change in response to disturbing sound levels than animals that are highly motivated to remain in an area for feeding (Richardson *et al.,* 1995; NRC, 2003; Wartzok *et al.,* 2003). Controlled experiments with captive marine mammals showed pronounced behavioral reactions, including avoidance of loud sound sources (Ridgway *et al.,* 1997; Finneran *et al.,* 2003). Observed responses of wild marine mammals to loud pulsed sound sources (typically seismic guns or acoustic harassment devices, but also including pile driving) have been varied but often consist of avoidance behavior or other behavioral changes suggesting discomfort (Morton and Symonds, 2002; Thorson and Reyff, 2006; see also Gordon *et al.,* 2004; Wartzok *et al.,* 2003; Nowacek *et al.,* 2007). Responses to continuous sound, such as vibratory pile installation, have not been documented as well as responses to pulsed sounds.

With both types of pile driving, it is likely that the onset of pile driving could result in temporary, short term changes in an animal's typical behavior and/or avoidance of the affected area. These behavioral changes may include (Richardson *et al.,* 1995): changing durations of surfacing and dives, number of blows per surfacing (cetaceans only), or moving direction and/or speed; reduced/increased vocal activities; changing/cessation of certain behavioral activities (such as socializing or feeding); visible startle response or aggressive behavior; avoidance of areas where sound sources are located; and/or flight responses (*e.g.,* pinnipeds flushing into water from haul-outs or rookeries). Pinnipeds may increase the amount of time spent hauled out, possibly to avoid in-water disturbance (Thorson and Reyff, 2006). Since pile driving would likely only occur for a few hours a day, over a short period of time, it is unlikely to result in permanent displacement. Any potential impacts from pile driving activities could be experienced by individual marine mammals, but would not be likely to cause population level impacts,

or affect the long-term fitness of the species.

The biological significance of many of these behavioral disturbances is difficult to predict, especially if the detected disturbances appear minor. However, the consequences of behavioral modification could be expected to be biologically significant if the change affects growth, survival, or reproduction. Significant behavioral modifications that could potentially lead to effects on growth, survival, or reproduction include:

- Drastic changes in diving/surfacing patterns (such as those thought to cause beaked whale stranding due to exposure to military mid-frequency tactical sonar);
- Habitat abandonment due to loss of desirable acoustic environment; and
- Cessation of feeding or social interaction.

The onset of behavioral disturbance from anthropogenic sound depends on both external factors (characteristics of sound sources and their paths) and the specific characteristics of the receiving animals (hearing, motivation, experience, demography) and is difficult to predict (Southall *et al.,* 2007).

Auditory Masking

Natural and artificial sounds can disrupt behavior by masking, or interfering with, a marine mammal's ability to hear other sounds. Masking occurs when the receipt of a sound is interfered with by another coincident sound at similar frequencies and at similar or higher levels. Chronic exposure to excessive, though not high-intensity, sound could cause masking at particular frequencies for marine mammals that utilize sound for vital biological functions. Masking can interfere with detection of acoustic signals such as communication calls, echolocation sounds, and environmental sounds important to marine mammals. Therefore, under certain circumstances, marine mammals whose acoustical sensors or environment are being severely masked could also be impaired from maximizing their performance fitness in survival and reproduction. If the coincident (masking) sound were man-made, it could be potentially harassing if it disrupted hearing-related behavior. It is important to distinguish TTS and PTS, which persist after the sound exposure, from masking, which occurs during the sound exposure. Because masking (without resulting in TS) is not associated with abnormal physiological function, it is not considered a physiological effect, but rather a potential behavioral effect.

The frequency range of the potentially masking sound is important in determining any potential behavioral impacts. Because sound generated from in-water pile driving is mostly concentrated at low frequency ranges, it may affect detection of communication calls and other potentially important natural sounds such as surf and prey sound. It may also affect communication signals when they occur near the sound band and thus reduce the communication space of animals (*e.g.,* Clark *et al.,* 2009) and cause increased stress levels (*e.g.,* Foote *et al.,* 2004; Holt *et al.,* 2009).

Masking has the potential to impact species at the population or community levels as well as at individual levels. Masking affects both senders and receivers of the signals and can potentially have long-term chronic effects on marine mammal species and populations. Recent research suggests that low frequency ambient sound levels have increased by as much as 20 dB (more than three times in terms of SPL) in the world's ocean from pre-industrial periods, and that most of these increases are from distant shipping (Hildebrand, 2009). All anthropogenic sound sources, such as those from vessel traffic, pile driving, and dredging activities, contribute to the elevated ambient sound levels, thus intensifying masking.

The most intense underwater sounds in the proposed action are those produced by impact pile driving. Given that the energy distribution of pile driving covers a broad frequency spectrum, sound from these sources would likely be within the audible range of marine mammals present in the project area. Impact pile driving activity is relatively short-term, with rapid pulses occurring for approximately fifteen minutes per pile. The probability for impact pile driving resulting from the proposed action to mask acoustic signals important to the behavior and survival of marine mammal species is likely to be negligible. Vibratory pile driving is also relatively short-term, with rapid oscillations occurring for approximately one and a half hours per pile. It is possible that vibratory pile driving resulting from the proposed action may mask acoustic signals important to the behavior and survival of marine mammal species, but the short-term duration and limited affected area would result in insignificant impacts from masking. Any masking event that could possibly rise to Level B harassment under the MMPA would occur concurrently within the zones of behavioral harassment already estimated for vibratory and impact pile driving, and which have already been taken into account in the exposure analysis.

Acoustic Effects, Airborne

Marine mammals that occur in the project area could be exposed to airborne sounds associated with pile driving and blasting activities at the quarry that have the potential to cause harassment, depending on their distance from these activities. Airborne sound could potentially affect pinnipeds that are either hauled out or are in the water but have their heads above water in the project area. Most likely, airborne sound would cause behavioral responses similar to those discussed above in relation to underwater sound. For instance, anthropogenic sound could cause hauled out pinnipeds to exhibit changes in their normal behavior, such as reduction in vocalizations, or cause them to temporarily abandon their habitat and move further from the source. Studies by Blackwell *et al.* (2004) and Moulton *et al.* (2005) indicate a tolerance or lack of response to unweighted airborne sounds as high as 112 dB peak and 96 dB rms.

Anticipated Effects on Habitat

The proposed activities at Dutch Harbor would not result in permanent impacts to habitats used directly by marine mammals, such as haul-out sites, but may have potential short-term impacts to food sources such as forage fish and salmonids. There are no rookeries or haulout sites within the modeled zone of influence for impact or vibratory pile driving associated with the project, or ocean bottom structure of significant biological importance to marine mammals that may be present in the waters in the vicinity of the project area. The project location receives heavy use by vessel moorage and factory trawler offloads, and experiences frequent vessel traffic because of these activities, thus the area is already relatively industrialized and not a pristine habitat for marine mammals. As such, the main impact associated with the proposed activity would be temporarily elevated sound levels and the associated direct effects on marine mammals, as discussed previously in this document. The most likely impact to marine mammal habitat occurs from pile driving effects on likely marine mammal prey (*i.e.,* fish) near the project location, and minor impacts to the immediate substrate during installation and removal of piles during the dock construction project.

Effects on Potential Prey

Construction activities would produce both impulsive (*i.e.,* impact pile driving

and quarry blasting) and non-impulsive continuous (*i.e.,* vibratory pile driving) sounds. Fish react to sounds which are especially strong and/or intermittent low-frequency sounds. Short duration, sharp sounds can cause overt or subtle changes in fish behavior and local distribution. Hastings and Popper (2005) identified several studies that suggest fish may relocate to avoid certain areas of sound energy. Additional studies have documented effects of pile driving on fish, although several are based on studies in support of large, multiyear bridge construction projects (*e.g.,* Scholik and Yan, 2001, 2002; Popper and Hastings, 2009) and are therefore not directly comparable with the proposed project. Sound pulses at received levels of 160 dB may cause subtle changes in fish behavior. SPLs of 180 dB may cause noticeable changes in behavior (Pearson *et al.,* 1992; Skalski *et al.,* 1992). SPLs of sufficient strength have been known to cause injury to fish and fish mortality. In general, impacts to marine mammal prey species from the proposed project are expected to be minor and temporary due to the relatively short timeframe of the proposed project, and the fact that Dutch Harbor is not considered an important habitat for salmonids. The nearby Iliuliuk River supports salmon runs for at least four species of salmonids, however the harbor itself does not provide significant habitat for salmonids, and the proposed project is located far enough away from the lower Iliuliuk River that the potential that fish entering or leaving the river will be impacted is considered discountable. The most likely impact to fish from pile driving activities at the project area would be temporary behavioral avoidance of the area. The duration of fish avoidance of this area after pile driving stops is unknown, but a rapid return to normal recruitment, distribution and behavior is anticipated.

Effects on Potential Foraging Habitat

The area likely impacted by the project is very small relative to the available habitat in Unalaska Bay. Avoidance by potential prey (*i.e.,* fish) of the immediate area due to the temporary loss of this foraging habitat is possible. The duration of fish avoidance of this area after pile driving stops is unknown, but a rapid return to normal recruitment, distribution and behavior is anticipated. Any behavioral avoidance by fish of the disturbed area would still leave significantly large areas of fish and marine mammal foraging habitat in Unalaska Bay and the nearby vicinity.

In summary, given the short daily duration of sound associated with individual pile driving events and the relatively small area that would be affected, pile driving activities associated with the proposed action are not likely to have a permanent, adverse effect on any fish habitat, or populations of fish species. Thus, any impacts to marine mammal habitat are not expected to cause significant or long-term consequences for individual marine mammals or their populations.

Proposed Mitigations

In order to issue an IHA under section 101(a)(5)(D) of the MMPA, NMFS must set forth the permissible methods of taking pursuant to such activity, and other means of effecting the least practicable impact on such species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of such species or stock for taking for certain subsistence uses.

The COU's calculation of the Level A harassment zones utilized the methods presented in Appendix D of NMFS' Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (the Guidance, available at *http://www.nmfs.noaa.gov/pr/acoustics/guidelines.htm*), and the accompanying User Spreadsheet.[1] The Guidance provides updated PTS onset thresholds using the cumulative SEL (SEL_{cum}) metric, which incorporates marine mammal auditory weighting functions, to identify the received levels, or acoustic thresholds, at which individual marine mammals are predicted to experience changes in their hearing sensitivity for acute, incidental exposure to all underwater anthropogenic sound sources. The Guidance (Appendix D) and its companion User Spreadsheet provide alternative methodology for incorporating these more complex thresholds and associated weighting functions.

The User Spreadsheet accounts for effective hearing ranges using Weighting Factor Adjustments (WFAs), and the COU's application uses the recommended values for vibratory and impact driving therein. Pile driving durations were estimated based on similar project experience. NMFS' new acoustic thresholds use dual metrics of SEL_{cum} and peak sound level (PK) for impulsive sounds (*e.g.,* impact pile driving) and SEL_{cum} for non-impulsive sounds (*e.g.,* vibratory pile driving) (Table 4). The COU used source level measurements from similar pile driving events (as described in ''Estimated Take by Incidental Harassment''), and using the User Spreadsheet, applied the updated PTS onset thresholds for impulsive PK and SEL_{cum} in the new acoustic guidance to determine distance to the isopleths for PTS onset for impact pile driving. For vibratory pile driving, the COU used the User Spreadsheet to determine isopleth estimates for PTS onset using the cumulative sound exposure level metric (L_E) (*http://www.nmfs.noaa.gov/pr/acoustics/guidelines.htm*). In determining the cumulative sound exposure levels, the Guidance considers the duration of the activity, the sound exposure level produced by the source during one working day, and the effective hearing range of the receiving species. In the case of the duel metric acoustic thresholds (L_{pk} and L_E) for impulsive sound, the larger of the two isopleths for calculating PTS onset is used. These values were then used to develop mitigation measures for proposed pile driving activities. The exclusion zone effectively represents the mitigation zone that would be established around each pile to prevent Level A harassment (PTS onset) to marine mammals (Table 5), while the zones of influence (ZOI) provide estimates of the areas within which Level B harassment might occur for impact/vibratory pile driving and quarry blasting (Table 6).

[1] For most recent version of the NMFS User Spreadsheet, see: *http://www.nmfs.noaa.gov/pr/acoustics/guidelines.htm*

TABLE 4—SUMMARY OF PTS ONSET ACOUSTIC THRESHOLDS

Hearing group	PTS onset acoustic thresholds * (Received Level)	
	Impulsive	Non-impulsive
Low-Frequency (LF) Cetaceans	*Cell 1* Lpk,flat: 219 dB $L_{E,}$LF,24h: 183 dB	*Cell 2*. $L_{E,}$LF,24h: 199 dB.
Mid-Frequency (MF) Cetaceans	*Cell 3* Lpk,flat: 230 dB $L_{E,}$MF,24h: 185 dB	*Cell 4*. LE,MF,24h: 198 dB.
High-Frequency (HF) Cetaceans	*Cell 5* Lpk,flat: 202 dB $L_{E,}$HF,24h: 155 dB	*Cell 6*. LE,HF,24h: 173 dB.
Phocid Pinnipeds (PW) (Underwater)	*Cell 7* Lpk,flat: 218 dB $L_{E,}$PW,24h: 185 dB	*Cell 8*. $L_{E,}$PW,24h: 201 dB.
Otariid Pinnipeds (OW) (Underwater)	*Cell 9* Lpk,flat: 232 dB $L_{E,}$OW,24h: 203 dB	*Cell 10*. LE,OW,24h: 219 dB.

* Dual metric acoustic thresholds for impulsive sounds: Use whichever results in the largest isopleth for calculating PTS onset. If a non-impulsive sound has the potential of exceeding the peak sound pressure level thresholds associated with impulsive sounds, these thresholds should also be considered.

Note: Peak sound pressure (L_{pk}) has a reference value of 1 µPa, and cumulative sound exposure level (L_E) has a reference value of 1µPa²s. In this Table, thresholds are abbreviated to reflect American National Standards Institute standards (ANSI 2013). However, peak sound pressure is defined by ANSI as incorporating frequency weighting, which is not the intent for this Technical Guidance. Hence, the subscript "flat" is being included to indicate peak sound pressure should be flat weighted or unweighted within the generalized hearing range. The subscript associated with cumulative sound exposure level thresholds indicates the designated marine mammal auditory weighting function (LF, MF, and HF cetaceans, and PW and OW pinnipeds) and that the recommended accumulation period is 24 hours. The cumulative sound exposure level thresholds could be exceeded in a multitude of ways (*i.e.,* varying exposure levels and durations, duty cycle). When possible, it is valuable for action proponents to indicate the conditions under which these acoustic thresholds will be exceeded.

Monitoring and Shutdown for Pile Driving

The following measures would apply to the COU's mitigation through the exclusion zone and zone of influence:

Exclusion Zone—For all pile driving activities, the COU will establish an exclusion zone intended to contain the area in which Level A harassment thresholds are exceeded. The purpose of the exclusion zone is to define an area within which shutdown of construction activity would occur upon sighting of a marine mammal within that area (or in anticipation of an animal entering the defined area), thus preventing potential injury of marine mammals. Calculated distances to the updated PTS onset acoustic thresholds are shown in Table 5. The greatest calculated distance to the Level A harassment threshold during impact pile driving, assuming a maximum of 5 piles driven per day, is 184.5 m for low-frequency cetaceans (humpback whale). For mid-frequency cetaceans (killer whale), phocid pinnipeds (harbor seal), and otariid pinnipeds (Steller sea lion), the distances are 6.6 m, 98.6 m, and 7.2 m, respectively (Table 5). Calculated distances to the PTS onset threshold during vibratory pile driving range from a maximum of 9.2 m for low-frequency cetaceans to 0.20 m for otariids—depending on the specific type of piles/sheets that are installed or removed (Table 5).

TABLE 5—PILE DRIVING ACTIVITIES AND CALCULATED DISTANCES TO LEVEL A HARASSMENT ISOPLETHS

[Onset PTS threshold using NMFS' new acoustic guidance]

Source	Estimated duration				Level A harassment zone (m) (new guidance)			
	Number of piles	Piles driven per day	Hours per day	Days of effort	LF cetaceans	MF cetaceans	PW pinnipeds	OW pinnipeds
Vibratory Installation Sheet	1,400	15	0.5	95	4.1	0.4	2.5	0.2
Vibratory Installation 18″	150	10	1.25	15	5.0	0.4	3.0	0.2
Vibratory Installation 30″	40	5	1	8	5.0	0.4	3.1	0.2
Vibratory Installation 30″	30	5	1	6	5.0	0.4	3.1	0.2
Vibratory Installation 30″	125	5	2	25	8.0	0.7	4.8	0.3
Vibratory Removal Steel 18″	195	10	1.25	35	5.0	0.4	3.0	0.2
Vibratory Removal Steel 18″	150	10	1.25	35	5.0	0.4	3.0	0.2
Vibratory Removal Timber	55	10	1.25	5.5	9.2	0.8	5.6	0.4
	Number of piles	Piles driven per day	Strikes per pile	Days of effort	LF cetaceans	MF cetaceans	PW pinnipeds	OW pinnipeds
Impact Installation 30'' (SEL Calc)*	195	5	200	39	184.5	6.6	98.8	7.2
	.....	4	.....	.....	159.0	5.7	85.1	6.2
	.....	3	.....	.....	131.3	4.7	70.3	5.1
	.....	2	.....	.....	100.2	3.6	53.6	3.9
	.....	1	.....	.....	63.1	2.2	33.8	2.5

* Distances to the Level A harassment (PTS onset) isopleth are based on the cumulative sound exposure level (L_E) acoustic threshold; the modeled distances to the PTS onset isopleth were smaller using the Lpk metric (see Table 8 in the application), and therefore, not used to establish shutdown zones.

The established shutdown zones corresponding to the Level A harassment zones for each activity are as follows:

- For all vibratory pile driving activities, a 10-m radius shutdown zone will be employed for all species observed
- During impact pile driving, a shutdown zone will be determined by the number of piles to be driven that day as follows: If the maximum of five piles are to be driven that day, shutdown during the first driven pile will occur if a marine mammal enters the '5-pile' radius. After the first pile is driven, if no marine mammals have been observed within the '5-pile'radius, the '4-pile' radius will become the shutdown radius. This pattern will continue unless an animal is observed within the most recent shutdown radius, at which time that shutdown radius will remain in effect for the rest of the workday. Shutdown radii for each species, depending on number of piles driven, are as follows:
  - 5-pile radius: humpback whale, 185 m; killer whale, 10 m; harbor seal, 100 m; Steller sea lion, 10 m
  - 4-pile radius: humpback whale, 160 m; killer whale, 10 m; harbor seal, 85 m; Steller sea lion, 10 m
  - 3-pile radius: humpback whale, 135 m; killer whale, 10 m; harbor seal, 70 m; Steller sea lion, 10 m
  - 2-pile radius: humpback whale, 100 m; killer whale, 10 m; harbor seal, 55 m; Steller sea lion, 10 m
  - 1-pile radius: humpback whale, 65 m; killer whale, 10 m; harbor seal, 35 m; Steller sea lion, 10 m

A shutdown will occur prior to a marine mammal entering a shutdown zone appropriate for that species and the concurrent work activity. Activity will cease until the observer is confident that the animal is clear of the shutdown zone: The animal will be considered clear if:

- It has been observed leaving the shutdown zone; or
- It has not been seen in the shutdown zone for 30 minutes for cetaceans and 15 minutes for pinnipeds.

If shutdown lasts for more than 30 minutes, pre-activity monitoring (see below) must recommence.

If the exclusion zone is obscured by fog or poor lighting conditions, pile driving will not be initiated until the exclusion zone is clearly visible. Should such conditions arise while impact driving is underway, the activity would be halted.

Level B Harassment Zone (Zone of Influence)—The zone of influence (ZOI) refers to the area(s) in which SPLs equal or exceed NMFS' current Level B harassment thresholds (160 and 120 dB rms for pulsed and non-pulsed continuous sound, respectively). ZOIs provide utility for monitoring that is conducted for mitigation purposes (*i.e.,* exclusion zone monitoring) by establishing monitoring protocols for areas adjacent to the exclusion zone. Monitoring of the ZOI enables observers to be aware of, and communicate about, the presence of marine mammals within the project area but outside the exclusion zone and thus prepare for potential shutdowns of activity should those marine mammals approach the exclusion zone. However, the primary purpose of ZOI monitoring is to allow documentation of incidents of Level B harassment; ZOI monitoring is discussed in greater detail later (see ''Proposed Monitoring and Reporting''). The modeled radial distances for ZOIs for impact and vibratory pile driving and removal (not taking into account landmasses which are expected to limit the actual ZOI radii) are shown in Table 7.

In order to document observed incidents of harassment, monitors will record all marine mammals observed within the ZOI. Modeling was performed to estimate the ZOI for impact pile driving (the areas in which SPLs are expected to equal or exceed 160 dB rms during impact driving) and for vibratory pile driving (the areas in which SPLs are expected to equal or exceed 120 dB rms during vibratory driving and removal). Results of this modeling showed the ZOI for impact driving would extend to a radius of 462 m from the pile being driven and the ZOI for vibratory pile driving would extend to a maximum radius of 5,168 m from the pile being driven (see Section 5 of the application for the radius of each type of vibratory pile installation and removal). However, due to the geography of the project area, landmasses surround Dutch Harbor and Iliuliuk Bay are expected to limit the propagation of sound from construction activities such that the actual distances to the ZOI extent for vibratory pile driving will be substantially smaller than those described above. Modeling results of the ensonified areas, taking into account the attenuation provided by landmasses, suggest the actual ZOI will extend to a maximum distance of 3,300 m for vibratory driving. Due to this adjusted ZOI, and due to the monitoring locations chosen by the COU (see the Monitoring Plan in Appendix E of the application for details), we expect that monitors will be able to observe the entire modeled ZOI for both impact and vibratory pile driving, and thus we expect data collected on incidents of Level B harassment to be relatively accurate. The modeled areas of the ZOIs for impact and vibratory driving, taking into account the attenuation provided by landmasses in attenuating sound from the construction project, are shown in Appendix B of the application. The actual Level B harassment/monitoring zones for impact pile driving (500 m) and vibratory pile driving (3,300 m) are shown in Table 7.

Marine Mammal Monitoring

Qualified observers will be on site before, during, and after all pile-driving activities. The proposed Level A and Level B harassment zones for underwater noise will be monitored before, during, and after all in-water construction activity. The observers will be authorized to shut down activity if pinnipeds or cetaceans are observed approaching or within the shutdown zone of any construction activities.

Observers will follow observer protocols, meet training requirements, fill out data forms and report findings in accordance with protocols reviewed and approved by NMFS. A detailed Marine Mammal Monitoring Plan is found in Appendix E of the application.

If marine mammals are observed approaching or within the shutdown zone, shutdown procedures will be implemented to prevent unauthorized exposure. If marine mammals are observed within the monitoring zone (ZOI), the sighting will be documented as a potential Level B take and the animal behaviors shall be documented. If the number of marine mammals exposed to Level B harassment approaches the number of takes allowed by the IHA, the COU will notify NMFS and seek further consultation. If any marine mammal species are encountered that are not authorized by the IHA and are likely to be exposed to sound pressure levels greater than or equal to the Level B harassment thresholds, then the COU will shut down in-water activity to avoid take of those species.

Pre-Activity Monitoring

Prior to the start of daily in-water construction activity, or whenever a break in pile driving of 30 minutes or longer occurs, the observer will observe the shutdown and monitoring zones for a period of 30 minutes. The shutdown zone will be cleared when a marine mammal has not been observed within zone for that 30-minute period. If a marine mammal is observed within the shutdown zone, a soft-start (described below) cannot proceed until the marine

mammal has left the zone or has not been observed for 15 minutes (for pinnipeds) and 30 minutes (for cetaceans). If the Level B harassment zone has been observed for 30 minutes and non-permitted species are not present within the zone, soft start procedures can commence and work can continue even if visibility becomes impaired within the Level B zone. If the Level B zone is not visible while work continues, exposures will be recorded at the estimated exposure rate for each permitted species. If work ceases for more than 30 minutes, the pre-activity monitoring of both zones must recommence

Soft Start

The use of a ''soft-start'' procedure is believed to provide additional protection to marine mammals by providing a warning and an opportunity to leave the area prior to the hammer operating at full capacity. Soft start procedures will be used prior to pile removal, pile installation, and in-water fill placement to allow marine mammals to leave the area prior to exposure to maximum noise levels. For vibratory hammers, the soft start technique will initiate noise from the hammer for short periods at a reduced energy level, followed by a brief waiting period and repeating the procedure two additional times. For impact hammers, the soft start technique will initiate several strikes at a reduced energy level, followed by a brief waiting period. This procedure would also be repeated two additional times. Equipment used for fill placement will be idled near the waterside edge of the fill area for 15 minutes prior to performing in-water fill placement

In-Water or Over-Water Construction Activities

During in-water or over-water construction activities having the potential to affect marine mammals, but not involving a pile driver, a shutdown zone of 10 m will be monitored to ensure that marine mammals are not endangered by physical interaction with construction equipment. These activities could include, but are not limited to, the positioning of the pile on the substrate via a crane (''stabbing'' the pile) or the removal of the pile from the water column/substrate via a crane (''deadpull''), or the slinging of construction materials via crane.

Vessel Interactions

To minimize impacts from vessels interactions with marine mammals, the crews aboard project vessels will follow NMFS's marine mammal viewing guidelines and regulations as practicable. (*https://alaskafisheries.noaa.gov/protectedresources/mmv/guide.htm*).

Mitigation Conclusions

We have carefully evaluated the COU's proposed mitigation measures and considered their likely effectiveness relative to implementation of similar mitigation measures in previously issued IHAs to preliminarily determine whether they are likely to affect the least practicable impact on the affected marine mammal species and stocks and their habitat. Our evaluation of potential measures included consideration of the following factors in relation to one another:

(1) The manner in which, and the degree to which, the successful implementation of the measure is expected to minimize adverse impacts to marine mammals;

(2) The proven or likely efficacy of the specific measure to minimize adverse impacts as planned; and

(3) The practicability of the measure for applicant implementation.

Based on our evaluation of the COU's proposed measures, we have preliminarily determined that the proposed mitigation measures provide the means of affecting the least practicable impact on marine mammal species or stocks and their habitat.

Proposed Monitoring and Reporting

In order to issue an IHA for an activity, section 101(a)(5)(D) of the MMPA states that NMFS must set forth ''requirements pertaining to the monitoring and reporting of such taking.'' The MMPA implementing regulations at 50 CFR 216.104(a)(13) indicate that requests for incidental take authorizations must include the suggested means of accomplishing the necessary monitoring and reporting that will result in increased knowledge of the species and of the level of taking or impacts on populations of marine mammals that are expected to be present in the proposed action area.

Monitoring

Any monitoring requirement we prescribe should accomplish one or more of the following general goals:

1. An increase in the probability of detecting marine mammals, both within defined zones of effect (thus allowing for more effective implementation of the mitigation) and in general to generate more data to contribute to the analyses mentioned below;

2. An increase in our understanding of how many marine mammals are likely to be exposed to stimuli that we associate with specific adverse effects, such as behavioral harassment or hearing threshold shifts;

3. An increase in our understanding of how marine mammals respond to stimuli expected to result in incidental take and how anticipated adverse effects on individuals may impact the population, stock, or species (specifically through effects on annual rates of recruitment or survival) through any of the following methods:

- Behavioral observations in the presence of stimuli compared to observations in the absence of stimuli (need to be able to accurately predict pertinent information, *e.g.,* received level, distance from source);
- Physiological measurements in the presence of stimuli compared to observations in the absence of stimuli (need to be able to accurately predict pertinent information, *e.g.,* received level, distance from source); and
- Distribution and/or abundance comparisons in times or areas with concentrated stimuli versus times or areas without stimuli.

4. An increased knowledge of the affected species; or

5. An increase in our understanding of the effectiveness of certain mitigation and monitoring measures.

The COU submitted a Marine Mammal Monitoring Plan as part of their IHA application (Appendix E of the application; also available online at: *http://www.nmfs.noaa.gov/pr/permits/incidental/*). The COU's proposed Marine Mammal Monitoring Plan was created with input from NMFS and was based on similar plans that have been successfully implemented by other action proponents under previous IHAs for pile driving projects. The plan may be modified or supplemented based on comments or new information received from the public during the public comment period.

Visual Marine Mammal Observations

The COU will collect sighting data and will record behavioral responses to construction activities for marine mammal species observed in the project location during the period of activity. All marine mammal observers (MMOs) will be trained in marine mammal identification and behaviors and are required to have no other construction-related tasks while conducting monitoring. The COU will monitor the exclusion zone (shutdown zone) and Level B harassment zone before, during, and after pile driving, with observers located at the best practicable vantage points (See Figure 3 in the Marine Mammal Monitoring Plan for the observer locations planned for use

during construction). Based on our requirements, the Marine Mammal Monitoring Plan would implement the following procedures for pile driving:

- During observation periods, observers will continuously scan the area for marine mammals using binoculars and the naked eye. Observers will work shifts of a maximum of four consecutive hours followed by an observer rotation or a 1-hour break and will work no more than 12 hours in any 24-hour period.
- Observers will collect data including, but not limited to, environmental conditions (*e.g.,* sea state, precipitation, glare, etc.), marine mammal sightings (*e.g.,* species, numbers, location, behavior, responses to construction activity, etc.), construction activity at the time of sighting, and number of marine mammal exposures. Observers will conduct observations, meet training requirements, fill out data forms, and report findings in accordance with this IHA
- During all observation periods, observers will use binoculars and the naked eye to search continuously for marine mammals.
- If the exclusion zone is obscured by fog or poor lighting conditions, pile driving will not be initiated until the exclusion zone is clearly visible. Should such conditions arise while impact driving is underway, the activity would be halted.
- Observers will implement mitigation measures including monitoring of the proposed shutdown and monitoring zones, clearing of the zones, and shutdown procedures.
- Observers will be in continuous contact with the construction personnel via two-way radio. A cellular phone will be use as back-up communications and for safety purposes.
- Individuals implementing the monitoring protocol will assess its effectiveness using an adaptive approach. MMOs will use their best professional judgment throughout implementation and seek improvements to these methods when deemed appropriate. Any modifications to protocol will be coordinated between NMFS and the COU.

Data Collection

We require that observers use approved data forms. Among other pieces of information, the COU will record detailed information about any implementation of shutdowns, including the distance of animals to the pile being driven, a description of specific actions that ensued, and resulting behavior of the animal, if any. In addition, the COU will attempt to distinguish between the number of individual animals taken and the number of incidents of take, when possible. We require that, at a minimum, the following information be collected on sighting forms:

- Date and time that permitted construction activity begins or ends;
- Weather parameters (*e.g.* percent cloud cover, percent glare, visibility) and Beaufort sea state.
- Species, numbers, and, if possible, sex and age class of observed marine mammals;
- Construction activities occurring during each sighting;
- Marine mammal behavior patterns observed, including bearing and direction of travel;
- Specific focus should be paid to behavioral reactions just prior to, or during, soft-start and shutdown procedures;
- Location of marine mammal, distance from observer to the marine mammal, and distance from pile driving activities to marine mammals;
- Record of whether an observation required the implementation of mitigation measures, including shutdown procedures and the duration of each shutdown; and
- Other human activity in the area. Record the hull numbers of fishing vessels if possible.

Sound Source and Attenuation Verification

The companion User Spreadsheet provided with NMFS' new acoustic guidance uses multiple conservative assumption which may result in unrealistically large isopleths associated with PTS onset. The COU may elect to verify the values used for source levels and sound attenuation in the various exclusion radii calculations. This would be achieved using the techniques and equipment for sound source verification discussed in Appendix A of the application. Sound levels would be measured at the earliest possibility during impact pile driving at 10, 100, 300, and 500 m from the sound source. These values would be plotted and a logarithmic line of best fit used to model the attenuation rates experienced at the construction site. If these values are higher than the typically-used value of 15, the exclusion radii will be revised according to the methods used to calculate the current values. The COU must obtain approval from NMFS of any new exclusion zone before it may be implemented.

The COU may elect not to exercise this option, if the cost of shutdown during impact pile driving is not anticipated to warrant additional research.

Reporting

Annual Report

A draft report will be submitted within 90 calendar days of the completion of the activity, The report will include information on marine mammal observations pre-activity, during-activity, and post-activity during pile driving days, and will provide descriptions of any behavioral responses to construction activities by marine mammals and a complete description of any mitigation shutdowns and results of those actions, as well as an estimate of total take based on the number of marine mammals observed during the course of construction. A final report must be submitted within 30 days following resolution of comments from NMFS on the draft report. The report shall include at a minimum:

- General data:
  - Date and time of activity.
  - Water conditions (*e.g.,* sea-state).
  - Weather conditions (*e.g.,* percent cover, percent glare, visibility).
- Specific pile driving data:
  - Description of the pile driving activity being conducted (pile locations, pile size and type), and times (onset and completion) when pile driving occurs.
  - The construction contractor and/or marine mammal monitoring staff will coordinate to ensure that pile driving times and strike counts are accurately recorded. The duration of soft start procedures should be noted as separate from the full power driving duration.
  - Description of in-water construction activity not involving pile driving (location, type of activity, onset and completion times)
- Pre-activity observational survey-specific data:
  - Date and time survey is initiated and terminated
  - Description of any observable marine mammals and their behavior in the immediate area during monitoring
  - Times when pile driving or other in-water construction is delayed due to presence of marine mammals within shutdown zones.
- During-activity observational survey-specific data:
  - Description of any observable marine mammal behavior within monitoring zones or in the immediate area surrounding the monitoring zones, including the following:
    - Distance from animal to pile driving sound source.
    - Reason why/why not shutdown implemented.
    - If a shutdown was implemented, behavioral reactions noted and if they

occurred before or after implementation of the shutdown.

▪ If a shutdown was implemented, the distance from animal to sound source at the time of the shutdown.

▪ Behavioral reactions noted during soft starts and if they occurred before or after implementation of the soft start.

▪ Distance to the animal from the sound source during soft start.

• Post-activity observational survey-specific data:

○ Results, which include the detections and behavioral reactions of marine mammals, the species and numbers observed, sighting rates and distances,

○ Refined exposure estimate based on the number of marine mammals observed. This may be reported as a rate of take (number of marine mammals per hour or per day), or using some other appropriate metric.

General Notifications

In the unanticipated event that the specified activity clearly causes the take of a marine mammal in a manner not authorized by the IHA (if issued), such as a Level A harassment, or a take of a marine mammal species other than those proposed for authorization, the COU would immediately cease the specified activities and immediately report the incident to Jolie Harrison (*Jolie.Harrison@noaa.gov*), Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, and Aleria Jensen (*Aleria.Jensen@noaa.gov*), Alaska Stranding Coordinator.

The report would include the following information:

• Time, date, and location (latitude/longitude) of the incident;

• Description of the incident;

• Status of all sound source use in the 24 hours preceding the incident;

• Environmental conditions (*e.g.,* wind speed and direction, Beaufort sea state, cloud cover, and visibility);

• Description of all marine mammal observations in the 24 hours preceding the incident;

• Species identification or description of the animal(s) involved;

• Fate of the animal(s); and

• Photographs or video footage of the animal(s) (if equipment is available).

Activities would not resume until NMFS is able to review the circumstances of the prohibited take. NMFS would work with the COU to determine what is necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. The COU would not be able to resume their activities until notified by NMFS via letter, email, or telephone.

In the event that the COU discovers an injured or dead marine mammal, and determines that the cause of the injury or death is unknown and the death is relatively recent (*i.e.,* in less than a moderate state of decomposition), the COU would immediately report the incident to Jolie Harrison (*Jolie.Harrison@noaa.gov*), Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, and Aleria Jensen (*Aleria.Jensen@noaa.gov*), Alaska Stranding Coordinator.

The report would include the same information identified in the paragraph above. Construction related activities would be able to continue while NMFS reviews the circumstances of the incident. NMFS would work with the COU to determine whether modifications in the activities are appropriate.

In the event that the COU discovers an injured or dead marine mammal, and determines that the injury or death is not associated with or related to the activities authorized in the IHA (*e.g.,* previously wounded animal, carcass with moderate to advanced decomposition, or scavenger damage), the COU would report the incident to Jolie Harrison (*Jolie.Harrison@noaa.gov*), Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, and Aleria Jensen (*Aleria.Jensen@noaa.gov*), Alaska Stranding Coordinator, within 24 hours of the discovery. The COU would provide photographs or video footage (if available) or other documentation of the stranded animal sighting to NMFS and the Marine Mammal Stranding Network. The COU can continue its operations under such a case.

Estimated Take by Incidental Harassment

Except with respect to certain activities not pertinent here, section 3(18) of the MMPA defines ''harassment'' as: ''. . . any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild (Level A harassment); or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering (Level B harassment).''

All anticipated takes would be by Level B harassment, resulting from vibratory and impact pile driving and involving temporary changes in behavior. Based on the best available information, the proposed activities—vibratory and impact pile driving—would not result in serious injuries or mortalities to marine mammals even in the absence of the planned mitigation and monitoring measures. Additionally, the proposed mitigation and monitoring measures are expected to minimize the potential for injury, such that take by Level A harassment is considered discountable.

If a marine mammal responds to a stimulus by changing its behavior (*e.g.,* through relatively minor changes in locomotion direction/speed or vocalization behavior), the response may or may not constitute taking at the individual level, and is unlikely to affect the stock or the species as a whole. However, if a sound source displaces marine mammals from an important feeding or breeding area for a prolonged period, impacts on animals or on the stock or species could potentially be significant (*e.g.,* Lusseau and Bejder, 2007; Weilgart, 2007). Given the many uncertainties in predicting the quantity and types of impacts of sound on marine mammals, it is common practice to estimate how many animals are likely to be present within a particular distance of a given activity, or exposed to a particular level of sound.

This practice potentially overestimates the numbers of marine mammals taken, as it is often difficult to distinguish between the individual animals harassed and incidences of harassment. In particular, for stationary activities, it is more likely that some smaller number of individuals may accrue a number of incidences of harassment per individual than for each incidence to accrue to a new individual, especially if those individuals display some degree of residency or site fidelity and the impetus to use the site (*e.g.,* because of foraging opportunities) is stronger than the deterrence presented by the harassing activity.

The COU has requested authorization for the incidental taking of small numbers of Steller sea lions, harbor seals, humpback whales, and killer whales that may result from pile driving activities associated with the UMC dock construction project described previously in this document. In order to estimate the potential incidents of take that may occur incidental to the specified activity, we must first estimate the extent of the sound field that may be produced by the activity and then incorporate information about marine mammal density or abundance in the project area. We first provide information on applicable sound thresholds for determining effects to marine mammals before describing the information used in estimating the

sound fields, the available marine mammal density or abundance information, and the method of estimating potential incidences of take.

Sound Thresholds

We use sound exposure thresholds to determine when an activity that produces sound might result in impacts to a marine mammal such that a ''take'' by harassment might occur. As discussed above, NMFS has recently revised PTS (and temporary threshold shift) onset acoustic thresholds for impulsive and non-impulsive sound as part of its new acoustic guidance (refer to Table 4 for those thresholds). The Guidance does not address Level B harassment, nor airborne noise harassment; therefore, COA uses the current NMFS acoustic exposure criteria to determine exposure to airborne and underwater noise sound pressure levels for Level B harassment (Table 6).

TABLE 6—CURRENT NMFS ACOUSTIC EXPOSURE CRITERIA FOR LEVEL B HARASSMENT

Criterion	Definition	Threshold
Level B harassment (underwater) ...	Behavioral disruption	160 dB re: 1 μPa (impulsive source*)/120 dB re: 1 μPa (continuous source*) (rms).
Level B harassment (airborne) **	Behavioral disruption	90 dB re: 20 μPa (harbor seals)/100 dB re: 20 μPa (other pinnipeds) (unweighted).

* Impact pile driving produces impulsive noise; vibratory pile driving produces non-pulsed (continuous) noise.

** NMFS has not established any formal criteria for harassment resulting from exposure to airborne sound. However, these thresholds represent the best available information regarding the effects of pinniped exposure to such sound and NMFS' practice is to associate exposure at these levels with Level B harassment.

Distance to Sound Thresholds

Underwater Sound Propagation Formula—Pile driving generates underwater noise that can potentially result in disturbance to marine mammals in the project area. Transmission loss (TL) is the decrease in acoustic intensity as an acoustic pressure wave propagates out from a source. TL parameters vary with frequency, temperature, sea conditions, current, source and receiver depth, water depth, water chemistry, and bottom composition and topography. The general formula for underwater TL is:

$TL = B * \log_{10}(R_1/R_2)$,

where:

R_1 = the distance of the modeled SPL from the driven pile, and

R_2 = the distance from the driven pile of the initial measurement

This formula neglects loss due to scattering and absorption, which is assumed to be zero here. The degree to which underwater sound propagates away from a sound source is dependent on a variety of factors, most notably the water bathymetry and presence or absence of reflective or absorptive conditions including in-water structures and sediments. Spherical spreading occurs in a perfectly unobstructed (free-field) environment not limited by depth or water surface, resulting in a 6 dB reduction in sound level for each doubling of distance from the source (20*log(range)). Cylindrical spreading occurs in an environment in which sound propagation is bounded by the water surface and sea bottom, resulting in a reduction of 3 dB in sound level for each doubling of distance from the source (10*log(range)). A practical spreading value of fifteen is often used under conditions, such as Dutch Harbor, where water depth increases as the receiver moves away from the shoreline, resulting in an expected propagation environment that would lie between spherical and cylindrical spreading loss conditions. Practical spreading loss (4.5 dB reduction in sound level for each doubling of distance) is assumed here.

Underwater Sound—During the installation of piles, the project has the potential to increase underwater noise levels. This could result in disturbance to pinnipeds and cetaceans that occur within the Level B harassment zone. The intensity of pile driving sounds is greatly influenced by factors such as the type of piles, hammers, and the physical environment in which the activity occurs. A large quantity of literature regarding SPLs recorded from pile driving projects is available for consideration. In order to determine reasonable SPLs and their associated effects on marine mammals that are likely to result from pile driving at the UMC dock, studies with similar properties to the specified activity were evaluated. See Section 5 of the COU's application for a detailed description of the information considered in determining reasonable proxy source level values.

According to studies by the California Department of Transportation (Caltrans), the installation of steel sheet piles using a vibratory hammer can result in underwater noise levels reaching a source level of 163 dB RMS or 162 dB_{SEL} at 10 m (Caltrans, 2015). PND Engineers, Inc. performed acoustic measurements during vibratory installation of steel sheet pile at a similar construction project in Unalaska, Alaska, and found average SPLs of 160.7 dB_{RMS} (Unisea, 2015). This lower value was used to calculate the harassment radii for vibratory installation sheet pile and is discussed further in Appendix A of the application.

Underwater noise levels during the vibratory removal and installation of 18-inch steel pile can reach a source level of 158 dB RMS or 158 dB_{SEL} at 10 m (Caltrans, 2015). Because there was little information on the underwater noise levels of the removal of timber piles, the levels used for analysis (162 dB RMS at 10 m) were taken from the installation of timber piles (Caltrans, 2015). Underwater noise levels during the impact pile driving of a 30-inch steel pile can reach a source level of 185 dB RMS (172 dB_{SEL}, 196 dB_{pk}) at 10 m, whereas the underwater noise from the vibratory driving of 30-inch steel pile can result in a source level of 159 dB RMS (159 dB_{SEL}) at 10 m (Caltrans, 2015).

Dutch Harbor does not represent open water, or free field, conditions. Therefore, sounds would attenuate as they encounter land masses. As a result, and as described above, pile driving noise in the project area is not expected to propagate to the calculated distances for the 120 dB thresholds as shown in Table 7. See Appendix B of the application for figures depicting the actual extents of areas in which each underwater sound threshold is predicted to occur at the project area due to pile driving, taking into account the attenuation provided by landmasses.

TABLE 7—MODELED DISTANCES TO THE NMFS LEVEL B HARASSMENT THRESHOLDS (ISOPLETHS) AND ACTUAL MONITORING ZONES DURING PILE INSTALLATION AND REMOVAL

Threshold	Distance (meters) *	Monitoring zone
Impact driving, disturbance (160 dB)	464	500
Vibratory removal, disturbance (120 dB)	** 5,168	3,300

* Distances shown are modeled maximum distances and do not account for landmasses which are expected to reduce the actual distances to sound thresholds.

** This is the maximum distance modeled. See Section 5 of the application for the modeled distances for each pile driving activity type.

Airborne Sound—During the installation of piles and blasting activities at the quarry, the project has the potential to increase airborne noise levels. This could result in disturbance to pinnipeds at the surface of the water or hauled out along the shoreline of Iliuliuk Bay or the Dutch Harbor spit; however, we do not expect animals to haul out frequently within Dutch Harbor or the spit due to the amount of activity within the area. A spherical spreading loss model (*i.e.,* 6 dB reduction in sound level for each doubling of distance from the source), in which there is a perfectly unobstructed (free-field) environment not limited by depth or water surface, is appropriate for use with airborne sound and was used to estimate the distance to the airborne thresholds.

The formula for calculating spherical spreading loss in airborne noise is:

$TL = GL \times \log(R_1/R_2)$

where:

TL = Transmission loss (dB)
GL = Geometric Loss Coefficient (20 for spherical spreading in airborne noise)
R_1 = Range of the sound pressure level (m)
R_2 = Distance from the source of the initial measurement (m)

Noise levels used to calculate airborne harassment radii come from Laughlin (2010) and Laughlin (2013) and are summarized in Table 9 of the application. Data for vibratory driving from Laughlin (2010) is presented in dB_{L5EQ}, or the 5-minute average continuous sound level. In this case dB_{RMS} values would be calculated in a similar fashion, so these dB_{L5EQ} were considered equivalent to the standard dB_{RMS}. Impact pile driving noise levels were taken from a recent Washington State Department of Transportation IHA application which used data collected by Laughlin (2013). A report was not available for this data, but it is assumed to be provided in dB_{RMS}. Only A-weighted airborne noise levels were available for quarry plasting (Giroux, 2009), so a conservative maximum level was selected, dBA_{LMAX}.

Based on the spherical spreading loss equation, the calculated airborne Level B harassment zones would extend out to the following distances:

- For the vibratory installation of 18-inch steel piles, the calculated airborne Level B harassment zone for harbor seals is 11.4 m; for Steller sea lions, the distance is 3.6 m;
- For the vibratory installation of 30-inch steel piles, the calculated airborne Level B harassment zone for harbor seals is 31.9 meters; for Steller sea lions, the distance is 10.1 m;
- For the impact installation of 24-inch steel piles, the calculated airborne Level B harassment zone for harbor seals is 152.4 m; for Steller sea lions, the distance is 48.2 m; and
- For quarry blasting, the calculated Level B harassment zone for harbor seals extends to 38.5 m and 12.2 m for Steller sea lions.

Vibratory installation of sheet piles is assumed to create lower noise levels than installation of 30-inch round piles, so these values will be used for sheet pile driving. Similarly, vibratory removal of steel or wooden piles will observe the same harassment radii. For the purposes of this analysis, impact installation of 30-inch steel piles is assumed to generate similar sound levels to the installation of 24-inch piles, as no unweighted data was available for the 30-inch piles.

Since the in-water area encompassed within the above areas is located entirely within the underwater Level B harassment zone, the pinnipeds that come within these areas will already be recorded as a take based on Level B harassment threshold for underwater noise, which are in all cases larger than those associated with airborne sound. Further, it is not anticipated that any pinnipeds will haul out within the airborne harassment zone. Airborne noise thresholds have not been established for cetaceans (NOAA, 2015b), and no adverse impacts are anticipated.

Distance from the quarry bottom to the shoreline is an average of 70–80 m, so exposure to even Level B harassment from blasting noise is highly unlikely.

Therefore, we do not believe that authorization of incidental take resulting from airborne sound for pinnipeds is warranted, and airborne sound is not discussed further here.

Marine Mammal Occurrence

The most appropriate information available was used to estimate the number of potential incidences of take. Density estimates for Steller sea lions, harbor seals, humpback whales, and killer whales in Dutch Harbor, and more broadly in the waters surrounding Unalaska Island, are not readily available. Likewise, we were not able to find any published literature or reports describing densities or estimating abundance of either species in the project area. As such, data collected from marine mammal surveys represent the best available information on the occurrence of both species in the project area.

Beginning in April 2015, UMC personnel began conducting surveys within Dutch Harbor under the direction of an ecological consultant. The consultant visited the site every month to ensure that data was gathered consistently and comprehensively. Observers monitored for a variety of marine mammals, including Steller sea lions, whales, and harbor seals. Several observation locations from various vantage points were selected for the surveys. Observations took place for approximately 15 minutes from each point, and included only marine mammals which were inside Dutch Harbor. The survey recorded the type of species observed, the number of species observed, the primary activity of the species, and any applicable notes. Surveys were conducted through July 2016.

These surveys represent the most recent data on marine mammal occurrence in the harbor, and represent the only targeted marine mammal surveys of the project area that we are aware of.

Data from bird surveys of Dutch Harbor conducted by the U.S. Army Corps of Engineers (USACE) from 2003–2013, which included observations of Steller sea lions in the harbor, were also available; however, we determined that these data were unreliable as a basis for

prediction of marine mammal abundance in the project location as the goal of the USACE surveys was to develop a snapshot of waterfowl and seabird location and abundance in the harbor, thus the surveys would have been designed and carried out differently if the goal had been to document marine mammal use of the harbor. Additionally, USACE surveys occurred only in winter; as Steller sea lion abundance is expected to vary significantly between the breeding and the non-breeding season in the project location, data that were collected only during the non-breeding season have limited utility in predicting year-round abundance. As such, we determined that the data from the surveys commissioned by COA in 2015–2016 represents the best available information on marine mammals in the project location.

Description of Take Calculation

The take calculations presented here rely on the best data currently available for marine mammal populations in the project location. Density data for marine mammal species in the project location is not available. Therefore the data collected from marine mammal surveys of Dutch Harbor in 2015–2016 represent the best available information on marine mammal populations in the project location, and this data was used to estimate take. As such, the zones that have been calculated to contain the areas ensonified to the Level A and Level B thresholds for pinnipeds have been calculated for mitigation and monitoring purposes and were not used in the calculation of take. See Table 8 for total estimated incidents of take. Estimates were based on the following assumptions:

- All marine mammals estimated to be in areas ensonified by noise exceeding the Level B harassment threshold for impact and vibratory driving (as shown in Appendix B of the application) are assumed to be in the water 100 percent of the time. This assumption is based on the fact that there are no haulouts or rookeries within the area predicted to be ensonified to the Level B harassment threshold based on modeling.
- Predicted exposures were based on total estimated total duration of pile driving/removal hours, which are estimated at 1,470 hours over the entire project. This estimate is based on a 245 day project time frame, an average work day of 12 hours, and a conservative estimate that up to approximately 50 percent of time (likely less on some days, based on the short pile driving durations provided in Table 5) during those work days will include pile driving and removal activities (with the rest of the work day spent on non-pile driving activities which will not result in marine mammal take, such as installing templating and bracing, moving equipment, etc.).
- Vibratory or impact driving could occur at any time during the ''duration'' and our approach to take calculation assumes a rate of occurrence that is the same for any of the calculated zones.
- The hourly marine mammal observation rate recorded during marine mammal surveys of Dutch Harbor in 2015 is reflective of the hourly rate that will be observed during the construction project.
- Takes were calculated based on estimated rates of occurrence for each species in the project area and this rate was assumed to be the same regardless of the size of the zone (for impact or vibratory driving/removal).
- Activities that may be accomplished by either impact driving or down-the-hole drilling (*i.e.,* fender support/pin piles, miscellaneous support piles, and temporary support piles) were assumed to be accomplished via impact driving. If any of these activities are ultimately accomplished via down-the-hole drilling instead of impact driving, this would not result in a change in the amount of overall effort (as they will be accomplished via down-the-hole drilling instead of, and not in addition to, impact driving). As take estimates are calculated based on effort and not marine mammal densities, this would not change the take estimate.

Take estimates for Steller sea lions, harbor seals, humpback whales, and killer whales were calculated using the following series of steps:

1. The average hourly rate of animals observed during 2015–2016 marine mammal surveys of Dutch Harbor was calculated separately for both species (''Observation Rate''). Thus ''Observation Rate'' (OR) = Number of individuals observed/hours of observation;

2. The 95 percent confidence interval was calculated for the data set, and the upper bound of the 95 percent confidence interval was added to the Observation Rate to account for variability of the small data set (''Exposure Rate''). Thus ''Exposure Rate'' (XR) = μ_{OR} + CI_{95} (where μ_{OR} = average of hourly observation rates and CI_{95} = 95 percent confidence interval (normal distribution);

3. The total estimated hours of pile driving work over the entire project was calculated, as described above (''Duration''); Thus ''Duration'' = total number of work days (245) * average pile driving/removal hours per day (6) = total work hours for the project (1,470); and

4. The estimated number of exposures was calculated by multiplying the ''Duration'' by the estimated ''Exposure Rate'' for each species. Thus, estimated takes = Duration * XR.

Please refer to Appendix G of the application for a more thorough description of the statistical analysis of the observation data from marine mammal surveys.

Steller Sea Lion—Steller sea lion density data for the project area is not available. Steller sea lions occur year-round in the Aleutian Islands and within Unalaska Bay and Dutch Harbor. As described above, local abundance in the non-breeding season (winter months) is generally lower overall; data from surveys conducted by the COU in 2015–2016 revealed Steller sea lions were present in Dutch Harbor in most months that surveys occurred. We assume, based on marine mammal surveys of Dutch Harbor, and based on the best available information on seasonal abundance patterns of the species including over 20 years of NOAA National Marine Mammal Laboratory (NMML) survey data collected in Unalaska, that Steller sea lions will be regularly observed in the project area during most or all months of construction. As described above, all Steller sea lions in the project area at a given time are assumed to be in the water, thus any sea lion within the modeled area of ensonification exceeding the Level B harassment threshold would be recorded as taken by Level B harassment.

Estimated take of Steller sea lions was calculated using the equations described above, as follows:

μ_{OR} = 0.40 animals/hour
CI_{95} = 0.23 animals/hour
XR = 0.63 animals/hour

Estimated exposures (Level B harassment) = 0.63 * 1,470 = 926

Thus we estimate that a total of 926 Steller sea lion takes will occur as a result of the proposed UMC dock construction project (Table 8).

Harbor Seal—Harbor seal density data for the project location is not available. We assume, based on the best on the best available information, that harbor seals will be encountered in low numbers throughout the duration of the project. We relied on the best available information to estimate take of harbor seals, which in this case was survey data collected from the 2015–2016 marine mammal surveys of Dutch Harbor as described above. That survey data showed harbor seals are present in

the harbor only occasionally (average monthly observation rate = 0.41). NMML surveys have not been performed in Dutch Harbor, but the most recent NMML surveys of Unalaska Bay confirm that harbor seals are present in the area in relatively small numbers, with the most recent haulout counts in Unalaska Bay (2008–2011) recording no more than 19 individuals at the three known haulouts there. NMML surveys have been limited to the months of July and August, so it is not known whether harbor seal abundance in the project area varies seasonally. As described above, all harbor seals in the project area at a given time are assumed to be in the water, thus any harbor seals within the modeled area of ensonification exceeding the Level B harassment threshold would be recorded as taken by Level B harassment.

Estimated take of harbor seals was calculated using the equations described above, as follows:

μ_{OR} = 0.16 animals/hour
CI_{95} = 0.16 animals/hour
XR = 0.32 animals/hour

Estimated exposures (Level B harassment) = 0.32 * 1,470 hours = 470

Thus we estimate that a total of 470 harbor seal takes will occur as a result of the proposed UMC dock construction project (Table 8).

Humpback Whale—Humpback whale density data for the project location is not available. We assume, based on the best on the best available information, that humpback whales will be encountered in low numbers throughout the duration of the project. We relied on the best available information to estimate take of humpback whales, which in this case was survey data collected from the 2015–2016 marine mammal surveys of Dutch Harbor as described above. That survey data showed humpback whales are present in the harbor only occasionally (average monthly observation rate = 0.06). Estimated take of humpback whales was calculated using the equations described above, as follows:

μ_{OR} = 0.06 animals/hour
CI_{95} = 0.06 animals/hour
XR = 0.12 animals/hour

Estimated exposures (Level B harassment) = 0.12 * 1,470 hours = 176

Thus we estimate that a total of 176 humpback whale takes will occur as a result of the proposed UMC dock construction project (Table 8).

Killer Whale—Little is known about killer whales that inhabit waters near Unalaska (Parsons *et al.,* 2013). While it is likely that killer whales may appear in Dutch Harbor, given their known range and the availability of food, the 2015–2016 surveys saw only a small number (2) of marine mammals that were suspected to be killer whales (average monthly observation rate for these unidentified whales = 0.02). There are differences in the physical appearance of transient and resident killer whales; however, in the surveys no distinction was notated. Killer whale density data for the project location is not available. We assume, based on the best on the best available information, that killer whales will be encountered in low numbers throughout the duration of the project. We relied on the best available information to estimate take of killer whales, which in this case was survey data collected from the 2015–2016 marine mammal surveys of Dutch Harbor as described above. That survey data showed killer whales are potentially present in the harbor only very rarely. Estimated take of killer whales was calculated using the equations described above, as follows:

μ_{OR} = 0.02 animals/hour
CI_{95} = 0.04 animals/hour
XR = 0.06 animals/hour

Estimated exposures (Level B harassment) = 0.06 * 1,470 hours = 88

Thus we estimate that a total of 81 killer whale takes will occur as a result of the proposed UMC dock construction project (Table 8).

We therefore propose to authorize the take, by Level B harassment only, of a total of 926 Steller sea lions (Western DPS), 470 harbor seals (Aleutian Islands Stock), 88 killer whales (Eastern North Pacific Alaska Resident and Gulf of Alaska, Aleutian Islands, and Bering Sea Transient Stocks), and 176 humpback whales (Central North Pacific Stock; Western North Pacific Stock) as a result of the proposed construction project. These take estimates are considered reasonable estimates of the number of marine mammal exposures to sound above the Level B harassment threshold that are likely to occur over the course of the project, and not the number of individual animals exposed. For instance, for pinnipeds that associate fishing boats in Dutch Harbor with reliable sources of food, there will almost certainly be some overlap in individuals present day-to-day depending on the number of vessels entering the harbor, however each instance of exposure for these individuals will be recorded as a separate, additional take. Moreover, because we anticipate that marine mammal observers will typically be unable to determine from field observations whether the same or different individuals are being exposed over the course of a workday, each observation of a marine mammal will be recorded as a new take, although an individual theoretically would only be considered as taken once in a given day.

TABLE 8—NUMBER OF POTENTIAL MARINE MAMMAL INCIDENTAL TAKES PROPOSED FOR AUTHORIZATION, AND PERCENTAGE OF STOCK ABUNDANCE, AS A RESULT OF THE PROPOSED PROJECT

Species	Underwater[1]		Percentage of stock abundance (%)
	Level A	Level B	
Humpback whale	0	176	1.6
Killer whale	0	88	3.0
Steller sea lion	0	926	1.9
Harbor seal	0	470	8.1

[1] We assume, for reasons described earlier, that no takes would occur as a result of airborne noise.

Analyses and Preliminary Determinations

Negligible Impact Analysis

NMFS has defined ''negligible impact'' in 50 CFR 216.103 as ''. . . an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival.'' A negligible impact finding is based on the lack of likely adverse effects on annual rates of recruitment or survival (*i.e.,* population-level effects). An estimate of the number of Level B harassment takes alone is not enough information on which to base an impact determination. In addition to considering estimates of the number of marine mammals that might be ''taken'' through behavioral harassment, we consider other factors, such as the likely nature of any responses (*e.g.,* intensity, duration), the context of any responses (*e.g.,* critical reproductive time or location, migration), as well as the number and nature of estimated Level A harassment takes, the number of estimated mortalities, and effects on habitat.

To avoid repetition, the discussion of our analyses applies generally to all the species listed in Table 8, given that the anticipated effects of this pile driving project on marine mammals are expected to be relatively similar in nature. Where there are species-specific factors that have been considered, they are identified below.

Pile driving activities associated with the proposed dock construction project, as outlined previously, have the potential to disturb or displace marine mammals. Specifically, the specified activities may result in take, in the form of Level B harassment (behavioral disturbance) only, from underwater sounds generated from pile driving. Potential takes could occur if individuals of these species are present in the ensonified zone when pile driving and removal are under way.

The takes from Level B harassment will be due to potential behavioral disturbance and TTS. No serious injury or mortality of marine mammals would be anticipated as a result of vibratory and impact pile driving. Except when operated at long continuous duration (not the case here) in the presence of marine mammals that do not move away, vibratory hammers do not have significant potential to cause injury to marine mammals due to the relatively low source levels produced and the lack of potentially injurious source characteristics. Impact pile driving produces short, sharp pulses with higher peak levels than vibratory driving and much sharper rise time to reach those peaks. The potential for injury that may otherwise result from exposure to noise associated with impact pile driving will effectively be minimized through the implementation of the planned mitigation measures. These measures include: the implementation of an exclusion (shutdown) zone, which is expected to eliminate the likelihood of marine mammal exposure to noise at received levels that could result in injury; and the use of ''soft start'' before pile driving, which is expected to provide marine mammals near or within the zone of potential injury with sufficient time to vacate the area. We believe the required mitigation measures, which have been successfully implemented in similar pile driving projects, will minimize the possibility of injury that may otherwise exist as a result of impact pile driving.

The proposed activities are localized and of relatively short duration. The entire project area is limited to the UMC Dock area and its immediate surroundings. These localized and short-term noise exposures may cause short-term behavioral modifications in harbor seals, Steller sea lions, killer whales, and humpback whales. Moreover, the proposed mitigation and monitoring measures, including injury shutdowns, soft start techniques, and multiple MMOs monitoring the behavioral and injury zones for marine mammal presence, are expected to reduce the likelihood of injury and behavior exposures. Additionally, no critical habitat for marine mammals are known to be within the ensonification areas of the proposed action area during the construction time frame. No pinniped rookeries or haul-outs are present within the project area

The project also is not expected to have significant adverse effects on affected marine mammals' habitat. The project activities would not modify existing marine mammal habitat for a significant amount of time. The activities may cause some fish to leave the area of disturbance, thus temporarily impacting marine mammals' foraging opportunities in a limited portion of the foraging range; but, because of the short duration of the activities and the relatively small area of the habitat that may be affected, the impacts to marine mammal habitat are not expected to cause significant or long-term negative consequences.

Effects on individuals that are taken by Level B harassment, on the basis of reports in the literature as well as monitoring from similar pile driving projects that have received incidental take authorizations from NMFS, will likely be limited to reactions such as increased swimming speeds, increased surfacing time, or decreased foraging. Most likely, individuals will simply move away from the sound source and be temporarily displaced from the area of pile driving (though even this reaction has been observed primarily in association with impact pile driving). In response to vibratory driving, harbor seals have been observed to orient towards and sometimes move towards the sound. Repeated exposures of individuals to levels of sound that may cause Level B harassment are unlikely to result in hearing impairment or to significantly disrupt foraging behavior. Thus, even repeated Level B harassment of some small subset of the overall stock is unlikely to result in any significant realized decrease in fitness to those individuals, and thus would not result in any adverse impact to the stock as a whole. Take of marine mammal species or stocks and their habitat will be reduced to the level of least practicable impact through use of mitigation measures described herein and, if sound produced by project activities is sufficiently disturbing, animals are likely to simply avoid the project area while the activity is occurring.

While we are not aware of comparable construction projects in the project location, the pile driving activities analyzed here are similar to other in-water construction activities that have received incidental harassment authorizations previously, including a Unisea dock construction project in neighboring Iliuliuk Harbor, and at Naval Base Kitsap Bangor in Hood Canal, Washington, and at the Port of Friday Harbor in the San Juan Islands, which have occurred with no reported injuries or mortalities to marine mammals, and no known long-term adverse consequences to marine mammals from behavioral harassment.

In summary, this negligible impact analysis is founded on the following factors: (1) The possibility of injury, serious injury, or mortality may reasonably be considered discountable; (2) the anticipated incidences of Level B harassment consist of, at worst, temporary modifications in behavior or potential TTS; (3) the absence of any major rookeries and only a few isolated haulout areas near the project site; (4) the absence of any other known areas or features of special significance for foraging or reproduction within the project area; and (5) the presumed efficacy of planned mitigation measures in reducing the effects of the specified activity to the level of least practicable

impact. In combination, we believe that these factors, as well as the available body of evidence from other similar activities, demonstrate that the potential effects of the specified activity will have only short-term effects on individual animals. The specified activity is not expected to impact rates of recruitment or survival and will therefore not result in population-level impacts.

Based on the analysis contained herein of the likely effects of the specified activity on marine mammals and their habitat, and taking into consideration the implementation of the proposed monitoring and mitigation measures, we preliminarily find that the total marine mammal take from UMC dock construction activities in Dutch Harbor will have a negligible impact on the affected marine mammal species or stocks.

Small Numbers Analysis

The numbers of animals authorized to be taken would be considered small relative to the relevant stocks or populations (1.9 percent for Steller sea lions, 8.1 percent for harbor seals, 1.6 percent for humpback whales, and 3.0 percent for killer whales) even if each estimated taking occurred to a new individual. However, the likelihood that each take would occur to a new individual is extremely low.

Further, these takes are likely to occur only within some small portion of the overall regional stock. For example, of the estimated 49,497 western DPS Steller sea lions throughout Alaska, there are probably no more than 300 individuals with site fidelity to the three haulouts located nearest to the project location, based on over twenty years of NMML survey data (see ''Description of Marine Mammals in the Area of the Specified Activity'' above). For harbor seals, NMML survey data suggest there are likely no more than 60 individuals that use the three haulouts nearest to the project location (the only haulouts in Unalaska Bay). Thus the estimate of take is an estimate of the number of anticipated exposures, rather than an estimate of the number of individuals that will be taken, as we expect the majority of exposures would be repeat exposures that would accrue to the same individuals. As such, the authorized takes would represent a much smaller number of individuals in relation to total stock sizes.

Based on the analysis contained herein of the likely effects of the specified activity on marine mammals and their habitat, and taking into consideration the implementation of the mitigation and monitoring measures, we preliminarily find that small numbers of marine mammals will be taken relative to the populations of the affected species or stocks.

Impact on Availability of Affected Species for Taking for Subsistence Uses

Subsistence hunting and fishing is an important part of the history and culture of Unalaska Island. However, the number of Steller sea lions and harbor seals harvested in Unalaska decreased from 1994 through 2008; in 2008, the last year for which data is available, there were no harbor seals reported as harvested for subsistence use and only three Steller sea lions reported (Wolfe *et al.,* 2009). Data on pinnipeds hunted for subsistence use in Unalaska has not been collected since 2008. For a summary of data on pinniped harvests in Unalaska from 1994–2008, see Section 8 of the application. Subsistence hunting for humpback whales and killer whales does not occur in Unalaska.

Aside from the apparently decreasing rate of subsistence hunting in Unalaska, Dutch Harbor is not likely to be used for subsistence hunting or fishing due to its industrial nature, with several dock facilities located along the shoreline of the harbor. In addition, the proposed construction project is likely to result only in short-term, temporary impacts to pinnipeds in the form of possible behavior changes, and is not expected to result in the injury or death of any marine mammal. As such, the proposed project is not likely to adversely impact the availability of any marine mammal species or stocks that may otherwise be used for subsistence purposes.

Endangered Species Act (ESA)

Threatened or endangered marine mammal species with confirmed occurrence in the project area include the Western North Pacific DPS and Mexico DPS of humpback whale, and the Western DPS Steller sea lion. The project area occurs within critical habitat for three major Steller sea lion haul-outs and one rookery. The three haul-outs (Old Man Rocks, Unalaska/Cape Sedanka, and Akutan/Reef-Lava) are located between approximately 15 and 19 nautical miles from the project area. The closest rookery is Akutan/Cape Morgan, which is about 19 nautical miles from the project area. The NMFS Permits and Conservation Division has initiated consultation with the NMFS Alaska Regional Office Protected Resources Division under section 7 of the ESA on the issuance of an IHA to the COU under section 101(a)(5)(D) of the MMPA for this activity. Consultation will be concluded prior to a determination on the issuance of an IHA.

Proposed Authorization

As a result of these preliminary determinations, we propose to issue an IHA to the COU, to conduct the described dock construction activities in Dutch Harbor, from March 1, 2016 through February 28, 2017, provided the previously mentioned mitigation, monitoring, and reporting requirements are incorporated. The proposed IHA language is provided next.

This section contains a draft of the IHA itself. The wording contained in this section is proposed for inclusion in the IHA (if issued).

1. This Incidental Harassment Authorization (IHA) is valid from March 1, 2016 through February 28, 2017.

2. This IHA is valid only for pile driving and removal activities associated with construction of the UMC dock in Dutch Harbor, Unalaska, Alaska.

3. General Conditions

(a) A copy of this IHA must be in the possession of the COU, its designees, and work crew personnel operating under the authority of this IHA.

(b) The species authorized for taking are the harbor seal (*Phoca vitulina*), Steller sea lion (*Eumetopias jubatus*), humpback whale (*Megaptera novaeangliae*), and killer whale (*Orcinus orca*).

(c) The taking, by Level B harassment only, is limited to the species listed in condition 3(b). See Table 8 in the proposed IHA authorization for numbers of take authorized.

(d) The taking by injury (Level A harassment), serious injury, or death of any of the species listed in condition 3(b) of the Authorization or any taking of any other species of marine mammal is prohibited and may result in the modification, suspension, or revocation of this IHA.

(e) The COU shall conduct briefings between construction supervisors and crews, marine mammal monitoring team, and the COU personnel prior to the start of all pile driving activity, and when new personnel join the work, in order to explain responsibilities, communication procedures, marine mammal monitoring protocol, and operational procedures.

4. Mitigation Measures

The holder of this Authorization is required to implement the following mitigation measures:

(a) For all pile driving activities, the COU shall establish an exclusion (shutdown) zone intended to contain the area in which Level A harassment thresholds are exceeded.

(b) The established shutdown zones corresponding to the Level A

harassment zones for each activity are as follows:

i. For all vibratory pile driving activities, a 10-m radius shutdown zone shall be employed

ii. During impact pile driving, a shutdown zone shall be determined by the number of piles to be driven that day as follows: If the maximum of five piles are to be driven that day, shutdown during the first driven pile shall occur if a marine mammal enters the '5-pile' radius. After the first pile is driven, if no marine mammals have been observed within the '5-pile'radius, the '4-pile' radius shall become the shutdown radius. This pattern shall continue unless an animal is observed within the most recent shutdown radius, at which time that shutdown radius shall remain in effect for the rest of the workday. Shutdown radii for each species, depending on number of piles driven, are as follows:

- 5-pile radius: humpback whale, 185 m; killer whale, 10 m; harbor seal, 100 m; Steller sea lion, 10 m
- 4-pile radius: humpback whale, 160 m; killer whale, 10 m; harbor seal, 85 m; Steller sea lion, 10 m
- 3-pile radius: humpback whale, 135 m; killer whale, 10 m; harbor seal, 70 m; Steller sea lion, 10 m
- 2-pile radius: humpback whale, 100 m; killer whale, 10 m; harbor seal, 55 m; Steller sea lion, 10 m
- 1-pile radius: humpback whale, 65 m; killer whale, 10 m; harbor seal, 35 m; Steller sea lion, 10 m

(c) A shutdown shall occur prior to a marine mammal entering a shutdown zone appropriate for that species and the concurrent work activity. Activity shall cease until the observer is confident that the animal is clear of the shutdown zone: The animal shall be considered clear if:

- It has been observed leaving the shutdown zone; or
- It has not been seen in the shutdown zone for 30 minutes for cetaceans and 15 minutes for pinnipeds.

(d) If shutdown lasts for more than 30 minutes, pre-activity monitoring (see below) must recommence.

(e) Prior to the start of daily in-water construction activity, or whenever a break in pile driving of 30 minutes or longer occurs, the observer shall observe the shutdown and monitoring zones for a period of 30 minutes. The shutdown zone shall be cleared when a marine mammal has not been observed within zone for that 30-minute period. If a marine mammal is observed within the shutdown zone, a soft-start (described below) cannot proceed until the marine mammal has left the zone or has not been observed for 15 minutes (for pinnipeds) and 30 minutes (for cetaceans). If the Level B harassment zone has been observed for 30 minutes and non-permitted species are not present within the zone, soft start procedures can commence and work can continue even if visibility becomes impaired within the Level B zone. If the Level B zone is not visible while work continues, exposures shall be recorded at the estimated exposure rate for each permitted species. If work ceases for more than 30 minutes, the pre-activity monitoring of both zones must recommence

(f) If the exclusion zone is obscured by fog or poor lighting conditions, pile driving shall not be initiated until the exclusion zone is clearly visible. Should such conditions arise while impact driving is underway, the activity would be halted.

(g) Soft start procedures shall be used prior to pile removal, pile installation, and in-water fill placement to allow marine mammals to leave the area prior to exposure to maximum noise levels. For vibratory hammers, the soft start technique shall initiate noise from the hammer for short periods at a reduced energy level, followed by a brief waiting period and repeating the procedure two additional times. For impact hammers, the soft start technique shall initiate several strikes at a reduced energy level, followed by a brief waiting period. This procedure shall also be repeated two additional times. Equipment used for fill placement shall be idled near the waterside edge of the fill area for 15 minutes prior to performing in-water fill placement

(h) During in-water or over-water construction activities having the potential to affect marine mammals, but not involving a pile driver, a shutdown zone of 10 m shall be monitored to ensure that marine mammals are not endangered by physical interaction with construction equipment. These activities could include, but are not limited to, the positioning of the pile on the substrate via a crane (''stabbing'' the pile) or the removal of the pile from the water column/substrate via a crane (''deadpull''), or the slinging of construction materials via crane.

(i) To minimize impacts from vessels interactions with marine mammals, the crews aboard project vessels shall follow NMFS's marine mammal viewing guidelines and regulations as practicable. (*https://alaskafisheries.noaa.gov/protectedresources/mmv/guide.htm*).

5. Monitoring

The holder of this Authorization is required to conduct marine mammal monitoring during pile driving activity. The COU shall collect sighting data and shall record behavioral responses to construction activities for marine mammal species observed in the project location during the period of activity. All marine mammal observers (MMOs) shall be trained in marine mammal identification and behaviors and are required to have no other construction-related tasks while conducting monitoring. The COU shall monitor the exclusion zones (shutdown zones) and Level B harassment zones before, during, and after pile driving, with observers located at the best practicable vantage points. The Marine Mammal Monitoring Plan shall implement the following procedures for pile driving:

(a) During observation periods, observers shall continuously scan the area for marine mammals using binoculars and the naked eye. Observers shall work shifts of a maximum of four consecutive hours followed by an observer rotation or a 1-hour break and shall work no more than 12 hours in any 24-hour period. Observers shall collect data including, but not limited to, environmental conditions (*e.g.,* sea state, precipitation, glare, etc.), marine mammal sightings (*e.g.,* species, numbers, location, behavior, responses to construction activity, etc.), construction activity at the time of sighting, and number of marine mammal exposures. Observers shall conduct observations, meet training requirements, fill out data forms, and report findings in accordance with this IHA

(b) During all observation periods, observers shall use binoculars and the naked eye to search continuously for marine mammals.

(c) If marine mammals are observed within the monitoring zone (ZOI—500 m during impact pile driving; 3,300 m during vibratory pile driving) the sighting shall be documented as a potential Level B take and the animal behaviors shall be documented. If the number of marine mammals exposed to Level B harassment approaches the number of takes allowed by the IHA, the COU shall notify NMFS and seek further consultation. If any marine mammal species are encountered that are not authorized by the IHA and are likely to be exposed to sound pressure levels greater than or equal to the Level B harassment thresholds, then the COU shall shut down in-water activity to avoid take of those species.

(d) Observers shall implement mitigation measures including monitoring of the proposed shutdown and monitoring zones, clearing of the zones, and shutdown procedures. They shall be in continuous contact with the construction personnel via two-way radio. A cellular phone shall be use as back-up communications and for safety purposes.

(e) Individuals implementing the monitoring protocol shall assess its effectiveness using an adaptive approach. MMOs shall use their best professional judgment throughout implementation and seek improvements to these methods when deemed appropriate. Any modifications to protocol shall be coordinated between NMFS and the COU.

(f) The following information shall be collected on marine mammal sighting forms:

- Date and time that permitted construction activity begins or ends;
- Weather parameters (*e.g.* percent cloud cover, percent glare, visibility) and Beaufort sea state.
- Species, numbers, and, if possible, sex and age class of observed marine mammals;
- Construction activities occurring during each sighting;
- Marine mammal behavior patterns observed, including bearing and direction of travel;
- Specific focus should be paid to behavioral reactions just prior to, or during, soft-start and shutdown procedures;
- Location of marine mammal, distance from observer to the marine mammal, and distance from pile driving activities to marine mammals;
- Record of whether an observation required the implementation of mitigation measures, including shutdown procedures and the duration of each shutdown; and
- Other human activity in the area. Record the hull numbers of fishing vessels if possible.

6. Reporting

The holder of this Authorization is required to:

(a) Submit a draft report within 90 calendar days of the completion of the activity, The report shall include information on marine mammal observations pre-activity, during-activity, and post-activity during pile driving days, and shall provide descriptions of any behavioral responses to construction activities by marine mammals and a complete description of any mitigation shutdowns and results of those actions, as well as an estimate of total take based on the number of marine mammals observed during the course of construction. A final report shall be submitted within 30 days following resolution of comments from NMFS on the draft report. The report shall include at a minimum:

- General data:
  - Date and time of activity.
  - Water conditions (*e.g.,* sea-state).
  - Weather conditions (*e.g.,* percent cover, percent glare, visibility).
  - Date and time of activity.
  - Water conditions (*e.g.,* sea-state).
  - Weather conditions (*e.g.,* percent cover, percent glare, visibility).
- Specific pile driving data:
  - Description of the pile driving activity being conducted (pile locations, pile size and type), and times (onset and completion) when pile driving occurs.
  - The construction contractor and/or marine mammal monitoring staff will coordinate to ensure that pile driving times and strike counts are accurately recorded. The duration of soft start procedures should be noted as separate from the full power driving duration.
  - Description of in-water construction activity not involving pile driving (location, type of activity, onset and completion times)
- Pre-activity observational survey-specific data:
  - Date and time survey is initiated and terminated.
  - Description of any observable marine mammals and their behavior in the immediate area during monitoring.
  - Times when pile driving or other in-water construction is delayed due to presence of marine mammals within shutdown zones.
- During-activity observational survey-specific data:
  - Description of any observable marine mammal behavior within monitoring zones or in the immediate area surrounding the monitoring zones, including the following:
    - Distance from animal to pile driving sound source.
    - Reason why/why not shutdown implemented.
    - If a shutdown was implemented, behavioral reactions noted and if they occurred before or after implementation of the shutdown.
    - If a shutdown was implemented, the distance from animal to sound source at the time of the shutdown.
    - Behavioral reactions noted during soft starts and if they occurred before or after implementation of the soft start.
    - Distance to the animal from the sound source during soft start.
- Post-activity observational survey-specific data:
  - Results, which include the detections and behavioral reactions of marine mammals, the species and numbers observed, sighting rates and distances,
  - Refined exposure estimate based on the number of marine mammals observed. This may be reported as a rate of take (number of marine mammals per hour or per day), or using some other appropriate metric.

(b) Reporting injured or dead marine mammals:

i. In the unanticipated event that the specified activity clearly causes the take of a marine mammal in a manner not authorized by the IHA (if issued), such as a Level A harassment, or a take of a marine mammal species other than those proposed for authorization, the COU would immediately cease the specified activities and immediately report the incident to Jolie Harrison (*Jolie.Harrison@noaa.gov*), Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, and Aleria Jensen (*Aleria.Jensen@noaa.gov*), Alaska Stranding Coordinator.

The report would include the following information:

- Time, date, and location (latitude/longitude) of the incident;
- Description of the incident;
- Status of all sound source use in the 24 hours preceding the incident;
- Environmental conditions (*e.g.,* wind speed and direction, Beaufort sea state, cloud cover, and visibility);
- Description of all marine mammal observations in the 24 hours preceding the incident;
- Species identification or description of the animal(s) involved;
- Fate of the animal(s); and
- Photographs or video footage of the animal(s) (if equipment is available).

Activities would not resume until NMFS is able to review the circumstances of the prohibited take. NMFS would work with the COU to determine what is necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. The COU would not be able to resume their activities until notified by NMFS via letter, email, or telephone.

ii. In the event that the COU discovers an injured or dead marine mammal, and determines that the cause of the injury or death is unknown and the death is relatively recent (*i.e.,* in less than a moderate state of decomposition), the COU would immediately report the incident to Jolie Harrison (*Jolie.Harrison@noaa.gov*), Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, and Aleria Jensen (*Aleria.Jensen@noaa.gov*), Alaska Stranding Coordinator.

The report would include the same information identified in the paragraph above. Construction related activities would be able to continue while NMFS reviews the circumstances of the incident. NMFS would work with the COU to determine whether modifications in the activities are appropriate.

iii. In the event that the COU discovers an injured or dead marine mammal, and determines that the injury or death is not associated with or related to the activities authorized in the IHA (*e.g.,* previously wounded animal, carcass with moderate to advanced decomposition, or scavenger damage), the COU would report the incident to Jolie Harrison (*Jolie.Harrison@noaa.gov*), Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, and Aleria Jensen (*Aleria.Jensen@noaa.gov*), Alaska Stranding Coordinator, within 24 hours of the discovery. The COU would provide photographs or video footage (if available) or other documentation of the stranded animal sighting to NMFS and the Marine Mammal Stranding Network. The COU can continue its operations under such a case.

7. This Authorization may be modified, suspended or withdrawn if the holder fails to abide by the conditions prescribed herein, or if NMFS determines that the authorized taking is having more than a negligible impact on the species or stock of affected marine mammals.

Request for Public Comments

We request comment on our analysis, the draft authorization, and any other aspect of this Notice of Proposed IHA for the COU's dock construction activities. Please include with your comments any supporting data or literature citations to help inform our final decision on the COU's request for an MMPA authorization.

Dated: November 4, 2016.

Donna S. Wieting

Director, Office of Protected Resources, National Marine Fisheries Service.

[FR Doc. 2016–27119 Filed 11–9–16; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648–XF006

Taking and Importing Marine Mammals; Taking Marine Mammals Incidental to Commercial Fireworks Displays at the Monterey Bay National Marine Sanctuary, California

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice; receipt of application for letter of authorization; request for comments and information.

SUMMARY: NMFS has received a request from the Monterey Bay National Marine Sanctuary (MBNMS or Sanctuary) for authorization to take small numbers of marine mammals incidental to professional fireworks displays permitted within the Sanctuary in California waters, over the course of five years, from July 4, 2017 through July 3, 2022. Pursuant to regulations implementing the Marine Mammal Protection Act (MMPA), NMFS is announcing receipt of MBNMS's request for the development and implementation of regulations governing the incidental taking of marine mammals and inviting information, suggestions, and comments on MBNMS's application and request.

DATES: Comments and information must be received no later than December 12, 2016.

ADDRESSES: Comments on the application should be addressed to Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service. Physical comments should be sent to 1315 East-West Highway, Silver Spring, MD 20910 and electronic comments should be sent to *ITP.Daly@noaa.gov.*

Instructions: NMFS is not responsible for comments sent by any other method, to any other address or individual, or received after the end of the comment period. Comments received electronically, including all attachments, must not exceed a 25-megabyte file size. Attachments to electronic comments will be accepted in Microsoft Word or Excel or Adobe PDF file formats only. All comments received are a part of the public record and will generally be posted online at *www.nmfs.noaa.gov/pr/permits/incidental/construction.htm* without change. All personal identifying information (*e.g.,* 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: Jaclyn Daly, Office of Protected Resources, NMFS, (301) 427–8401.

SUPPLEMENTARY INFORMATION:

Availability

A copy of MBNMS's application may be obtained by writing to the address specified above (see **ADDRESSES**), telephoning the contact listed above (see **FOR FURTHER INFORMATION CONTACT**), or visiting the internet at: *http://www.nmfs.noaa.gov/pr/permits/incidental.htm#applications.*

Background

Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq.*) direct the Secretary of Commerce (Secretary) to allow, upon request, the incidental, but not intentional taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) if certain findings are made and regulations are issued or, if the taking is limited to harassment, notice of a proposed authorization is provided to the public for review. Authorization for incidental takings may be granted if NMFS finds that the taking will have a negligible impact on the species or stock(s) and will not have an unmitigable adverse impact on the availability of the species or stock(s) for certain subsistence uses, and if the permissible methods of taking and requirements pertaining to the mitigation, monitoring and reporting of such taking are set forth.

NMFS has defined ''negligible impact'' in 50 CFR 216.103 as ''an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival.''

Except with respect to certain activities not pertinent here, the MMPA defines ''harassment'' as: ''any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild (Level A harassment); or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering (Level B harassment).''

Summary of Request

On September 16, 2016, NMFS received an application from the MBNMS requesting authorization to take, by Level B harassment, two species of marine mammals incidental to commercial fireworks displays conducted under sanctuary authorization permits issued by the MBNMS. After addressing NMFS comments on the original application, the MBNMS submitted a revised application on October 18, 2016. NMFS found this application to be adequate and complete.

Marine mammals would be exposed to elevated levels of sound as a result of permitted fireworks displays, as well as increased human activity associated with those displays. Because the specified activities have the potential to take marine mammals present within the action area, the MBNMS requests authorization to take, by Level B harassment only, California sea lions (*Zalophus californianus*) and harbor seals (*Phoca vitulina*).

Specified Activities

Since 1993, the MBNMS, a component of NOAA's Office of National Marine Sanctuaries, has processed requests for the professional display of fireworks that affect resources within the sanctuary. The MBNMS has determined that debris fallout (*i.e.,* spent pyrotechnic materials) from fireworks events may constitute a discharge into the sanctuary and thus violate sanctuary regulations, unless a permit is issued by the superintendent. Therefore, sponsors of fireworks displays conducted in the MBNMS are required to obtain sanctuary authorization prior to conducting such displays (see 15 CFR 922.132).

Since the MBNMS began issuing permits for fireworks discharge in 1993, it has received a total of 102 requests for professional fireworks displays, the majority of which have been associated with large community events such as Independence Day and municipal festivals. The number of fireworks displays within the Sanctuary remained relatively constant although there has been a slight decrease of the number of displays since the economic downturn of 2008. The MBNMS has permitted, on average, approximately five fireworks displays per year; however, only 2 to 4 displays were hosted annually between 2009 and 2015. Since 2005, the MBNMS has requested, and subsequently been authorized under section 101 (a)(5)(A or D) of the MMPA, to take marine mammals incidental to up to 20 fireworks events per year. However, for this application, the MNBMS, at the request of NMFS, re-evaluated the possibility of 20 events occurring per year based on the trend in fireworks permit applications. As such, the MBNMS has modified the number of anticipated displays that would occur under the requested regulations to no more than ten events per year.

The location, mitigation, and monitoring measures contained within previous authorizations would remain in effect. Fireworks displays would be limited to the same four specific areas along 276 miles (444 kilometers) of coastline: Half Moon Bay, the Santa Cruz/Soquel area, the northeastern Monterey Peninsula, and Cambria (Santa Rosa Creek). This effectively limits permitted fireworks displays to approximately five percent of the MBNMS coastline. The MBNMS would also retain the March 1 through June 30 moratorium on fireworks which corresponds to the peak spring breeding season for marine wildlife. Each fireworks displays would not exceed 30 minutes in duration (with the exception of up to two displays per year, each not to exceed one hour) and would occur with an average frequency of less than or equal to once every two months within each of the four prescribed display areas.

A more detailed description of the fireworks displays permitted by MBNMS and anticipated behavioral reactions of marine mammals may be found in MBNMS' application, MBNMS' Assessment of Pyrotechnic Displays and Impacts within the MBNMS 1993–2001 (2001), Marine Mammal Acoustic and Behavioral Monitoring for the MBNMS Fireworks Display, 4 July 2007 (2007), and multiple monitoring reports which are available at: *http://www.nmfs.noaa.gov/pr/permits/incidental.htm.*

Information Solicited

Interested persons may submit information, suggestions, and comments concerning MBNMS's request (see **ADDRESSES**). All information, suggestions, and comments related to MBNMS's request and NMFS' potential development and implementation of regulations governing the incidental taking of marine mammals by the MBNMS will be considered by NMFS in developing, if appropriate, regulations governing the issuance of letters of authorization.

Dated: November 4, 2016.

Donna S. Wieting,

Director, Office of Protected Resources, National Marine Fisheries Service.

[FR Doc. 2016–27094 Filed 11–9–16; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

New Policy and Procedures Documents Announcing a Change in the Calibration Base Line Program

AGENCY: National Geodetic Survey (NGS), National Ocean Service (NOS), National Oceanic and Atmospheric Administration (NOAA), Department of Commerce.

ACTION: Notice of Change in the Calibration Base Line Program; Notice of Public Comment.

SUMMARY: NOAA's National Geodetic Survey (NGS) conducts a Calibration Base Line (CBL) program for electronic distance measuring instrumentation, hereafter referred to as the CBL Program. The CBL Program provides the surveying and engineering community with a locally accessible standard for measuring length and a means for quantifying and correcting for errors associated with this type of instrumentation. Currently, the CBL Program requires use of NGS equipment and direct participation by NGS personnel when establishing and reestablishing CBLs. NGS is considering changes to the CBL Program which will enable our partners to establish and reestablish their local CBLs using their own instrumentation, with NGS providing a quality review function. NGS invites written comments on the CBL Program draft policy (*http://www.ngs.noaa.gov/CBLINES/For_review_CBL_Program_Policy.pdf*) and draft procedures (*http://www.ngs.noaa.gov/CBLINES/For_review_CBL_Program_Procedures.pdf*) documents.

FOR FURTHER INFORMATION CONTACT: Requests for additional information or comments should be directed to Mr. Kendall Fancher, Instrumentation and Methodologies Branch Chief, National Geodetic Survey, 15351 Office Drive, Woodford, VA 22580; phone: 540–373–1243, Email: *Kendall.Fancher@noaa.gov* or *NGS.Feedback@noaa.gov.*

You may submit your comments or concerns to NGS by Tuesday, January 17, 2017.

SUPPLEMENTARY INFORMATION: Since the CBL Program's inception in 1974, NGS

has established more than 400 CBLs throughout the United States in cooperation with various government agencies, universities, professional societies, and others. All data and products associated with this nationwide program are available at the CBL Program Web page: *http://www.geodesy.noaa.gov/CBLINES/calibration.html.*

Currently the establishment/reestablishment of a local CBL requires on-site supervision by NGS personnel and the use of NGS-owned instrumentation. NGS resource constraints can limit administration of the program and the number of CBLs that can be established and reestablished.

The Director of NOAA's National Geodetic Survey invites interested parties to submit comments to assist NGS as it decides how to maintain the CBL Program into the future. Comments may address any aspect of the CBL Program. Specifically, the Director seeks comments regarding:

1. CBLs located within your local area or state that are important to your organizational activities.

2. Whether proposed changes in the CBL Program policy and procedures impose a hardship on your organization.

3. Whether proposed changes in the CBL Program policy and procedures will be beneficial to your organization.

Dated: November 1, 2016.

Juliana P. Blackwell,

Director, Office of National Geodetic Survey, National Ocean Service, National Oceanic and Atmospheric Administration.

[FR Doc. 2016–27164 Filed 11–9–16; 8:45 am]

BILLING CODE 3510–JE–P

COMMITTEE FOR PURCHASE FROM PEOPLE WHO ARE BLIND OR SEVERELY DISABLED

Procurement List; Additions and Deletions

AGENCY: Committee for Purchase From People Who Are Blind or Severely Disabled.

ACTION: Additions to and deletions from the Procurement List.

SUMMARY: This action adds product and services to the Procurement List that will be furnished by nonprofit agencies employing persons who are blind or have other severe disabilities, and deletes products from the Procurement List previously furnished by such agencies.

DATES: Effective December 10, 2016.

ADDRESSES: Committee for Purchase From People Who Are Blind or Severely Disabled, 1401 S. Clark Street, Suite 715, Arlington, Virginia, 22202–4149.

FOR FURTHER INFORMATION CONTACT: Barry S. Lineback, Telephone: (703) 603–7740, Fax: (703) 603–0655, or email *CMTEFedReg@AbilityOne.gov.*

SUPPLEMENTARY INFORMATION:

Additions

On 4/15/2016 (81 FR 22239) and 8/19/2016 (81 FR 55447–55448), the Committee for Purchase From People Who Are Blind or Severely Disabled published notices of proposed additions to the Procurement List.

After consideration of the material presented to it concerning capability of qualified nonprofit agencies to provide the product and services and impact of the additions on the current or most recent contractors, the Committee has determined that the products and services listed below are suitable for procurement by the Federal Government under 41 U.S.C. 8501–8506 and 41 CFR 51–2.4.

Regulatory Flexibility Act Certification

I certify that the following action will not have a significant impact on a substantial number of small entities. The major factors considered for this certification were:

1. The action will not result in any additional reporting, recordkeeping or other compliance requirements for small entities other than the small organizations that will furnish the product and services to the Government.

2. The action will result in authorizing small entities to furnish the product and services to the Government.

3. There are no known regulatory alternatives which would accomplish the objectives of the Javits-Wagner-O'Day Act (41 U.S.C. 8501–8506) in connection with the product and services proposed for addition to the Procurement List.

End of Certification

Accordingly, the following product and services are added to the Procurement List:

Product:

Product Name(s)—NSN(s): 8465–01–608–7507—Sack, Extreme Cold Weather Compression Stuff Sack, (ECW CSS) U.S. Marine Corps, One size fits all

Mandatory Source(s) of Supply: The Lighthouse for the Blind, Inc., Seattle, WA

Mandatory Purchase For: 50% of the requirement of the Department of Defense

Contracting Activity: Defense Logistics Agency Troop Support

Distribution: C-List

Services:

Service Type: Custodial Service

Mandatory for: DoDEA, DDESS, Fort Bragg Community Schools System: Bowley Elementary School, Fort Bragg, NC; Gary I Gordon Elementary School, Cameron, NC; Randall Shughart Elementary School, Cameron, NC, and; Randall Shughart Middle School, Cameron, NC.

Mandatory Source(s) of Supply: Brevard Achievement Center, Inc., Rockledge, FL

Contracting Activity: Dept of Defense Education Activity (DODEA), DDESS Area Service Center

Deletions

On 9/30/2016 (81 FR 67327) and 10/7/2017 (81 FR 69789–69790), the Committee for Purchase From People Who Are Blind or Severely Disabled published notices of proposed deletions from the Procurement List.

After consideration of the relevant matter presented, the Committee has determined that the products listed below are no longer suitable for procurement by the Federal Government under 41 U.S.C. 8501–8506 and 41 CFR 51–2.4.

Regulatory Flexibility Act Certification

I certify that the following action will not have a significant impact on a substantial number of small entities. The major factors considered for this certification were:

1. The action will not result in additional reporting, recordkeeping or other compliance requirements for small entities.

2. The action may result in authorizing small entities to furnish the products to the Government.

3. There are no known regulatory alternatives which would accomplish the objectives of the Javits-Wagner-O'Day Act (41 U.S.C. 8501–8506) in connection with the products deleted from the Procurement List.

End of Certification

Accordingly, the following products are deleted from the Procurement List:

Products:

NSN(s)—Product Name(s):

1670–01–468–9178—Line, Multi-Loop, low altitude parachute extraction system, 140′

1670–01–062–6304—Line, Multi-Loop, low altitude parachute extraction system, 9′

1670–01–062–6305—Line, Multi-Loop, low altitude parachute extraction system, 9′

1670–01–062–6310—Line, Multi-Loop, low altitude parachute extraction system, 11′

1670–01–062–6307—Line, Multi-Loop, low altitude parachute

extraction system, 12′
1670–01–062–6311—Line, Multi-Loop, low altitude parachute extraction system, 120′
1670–01–063–7760—Line, Multi-Loop, low altitude parachute extraction system, 11′
1670–01–062–6313—Line, Multi-Loop, low altitude parachute extraction system, 60′
1670–01–107–7652—Line, Multi-Loop, low altitude parachute extraction system, 160′
1670–01–064–4452—Line, Multi-Loop, low altitude parachute extraction system, 60′
1670–01–064–4451—Line, Multi-Loop, low altitude parachute extraction system, 36′
1670–01–062–6312—Line, Multi-Loop, low altitude parachute extraction system, 120′
1670–01–062–6306—Line, Multi-Loop, low altitude parachute extraction system, 3′
1670–01–062–6303—Line, Multi-Loop, low altitude parachute extraction system, 12′
Mandatory Source(s) of Supply: Unknown
Contracting Activity: Defense Logistics Agency Aviation
1670–01–064–4454—Line, Multi-Loop, low altitude parachute extraction system, 60′
1670–01–062–6309—Line, Multi-Loop, low altitude parachute extraction system, 28′
1670–01–062–6301—Line, Multi-Loop, low altitude parachute extraction system, 3′
1670–01–062–6302—Line, Multi-Loop, low altitude parachute extraction system, 20′
1670–01–107–7651—Line, Multi-Loop, low altitude parachute extraction system, 140′
1670–01–064–4453—Line, Multi-Loop, low altitude parachute extraction system, 20′
1670–01–063–7761—Line, Multi-Loop, low altitude parachute extraction system, 16′
1670–01–062–6308—Line, Multi-Loop, low altitude parachute extraction system, 16′
Mandatory Source(s) of Supply: Unknown
Contracting Activity: W6QK ACC–APG Natick, Natick, MA
NSN(s)—Product Name(s): 3990–01–415–6951—Pallet, Runner
Mandatory Source(s) of Supply: Tarrant County Association for the Blind, Fort Worth, TX
Contracting Activity: General Services Administration, Fort Worth, TX
NSN(s)—Product Name(s): 7520–00–543–7149—Pen, Ballpoint, with Chain, Blue, Medium Pt
Mandatory Source(s) of Supply: Industries of the Blind, Inc., Greensboro, NC
Industries for the Blind, Inc., West Allis, WI
Contracting Activity: General Services Administration, New York, NY
NSN(s)—Product Name(s): 8520–00–NIB–0110—Purell/Skilcraft Instant Hand Sanitizer Value Pack
8520–00–NIB–0111—Purell/Skilcraft 1200 mL Antibacterial Hand Wash Sa
8520–00–NIB–0120—Purell/Skilcraft, Instant Hand Sanitizer—foam
Mandatory Source(s) of Supply: Travis Association for the Blind, Austin, TX
Contracting Activity: Department of Veterans Affairs
NSN(s)—Product Name(s): 6532–00–122–0468—Cap, Operating, Surgical, Blue or Green
Mandatory Source(s) of Supply: Unknown
Contracting Activity: Strategic Acquisition Center, Fredericksburg, VA
NSN(s)—Product Name(s): 8455–00–985–7336—Scarf, Branch of Service, Aviation Units, USAF and USA, Blue
Mandatory Source(s) of Supply: Unknown,
Contracting Activity: Defense Logistics Agency Troop Support
NSN(s)—Product Name(s): 7920–00–297–1511—Brush, Scrub
Mandatory Source(s) of Supply: Industries for the Blind, Inc., West Allis, WI
Contracting Activity: General Services Administration, Fort Worth, TX

Barry S. Lineback,

Director, Business Operations.

[FR Doc. 2016–27217 Filed 11–9–16; 8:45 am]

BILLING CODE 6353–01–P

COMMITTEE FOR PURCHASE FROM PEOPLE WHO ARE BLIND OR SEVERELY DISABLED

Procurement List; Proposed Additions and Deletions

AGENCY: Committee for Purchase From People Who Are Blind or Severely Disabled.

ACTION: Proposed Additions to and deletions from the Procurement List.

SUMMARY: The Committee is proposing to add a product and services to the Procurement List that will be furnished by nonprofit agencies employing persons who are blind or have other severe disabilities, and delete products and services previously furnished by such agencies.

DATES: Comments must be received on or before: 12/10/2016.

ADDRESSES: Committee for Purchase From People Who Are Blind or Severely Disabled, 1401 S. Clark Street, Suite 715, Arlington, Virginia, 22202–4149.

FOR FURTHER INFORMATION CONTACT: Barry S. Lineback, Telephone: (703) 603–7740, Fax: (703) 603–0655, or email *CMTEFedReg@AbilityOne.gov.*

SUPPLEMENTARY INFORMATION: This notice is published pursuant to 41 U.S.C. 8503 (a)(2) and 41 CFR 51–2.3. Its purpose is to provide interested persons an opportunity to submit comments on the proposed actions.

Additions

If the Committee approves the proposed additions, the entities of the Federal Government identified in this notice will be required to procure the product and services listed below from nonprofit agencies employing persons who are blind or have other severe disabilities.

The following product and services are proposed for addition to the Procurement List for production by the nonprofit agencies listed:

Product:

NSN(s)—Product Name(s): 3990–01–187–3615—Ratchet Strap Assembly
Mandatory for: Defense Logistics Agency Troop Support
Mandatory Source(s) of Supply: Mississippi Industries for the Blind, Jackson, MS
Contracting Activity: Defense Logistics Agency Troop Support
Distribution: B-List

Services:

Service Type: Custodial Service
Mandatory for: U.S. Army, U.S. Military Academy, First Class Club and Grant Hall, 681 Hardee Place, West Point, NY
Mandatory Source(s) of Supply: Access: Supports for Living Inc., Middletown, NY
Contracting Activity: Dept of the Army, W6QM MICC–West Point
Service Type: Retail Operation Support Service
Mandatory for: GSA FAS, GSA Global Supply Store 5250 Gibson Avenue, Joint Base Elmendorf, Richardson, AK
Mandatory Source(s) of Supply: M. C. Resource Management, Anchorage, AK
Contracting Activity: General Services Administration, Federal Acquisition Service, Washington, DC
Service Type: Mailroom Support Service
Mandatory for: U.S. Air National Guard, Air National Guard Readiness Center Receiving & Document Control Center, 3500 & 3501 Fetchet Avenue, Joint Base Andrews, MD
Mandatory Source(s) of Supply: ServiceSource, Inc., Oakton, VA
Contracting Activity: Dept of the Army, W39L USA NG Readiness Center

Deletions

The following products and services are proposed for deletion from the Procurement List:

Products:

NSN(s)—Product Name(s): 7520–00–282–2137—Trimmer, Paper, 7520–00–224–7621—Trimmer, Paper, Drop Knife, Beige, 24″ x 24″
Mandatory Source(s) of Supply: The Lighthouse for the Blind, Inc. (Seattle Lighthouse), Seattle, WA
Contracting Activity: General Services Administration, New York, NY
NSN(s)—Product Name(s): 7195–01–484–0017—Bulletin Board, Granite Finish, 36″ x 24″, Aluminum Frame
Mandatory Source(s) of Supply: The Lighthouse for the Blind, Inc. (Seattle Lighthouse), Seattle, WA
Contracting Activities: Department of Veterans Affairs; General Services Administration, Philadelphia, PA

Services:

Service Type: Document Destruction Service
Mandatory Source(s) of Supply: SourceAmerica (Prime Contractor)
Contracting Activity: Dept. of the Treasury/Internal Revenue Service, Washington, DC
Mandatory for: Internal Revenue Service Offices at the following locations:
Cross Point Tower One: 900 Chelmsford Street, Lowell, MA
53 North Sixth Street, New Bedford, MA
AccessPoint RI, Cranston, RI (Subcontractor)
921 N. Nova Boulevard, Holly Hill, FL
Challenge Enterprises of North Florida, Inc., Green Cove Springs, FL (Subcontractor)
675 W. Moana Lane, Reno, NV
Beacon Group, Inc., Tucson, AZ (Subcontractor)
Jackson: 234 Louis Glick Hwy, Jackson, MI, Community Enterprises of St. Clair County, Port Huron, MI (Subcontractor)
2628 S. Cherry Avenue, Fresno, CA
5104 N. Blyth, Fresno, CA
890 West Ashlan, Fresno, CA
1728 Van Ness, Fresno, CA
The ARC Fresno/Madera Counties, Fresno, CA (Subcontractor)
Mobile: 1110 Montlimar Dr., Mobile, AL
One Pensacola Plaza: 125 W Romana Street, Pensacola, FL
Wiregrass Rehabilitation Center, Inc., Dothan, AL (Subcontractor)
Springfield: 3333 S. National Ave, Springfield, MO
El Dorado: 1115 North Madison Ave., El Dorado, AR
Pine Bluff: 100 East 8th Ave., Pine Bluff, AR
United Cerebral Palsy of Central Arkansas Little Rock, AR (Subcontractor)
Effingham: 405 South Banker Street, Effingham, IL
United Cerebral Palsy of the Land of Lincoln, Springfield, IL (Subcontractor)
Indy Bldg: 7525 East 39th Street, Indianapolis, IN
Evansville: 7409 Eagle Crest Blvd., Evansville, IN
Shares Inc., Shelbyville, IN (Subcontractor)
Creekside IV: 12 Cadillac Dr., Ste 400, Brentwood, TN
The Orange Grove Center, Inc., Chattanooga, TN (Subcontractor)
Defiance: 208 Perry St., Defiance, OH
Lorain: 300 Broadway, Lorain, OH
Painesville: 8 North State Street, Painesville, OH
Steubenville: 500 Market Street, Steubenville, OH
Warrendale: 547 Keystone Drive, Warrendale, PA
Weaver Industries, Inc., Akron, OH (Subcontractor)
11620 Caroline Road, Philadelphia, PA
9815 B Roosevelt Blvd., Philadelphia, PA
Opportunity Center, Incorporated, Wilmington, DE (Subcontractor)
Greensboro: 2303 W. Meadowview Road, Greensboro, NC
Winston Salem: 251 N. Main Street, Winston Salem, NC
OE Enterprises, Inc., Hillsborough, NC (Subcontractor)
201 Como Park Blvd., Cheektowaga, NY
1314 Griswald Plaza, Erie, PA
7th & State Street, Erie, PA
Lifetime Assistance, Inc., Rochester, NY (Subcontractor)
101 Park Deville Drive, Columbia, MO
919 Jackson Street, Chillicothe, MO
3702 W. Truman Blvd., Suite 113, Jefferson City, MO
Mission: 5799 Broadmoor St., Mission, KS
JobOne, Independence, MO
Chillicothe: 1534 North Bridge St., Chillicothe, OH
The Plains: 70 N. Plains Road, The Plains, OH
Zanesville: 710 Main St., Zanesville, OH
Greene, Inc., Xenia, OH (Subcontractor)
11 South 12th Street, Richmond, VA
600 Main Street, Richmond, VA
Goodwill Services, Inc., Richmond, VA (Subcontractor)
6021 Durand Avenue, Suite 600, Racine, WI
Janesville: 20 E. Milwaukee St., Ste. 204, Janesville, WI
Sheboygan: 2108 Kohler Memorial Dr., Sheboygan, WI
Goodwill Industries of Southeastern Wisconsin, Milwaukee, WI (Subcontractor)
2201 Cantu Court, Sarasota, FL
300 Lock Road, Deerfield Beach, FL
Goodwill Industries of South Florida, Miami, FL (Subcontractor)
Multiple Locations, Chicago, IL
Glenkirk, Northbrook, IL (Subcontractor)
Grand Rapids: 678 Front Street NW., Grand Rapids, MI
Portage: 8075 Creekside Drive, Portage, MI
South Bend: One Michiana Square, South Bend, IN
Benton Harbor: 777 Riverview Drive, Benton Harbor, MI
Gateway, Berrien Springs, MI (Subcontractor)
Corporate Plaza 1: 8100 Corporate Drive, Hyattsville, MD
Customer Service Site: 120 Charles Street, Baltimore, MD
Athelas Institute, Inc., Hyattsville, MD (Subcontractor)
10 Metrotech Center, New York, NY
10 Richmond Terrace, New York, NY
107 Charles Lindbergh Blvd., Garden City, NY
30 Montgomery Street, Jersey City, NJ
518A East Main Street, Riverhead, NY
NYSARC, Inc., NYC Chapter, New York, NY (Subcontractor)
Beaufort: 1212 Charles Street, Beaufort, SC
Florence County Disabilities and Special Needs Board, Florence, SC (Subcontractor)

Barry S. Lineback,

Director, Business Operations.

[FR Doc. 2016–27214 Filed 11–9–16; 8:45 am]

BILLING CODE 6353–01–P

DEPARTMENT OF DEFENSE

Department of the Army

Notice of Intent To Grant Exclusive Patent License to Fox Materials Consulting, LLC; Colorado Springs, CO

AGENCY: Department of the Army, DoD.

ACTION: Notice of intent.

SUMMARY: The Department of the Army hereby gives notice of its intent to grant to Fox Materials Consulting, LLC; a corporation having its principle place of business at 7145 Baker Rd., Colorado Springs, CO 80908, an exclusive license.

DATES: Written objections must be filed not later than 15 days following publication of this announcement.

ADDRESSES: Send written objections to U.S. Army Research Laboratory Technology Transfer and Outreach Office, RDRL–DPT/Thomas Mulkern, Building 321 Room 110, Aberdeen Proving Ground, MD 21005–5425.

FOR FURTHER INFORMATION CONTACT: Thomas Mulkern, (410) 278–0889, E-Mail: *ORTA@arl.army.mil*

SUPPLEMENTARY INFORMATION: The Department of the Army plans to grant an exclusive license to Fox Materials Consulting, LLC, in all fields relative to the following:

- ''Ferroelectric Mechanical Memory and Method'', US Patent No.: 9,385,306, Filing Date March 12, 2015, Issue Date July 5, 2016.
- ''Ferroelectric Mechanical Memory Based on Remanant Displacement and Method'', US Patent Application No.: 15/131,881, Filing Date April 18, 2016.
- ''Ferroelectric Mechanical Memory and Method'', US Patent Application No.: 15/200,816, Filing Date July 1, 2016.

The prospective exclusive license may be granted unless within fifteen (15) days from the date of this published notice, the U.S. Army Research Laboratory receives written objections

including evidence and argument that establish that the grant of the license would not be consistent with the requirements of 35 U.S.C. 209(e) and 37 CFR 404.7(a)(1)(i). Competing applications completed and received by the U.S. Army Research Laboratory within fifteen (15) days from the date of this published notice will also be treated as objections to the grant of the contemplated exclusive license.

Objections submitted in response to this notice will not be made available to the public for inspection and, to the extent permitted by law, will not be released under the Freedom of Information Act, 5 U.S.C. 552.

Brenda S. Bowen,

Army Federal Register Liaison Officer.

[FR Doc. 2016–27167 Filed 11–9–16; 8:45 am]

BILLING CODE 5001–03–P

DEPARTMENT OF DEFENSE

Department of the Army, Corps of Engineers

Inland Waterways Users Board Meeting Notice

AGENCY: Department of the Army, U.S. Army Corps of Engineers, DoD.

ACTION: Notice of open Federal advisory committee meeting.

SUMMARY: The Department of the Army is publishing this notice to announce the following Federal advisory committee meeting of the U.S. Army Corps of Engineers, Inland Waterways Users Board (Board). This meeting is open to the public. For additional information about the Board, please visit the committee's Web site at *http://www.iwr.usace.army.mil/Missions/Navigation/InlandWaterwaysUsersBoard.aspx*.

DATES: The Army Corps of Engineers, Inland Waterways Users Board will meet from 9:00 a.m. to 1:00 p.m. on December 13, 2016. Public registration will begin at 8:15 a.m.

ADDRESSES: The Board meeting will be conducted at The Conference Center at the Maritime Institute, 692 Maritime Boulevard, Linthicum Heights, Maryland 21090 (near Baltimore), 410–859–5700, or *http://www.ccmit.org*.

FOR FURTHER INFORMATION CONTACT: Mr. Mark R. Pointon, the Designated Federal Officer (DFO) for the committee, in writing at the Institute for Water Resources, U.S. Army Corps of Engineers, ATTN: CEIWR–GM, 7701 Telegraph Road, Casey Building, Alexandria, VA 22315–3868; by telephone at 703–428–6438; and by email at *Mark.Pointon@usace.army.mil*. Alternatively, contact Mr. Kenneth E. Lichtman, the Alternate Designated Federal Officer (ADFO), in writing at the Institute for Water Resources, U.S. Army Corps of Engineers, ATTN: CEIWR–GW, 7701 Telegraph Road, Casey Building, Alexandria, VA 22315–3868; by telephone at 703–428–8083; and by email at *Kenneth.E.Lichtman@usace.army.mil*.

SUPPLEMENTARY INFORMATION: The committee meeting is being held under the provisions of the Federal Advisory Committee Act of 1972 (5 U.S.C., Appendix, as amended), the Government in the Sunshine Act of 1976 (5 U.S.C. 552b, as amended), and 41 CFR 102–3.150.

Purpose of the Meeting: The Board is chartered to provide independent advice and recommendations to the Secretary of the Army on construction and rehabilitation project investments on the commercial navigation features of the inland waterways system of the United States. At this meeting, the Board will receive briefings and presentations regarding the investments, projects and status of the inland waterways system of the United States and conduct discussions and deliberations on those matters. The Board is interested in written and verbal comments from the public relevant to these purposes.

Agenda: At this meeting the agenda will include the status of FY 2017 funding for the Navigation Program, and an initial laydown display of the total funding for the Navigation Program; the Benefit-Cost Ratios (BCRs) and Remaining Benefit-Remaining Cost Ratio for projects being funded by the Inland Waterways Trust Fund; status of the Inland Waterways Trust Fund and project updates, including Lockport project completion closeout details; additional modifications to the Lock Performance Monitoring System (LPMS); the Corps of Engineers planning process and scheduling for external input; the status of the Olmsted Locks and Dam Project, and the Locks and Dams 2, 3, and 4 on the Monongahela River Project to include benefits and revised BCR without deferred project features; and updates of Kentucky Lock and Chickamauga Lock.

Availability of Materials for the Meeting. A copy of the agenda or any updates to the agenda for the December 13, 2016 meeting. The final version will be provided at the meeting. All materials will be posted to the Web site after the meeting.

Public Accessibility to the Meeting: Pursuant to 5 U.S.C. 552b, as amended, and 41 CFR 102–3.140 through 102–3.165, and subject to the availability of space, this meeting is open to the public. Registration of members of the public who wish to attend the meeting will begin at 8:15 a.m. on the day of the meeting. Seating is limited and is on a first-to-arrive basis. Attendees will be asked to provide their name, title, affiliation, and contact information to include email address and daytime telephone number at registration. Any interested person may attend the meeting, file written comments or statements with the committee, or make verbal comments from the floor during the public meeting, at the times, and in the manner, permitted by the committee, as set forth below.

Special Accommodations: The meeting venue is fully handicap accessible, with wheelchair access. Individuals requiring special accommodations to access the public meeting or seeking additional information about public access procedures, should contact Mr. Pointon, the committee DFO, or Mr. Lichtman, the ADFO, at the email addresses or telephone numbers listed in the **FOR FURTHER INFORMATION CONTACT** section, at least five (5) business days prior to the meeting so that appropriate arrangements can be made.

Written Comments or Statements: Pursuant to 41 CFR 102–3.105(j) and 102–3.140 and section 10(a)(3) of the Federal Advisory Committee Act, the public or interested organizations may submit written comments or statements to the Board about its mission and/or the topics to be addressed in this public meeting. Written comments or statements should be submitted to Mr. Pointon, the committee DFO, or Mr. Lichtman, the committee ADFO, via electronic mail, the preferred mode of submission, at the addresses listed in the **FOR FURTHER INFORMATION CONTACT** section in the following formats: Adobe Acrobat or Microsoft Word. The comment or statement must include the author's name, title, affiliation, address, and daytime telephone number. Written comments or statements being submitted in response to the agenda set forth in this notice must be received by the committee DFO or ADFO at least five (5) business days prior to the meeting so that they may be made available to the Board for its consideration prior to the meeting. Written comments or statements received after this date may not be provided to the Board until its next meeting. Please note that because the Board operates under the provisions of the Federal Advisory Committee Act, as amended, all written comments will be

treated as public documents and will be made available for public inspection.

Verbal Comments: Members of the public will be permitted to make verbal comments during the Board meeting only at the time and in the manner allowed herein. If a member of the public is interested in making a verbal comment at the open meeting, that individual must submit a request, with a brief statement of the subject matter to be addressed by the comment, at least three business (3) days in advance to the committee DFO or ADFO, via electronic mail, the preferred mode of submission, at the addresses listed in the **FOR FURTHER INFORMATION CONTACT** section. The committee DFO and ADFO will log each request to make a comment, in the order received, and determine whether the subject matter of each comment is relevant to the Board's mission and/or the topics to be addressed in this public meeting. A 15-minute period near the end of the meeting will be available for verbal public comments. Members of the public who have requested to make a verbal comment and whose comments have been deemed relevant under the process described above, will be allotted no more than three (3) minutes during this period, and will be invited to speak in the order in which their requests were received by the DFO and ADFO.

Brenda S. Bowen,

Army Federal Register Liaison Officer.

[FR Doc. 2016–27162 Filed 11–9–16; 8:45 am]

BILLING CODE 3720–58–P

DEPARTMENT OF DEFENSE

Department of the Navy

Notice of Extension of Public Scoping Period for the Environmental Impact Statement for the Fallon Range Training Complex Modernization, Nevada

AGENCY: Department of the Navy, DoD.

ACTION: Notice.

SUMMARY: The Department of the Navy (DoN) published a notice of intent (NOI) to prepare an Environmental Impact Statement (EIS) for the Fallon Range Training Complex Modernization in the **Federal Register** (81 FR 58919) on August 26, 2016, which initiated a 90-day public scoping period ending on November 25, 2016. This notice confirms the extension of that public scoping period until December 12, 2016.

FOR FURTHER INFORMATION CONTACT: Naval Facilities Engineering Command Southwest; Attention: Amy P. Kelley, Code EV21.AK; 1220 Pacific Highway; Building 1, 5th Floor; San Diego, California 92132.

SUPPLEMENTARY INFORMATION: The public scoping period for the Fallon Range Training Complex Modernization EIS will be extended until December 12, 2016. Scoping comments may be submitted in writing to the address identified above. In addition, scoping comments may be submitted online at *http://www.FRTCModernization.com.* All written comments must be postmarked or received online by December 12, 2016 to ensure they become part of the official record. All comments submitted to the DoN during the public scoping period will be taken into consideration during EIS preparation.

Dated: November 7, 2016.

C. Mora,

Commander, Judge Advocate General's Corps, U.S. Navy, Federal Register Liaison Officer.

[FR Doc. 2016–27205 Filed 11–9–16; 8:45 am]

BILLING CODE 3810–FF–P

DEPARTMENT OF ENERGY

Bonneville Power Administration

[BPA File No.: BP–18]

Fiscal Year (FY) 2018–2019 Proposed Power and Transmission Rate Adjustments Public Hearing and Opportunities for Public Review and Comment

AGENCY: Bonneville Power Administration (BPA or Bonneville), Department of Energy (DOE).

ACTION: Notice of FY 2018–2019 Proposed Power and Transmission Rate Adjustments.

SUMMARY: BPA is holding a consolidated rate proceeding, Docket No. BP–18, to establish power and transmission rates for FY 2018–2019.

The Pacific Northwest Electric Power Planning and Conservation Act (Northwest Power Act) provides that BPA must establish and periodically review and revise its rates so that they recover, in accordance with sound business principles, the costs associated with the acquisition, conservation, and transmission of electric power, including amortization of the Federal investment in the Federal Columbia River Power System (FCRPS) over a reasonable number of years, and BPA's other costs and expenses. The Northwest Power Act requires that BPA's rates be established based on the record of a formal hearing. For transmission rates only, the Northwest Power Act requires that the costs of the Federal transmission system be equitably allocated between Federal and non-Federal power utilizing the system. By this notice, BPA announces the commencement of a power and transmission rate adjustment proceeding for power, transmission, ancillary, and control area services rates to be effective on October 1, 2017.

DATES: Anyone wishing to become a party to the BP–18 proceeding must provide written notice by U.S. Mail or electronic mail. BPA must receive such notice no later than 3:00 p.m. on November 18, 2016.

The BP–18 rate adjustment proceeding begins with a prehearing conference at 9:00 a.m. on November 17, 2016, in the BPA Rates Hearing Room, 1201 NE Lloyd Boulevard, Suite 200, Portland, Oregon 97232.

Written comments by non-party participants must be received by February 17, 2017, to be considered in the Administrator's Record of Decision (ROD).

ADDRESSES:

1. Petitions to intervene should be directed to: Hearing Clerk—L–7, Bonneville Power Administration, 905 NE 11th Avenue, Portland, Oregon 97232 or may be emailed to *rateclerk@bpa.gov.* In addition, copies of the petition must be served concurrently on BPA's General Counsel and directed to both Mr. Kurt Casad, LP–7, and Mr. Matthew Perkins, LT–7, Office of General Counsel, 905 NE 11th Avenue, Portland, Oregon 97232, or by email to *krcasad@bpa.gov* and *mwperkins@bpa.gov* (see section III.A. for more information regarding interventions).

2. Written comments by participants should be submitted to BPA Public Involvement, Bonneville Power Administration, P.O. Box 14428, Portland, Oregon 97293. Participants may also submit comments electronically at *www.bpa.gov/comment.* BPA requests that all comments and documents intended to be part of the Official Record in this rate proceeding contain the designation BP–18 in the subject line.

FOR FURTHER INFORMATION CONTACT: Ms. Ebony Amato, DKE–7, BPA Communications, Bonneville Power Administration, P.O. Box 3621, Portland, Oregon 97208; by phone toll free at 1–800–622–4520; or by email to *elamato@bpa.gov.*

Responsible Officials: Mr. Daniel H. Fisher, Power Rates Manager, is the official responsible for the development of BPA's power rates, and Ms. Rebecca E. Fredrickson, Transmission Rates Manager, is the official responsible for the development of BPA's transmission,

ancillary, and control area services rates.

SUPPLEMENTARY INFORMATION:

Table of Contents

Part I—Introduction and Procedural Background

Section 7(i) of the Northwest Power Act, 16 U.S.C. 839e(i), requires that BPA's rates be established according to certain procedures, including publication in the **Federal Register** of this notice of the proposed rates; one or more hearings conducted as expeditiously as practicable by a Hearing Officer; opportunity for both oral presentation and written submission of views, data, questions, and arguments related to the proposed rates; and a decision by the Administrator based on the record. BPA's rate proceedings are further governed by BPA's Procedures Governing Bonneville Power Administration Rate Hearings, 51 **Federal Register** 7611 (1986), which implement and expand the statutory requirements.

This proceeding is being conducted under the rule for general rate proceedings, section 1010.4 of BPA's Procedures. A proposed schedule for the proceeding is provided below. A final schedule will be established by the Hearing Officer at the prehearing conference.

Prehearing Conference/BPA Initial Proposal	November 17, 2016.
Parties File Petitions to Intervene	November 18, 2016.
Clarification	December 6–7, 2016.
Motions to Strike	December 16, 2016.
Data Request Deadline	December 16, 2016.
Answers to Motions to Strike Due	January 10, 2017.
Data Response Deadline	January 10, 2017.
Parties File Direct Cases	January 31, 2017.
Clarification	February 7–8, 2017.
Motions to Strike Due	February 14, 2017.
Data Request Deadline	February 14, 2017.
Close of Participant Comments	February 17, 2017.
Answers to Motions to Strike Due	February 21, 2017.
Data Response Deadline	February 21, 2017.
Litigants File Rebuttal Cases	March 14, 2017.
Clarification	March 20, 2017.
Motions to Strike Due	March 24, 2017.
Data Request Deadline	March 24, 2017.
Answers to Motions to Strike Due	March 31, 2017.
Data Response Deadline	March 31, 2017.
Parties Give Notice of Intent to Cross-Examine	March 31, 2017.
Cross-Examination	April 6–7, 2017.
Initial Briefs Filed	May 2, 2017.
Oral Argument	May 9, 2017.
Draft ROD issued	June 13, 2017.
Briefs on Exceptions Filed	June 30, 2017.
Final ROD and Final Studies issued	July 26, 2017.

Section 1010.7 of BPA's Procedures prohibits *ex parte* communications. The *ex parte* rule applies to all BPA and DOE employees and contractors. Except as provided below, any outside communications with BPA and/or DOE personnel regarding the merits of any issue in BPA's rate proceeding by other Executive Branch agencies, Congress, existing or potential BPA customers (including tribes), or nonprofit or public interest groups are considered outside communications and are subject to the *ex parte* rule. The rule does not apply to communications relating to (1) matters of procedure only (the status of the rate proceeding, for example); (2) exchanges of data in the course of business or under the Freedom of Information Act; (3) requests for factual information; (4) matters for which BPA is responsible under statutes other than the ratemaking provisions; or (5) matters which all parties agree may be made on an *ex parte* basis. The *ex parte* rule remains in effect until the Administrator's Final ROD is issued, which is scheduled to occur on or about July 26, 2017.

Part II—Scope of BP–18 Rate Proceeding

A. Joint Rate Proceeding

BPA is holding one power and transmission rate proceeding with one procedural schedule, one record, and one ROD.

B. 2016 Integrated Program Review

BPA began its 2016 Integrated Program Review (IPR) and Capital Investment Review (CIR) process in June 2016. The IPR/CIR process is designed to allow an opportunity to review and comment on BPA's expense and capital spending level estimates before the spending levels are used to set rates. On October 12, 2016, BPA issued the Final Close-Out Report for the IPR/CIR process. In the Final Close-Out Report, BPA established the program level cost estimates that are used in the BP–18 Initial Proposal. Starting this fall, BPA will engage customers and stakeholders in a discussion to consider additional cost management alternatives which, if adopted, would be reflected in BPA's final rates.

C. Scope of the Rate Proceeding

This section provides guidance to the Hearing Officer as to those matters that are within the scope of the rate proceeding and those that are outside the scope. In addition to the items listed below, any other issue that is not a ratemaking issue is outside the scope of this proceeding.

1. Program Cost Estimates

Some of the decisions that determine program costs and spending levels have been made in the IPR/CIR public review process outside the rate proceeding. See section II.B. BPA's spending levels for

investments and expenses are not determined or subject to review in rate proceedings.

Pursuant to section 1010.3(f) of BPA's Procedures, the Administrator directs the Hearing Officer to exclude from the record all argument, testimony, or other evidence that challenges the appropriateness or reasonableness of the Administrator's decisions on cost and spending levels. If any re-examination of spending levels is necessary, such re-examination will occur outside of the rate proceeding. The above exclusion does not extend to those portions of the revenue requirements related to interest rate forecasts, interest expense and credit, Treasury repayment schedules, forecasts of depreciation and amortization expense, forecasts of system replacements used in repayment studies, Residential Exchange Program benefits, purchased power expenses, transmission acquisition expense incurred by Power Services, generation acquisition expense incurred by Transmission Services, minimum required net revenue, use of financial reserves, and the costs of risk mitigation actions resulting from the expense and revenue uncertainties included in the risk analysis. The Administrator also directs the Hearing Officer to exclude argument and evidence regarding BPA's debt management practices and policies. See section II.C.5.

2. Tiered Rate Methodology (TRM)

The TRM restricts BPA and customers with Contract High Water Mark (CHWM) contracts from proposing changes to the TRM's ratesetting guidelines unless certain procedures have been successfully concluded. No proposed changes have been subjected to the required procedures.

Pursuant to § 1010.3(f) of BPA's Procedures, the Administrator hereby directs the Hearing Officer to exclude from the record all argument, testimony, or other evidence that seeks in any way to propose revisions to the TRM made by BPA, customers with a CHWM contract, or their representatives. This restriction does not extend to a party or customer that does not have a CHWM contract.

3. Service to the Direct Service Industries (DSIs)

The level and method of service to DSIs during the FY 2018–2019 rate period are established in existing contractual arrangements with Alcoa, Inc. and Port Townsend Paper Corporation. Neither the contracts nor the records of decision supporting those contracts were subject to any petition for review in the Ninth Circuit. For this reason, pursuant to § 1010.3(f) of BPA's Procedures, the Administrator directs the Hearing Officer to exclude from the record all argument, testimony, or other evidence that seeks in any way to revisit the appropriateness or reasonableness of BPA's decisions regarding service to the DSIs, including BPA's decision to offer contracts to the DSIs and the method, level of service, or other terms embodied in the existing contracts with Alcoa and Port Townsend.

4. Generation Inputs

BPA provides a portion of the available generation from the FCRPS to enable Transmission Services to meet its various requirements. Transmission Services uses these generation inputs to provide ancillary and control area services.

Pursuant to § 1010.3(f) of BPA's Procedures, the Administrator directs the Hearing Officer to exclude from the record all argument, testimony, or other evidence that seeks in any way to revisit issues regarding reliability of the transmission system, dispatcher standing orders, e-Tag requirements and definitions, open access transmission tariff (OATT) provisions, and business practices. These non-rates issues are generally addressed by BPA in accordance with industry, reliability, and other compliance standards and criteria and are not matters appropriate for the rate proceeding.

5. Federal and Non-Federal Debt Service and Debt Management

During the 2016 IPR/CIR process and in other forums, BPA provided the public with background information on BPA's internal Federal and non-Federal debt management policies and practices. While these policies and practices are not decided in the IPR/CIR forum, these discussions were intended to inform interested parties about these matters so the parties would better understand BPA's debt structure. BPA's debt management policies and practices remain outside the scope of the rate proceeding.

Pursuant to § 1010.3(f) of BPA's Procedures, the Administrator hereby directs the Hearing Officer to exclude from the record all argument, testimony, or other evidence that seeks in any way to address the appropriateness or reasonableness of BPA's debt management policies and practices. This exclusion does not encompass how debt management actions are reflected in ratemaking.

6. Potential Environmental Impacts

Environmental impacts are addressed in a National Environmental Policy Act (NEPA) process BPA conducts concurrent with the rate proceeding. See section II.D.

Pursuant to § 1010.3(f) of BPA's Procedures, the Administrator directs the Hearing Officer to exclude from the record all argument, testimony, or other evidence that seeks in any way to address the potential environmental impacts of the rates being developed in this rate proceeding.

7. 2008 Average System Cost Methodology (2008 ASCM) and Average System Cost Determinations

Section 5(c) of the Northwest Power Act established the Residential Exchange Program, which provides benefits to residential and farm consumers of Pacific Northwest utilities based, in part, on a utility's ''average system cost'' (ASC) of resources. On September 4, 2009, the Federal Energy Regulatory Commission (Commission) granted final approval of BPA's 2008 ASCM. The 2008 ASCM is not subject to challenge or review in a section 7(i) proceeding. Determinations of the ASCs of participating utilities are made in separate processes conducted pursuant to the ASCM. Those processes began with ASC filings on June 1, 2016, and are continuing through July 2017. The determinations of ASCs are not subject to challenge or review in a section 7(i) proceeding.

Pursuant to § 1010.3(f) of BPA's Procedures, the Administrator hereby directs the Hearing Officer to exclude from the record all argument, testimony, or other evidence that seeks in any way to visit or revisit the appropriateness or reasonableness of the 2008 ASCM or that seeks in any way to visit or revisit the appropriateness or reasonableness of any of the ongoing ASC determinations.

8. Rate Period High Water Mark (RHWM) Process

The RHWM Process preceded the BP–18 rate proceeding. In that process, as directed by the TRM, BPA established FY 2018–2019 RHWMs for Public customers that signed contracts for firm requirements power service providing for tiered rates, referred to as CHWM contracts. BPA established the maximum planned amount of power a customer is eligible to purchase at Tier 1 rates during the rate period, the Above-RHWM Loads for each customer, the System Shaped Load for each customer, the Tier 1 System Firm Critical Output, RHWM Augmentation, the Rate Period Tier 1 System Capability (RT1SC), and the monthly/diurnal shape of RT1SC. The RHWM Process provided customers an opportunity to

review, comment on, and challenge BPA's RHWM determinations.

Pursuant to § 1010.3(f) of BPA's Procedures, the Administrator hereby directs the Hearing Officer to exclude from the record all argument, testimony, or other evidence that seeks in any way to visit or revisit BPA's determination of a customer's FY 2018–2019 RHWM or other RHWM Process determinations.

9. 2012 Residential Exchange Program Settlement Agreement (2012 REP Settlement)

On July 26, 2011, the Administrator executed the 2012 REP Settlement, which resolved longstanding litigation over BPA's implementation of the Residential Exchange Program (REP) under section 5(c) of the Northwest Power Act, 16 U.S.C. 839c(c). The Administrator's findings regarding the legal, factual, and policy challenges to the 2012 REP Settlement are explained in the REP–12 Record of Decision (REP–12 ROD). The 2012 REP Settlement and REP–12 ROD were approved by U.S. Court of Appeals for the Ninth Circuit in *Association of Public Agency Customers* v. *Bonneville Power Administration,* 733 F.3d 939 (9th Cir. 2013). Because the 2012 REP Settlement was part of the REP–12 ROD and was approved by the Court, challenges to BPA's decision to adopt the 2012 REP Settlement and implement its terms in BPA's rate proceedings are not within the scope of this proceeding. Pursuant to § 1010.3(f) of BPA's Procedures, the Administrator hereby directs the Hearing Officer to exclude from the record all argument, testimony, or other evidence that seeks in any way to visit or revisit BPA's determination to adopt the 2012 REP Settlement or its terms in this rate proceeding.

10. Financial Reserves Policy

BPA is proposing in this rate case a policy to establish targets (and upper and lower thresholds) for financial reserves for each of its business units and the agency as a whole. BPA's financial policies are normally not within the scope of BPA's rate cases; however, for administrative convenience BPA is using the BP–18 rate case process to develop the Financial Reserves Policy in lieu of conducting a parallel, but separate, public process. Therefore, the Financial Reserves Policy, and its implementation in the BP–18 rates, is within the scope of this rate proceeding.

11. Oversupply Management Protocol

The proposed OS–18 Oversupply rate is a formula rate designed to recover BPA's oversupply costs. BPA incurs oversupply costs pursuant to the Oversupply Management Protocol, Attachment P of BPA's OATT. Under the proposed formula rates, BPA would recover actual costs incurred during the BP–18 rate period rather than forecast costs, therefore avoiding the need to perform a later true-up between forecast costs and actual costs. Pursuant to Rule 1010.3(f) of BPA's Procedures, the Administrator limits the scope of this proceeding to issues concerning the rates for recovering the costs of the Oversupply Management Protocol. In particular, the following issues are not part of the scope of the case, and the Hearing Officer is directed to strike all argument, testimony, or other evidence concerning these issues: the terms of the Oversupply Management Protocol; whether the Oversupply Management Protocol complies with orders of the Commission; and whether BPA took all actions to avoid using the Oversupply Management Protocol, including the payment of negative prices to generators outside of BPA's balancing authority area.

12. Power Product Switching

On July 18, 2016, BPA issued a letter informing interested parties that Seattle City Light (Seattle) and Klickitat PUD (Klickitat) had requested an early change in their purchase obligations under their Regional Dialogue Power Sales Agreements (Regional Dialogue contracts). In the letter, BPA included its analysis of the proposed early change in purchase obligations and solicited comments from customers and other interested parties. On August 26, 2016, BPA issued a decision letter allowing Seattle and Klickitat to change their purchase obligations from the Slice/Block product to the Block product and Load Following product, respectively, effective October 1, 2017.

Because BPA has already issued a decision document on Seattle and Klickitat's request for an early change in purchase obligations under their Regional Dialogue contracts, this issue is not within the scope of this proceeding. Pursuant to § 1010.3(f) of BPA's Procedures, the Administrator hereby directs the Hearing Officer to exclude from the record all argument, testimony, or other evidence that seeks in any way to visit or revisit BPA's determination to grant Seattle and Klickitat's request for a change in purchase obligations in this rate proceeding.

D. The National Environmental Policy Act (NEPA)

BPA is in the process of assessing the potential environmental effects of its proposed power and transmission rates, consistent with NEPA. The NEPA process is conducted separately from the rate proceeding. As discussed in section II.C.6., all evidence and argument addressing potential environmental impacts of rates being developed in the BP–18 rate proceeding are excluded from the rate proceeding record. Instead, comments on environmental effects should be directed to the NEPA process.

Because this proposal involves BPA's ongoing business practices related to rates, BPA is reviewing the proposal for consistency with BPA's Business Plan Environmental Impact Statement (Business Plan EIS), completed in June 1995 (BOE/EIS–0183). This policy-level EIS evaluates the environmental impacts of a range of business plan alternatives for BPA that could be varied by applying various policy alternatives, including one for rates. Any combination of alternative policy choices should allow BPA to balance its costs and revenues. The Business Plan EIS also includes response strategies, such as adjustments to rates, that BPA could implement if BPA's costs exceed its revenues.

In August 1995, the BPA Administrator issued a ROD (Business Plan ROD) that adopted the Market-Driven Alternative from the Business Plan EIS. This alternative was selected because, among other reasons, it allows BPA to (1) recover costs through rates; (2) competitively market BPA's products and services; (3) develop rates that meet customer needs for clarity and simplicity; (4) continue to meet BPA's legal mandates; and (5) avoid adverse environmental impacts. BPA also committed to apply as many response strategies as necessary when BPA's costs and revenues do not balance.

In April 2007, BPA completed and issued a Supplement Analysis to the Business Plan EIS. This Supplement Analysis found that the Business Plan EIS's relationship-based and policy-level analysis of potential environmental impacts from BPA's business practices remains valid and that BPA's current business practices remain consistent with BPA's Market-Driven Alternative approach. The Business Plan EIS and ROD thus continue to provide a sound basis for making determinations under NEPA concerning BPA's policy-level decisions, including rates.

Because the proposed rates likely would assist BPA in accomplishing the goals identified in the Business Plan ROD, the proposal appears consistent with these aspects of the Market-Driven Alternative. In addition, this rate

proposal is similar to the type of rate designs evaluated in the Business Plan EIS; thus, implementation of this rate proposal would not be expected to result in environmental impacts significantly different from those examined in the Business Plan EIS. Therefore, BPA expects that this rate proposal will likely fall within the scope of the Market-Driven Alternative that was evaluated in the Business Plan EIS and adopted in the Business Plan ROD.

As part of the Administrator's ROD that will be prepared for the BP–18 rate proceeding, BPA may tier its decision under NEPA to the Business Plan ROD. However, depending upon the ongoing environmental review, BPA may instead issue another appropriate NEPA document. Comments regarding the potential environmental effects of the proposal may be submitted to Stacy Mason, NEPA Compliance Officer, ECP–4, Bonneville Power Administration, 905 NE 11th Avenue, Portland, Oregon 97232. Any such comments received by the comment deadline for Participant Comments identified in section III.A. below will be considered by BPA's NEPA compliance staff in the NEPA process that is being conducted for this proposal.

Part III—Public Participation in BP–18

A. Distinguishing Between ''Participants'' and ''Parties''

BPA distinguishes between ''participants in'' and ''parties to'' the hearings. Separate from the formal hearing process, BPA will receive written comments, views, opinions, and information from participants, who may submit comments without being subject to the duties of, or having the privileges of, parties. Participants' written comments will be made part of the official record and considered by the Administrator. Participants are not entitled to participate in the prehearing conference; may not cross-examine parties' witnesses, seek discovery, or serve or be served with documents; and are not subject to the same procedural requirements as parties. BPA customers whose rates are subject to this proceeding, or their affiliated customer groups, may not submit participant comments. Members or employees of organizations that have intervened in the rate proceeding may submit participant comments as private individuals (that is, not speaking for their organizations) but may not use the comment procedures to address specific issues raised by their intervenor organizations.

Written comments by participants will be included in the record if they are received by February 17, 2017. Written views, supporting information, questions, and arguments should be submitted to the address listed in the **ADDRESSES** section of this notice.

An entity or person becomes a party to the proceeding by filing a petition to intervene, which must state the name and address of the entity or person requesting party status and the entity's or person's interest in the hearing. BPA customers and affiliated customer groups will be granted intervention based on petitions filed in conformance with BPA's Procedures. Other petitioners must explain their interests in sufficient detail to permit the Hearing Officer to determine whether the petitioners have a relevant interest in the hearing. Pursuant to Rule 1010.1(d) of BPA's Procedures, BPA waives the requirement in Rule 1010.4(d) that an opposition to an intervention petition be filed and served 24 hours before the prehearing conference. The time limit for opposing a timely intervention will be established at the prehearing conference. Any party, including BPA, may oppose a petition for intervention. All petitions will be ruled on by the Hearing Officer. Late interventions are strongly disfavored. Opposition to an untimely petition to intervene must be filed and received by BPA within two days after service of the petition.

B. Developing the Record

The hearing record will include, among other things, the transcripts of the hearing, written evidence and argument entered into the record by BPA and the parties, written comments from participants, and other material accepted into the record by the Hearing Officer. The Hearing Officer will review the record and certify the record to the Administrator for final decision.

The Administrator will develop final rates based on the record and such other materials and information as may have been submitted to or developed by the Administrator. The Administrator will serve copies of the Final ROD on all parties. BPA will file its rates with the Commission for confirmation and approval after issuance of the Final ROD.

Part IV—Summary of Rate Proposals

A. Summary of the Power Rate Proposal

BPA is proposing four rates for Federal power sales and services:

Priority Firm Power Rate (PF–18)—The PF rate schedule applies to net requirements power sales to public body, cooperative, and Federal agency customers made pursuant to section 5(b) of the Northwest Power Act. It also includes the PF Public rates for the sale of firm requirements power under CHWM contracts and the PF Exchange rates for sales under Residential Purchase and Sale Agreements. The PF Public rate applies to customers taking Load Following, Block, or Slice/Block service. Consistent with the TRM, Tier 1 rates include three charges: (1) Customer charges; (2) a demand charge; and (3) a load shaping charge. In addition, four Tier 2 rates, corresponding to contract options, are applied to customers that have elected to purchase power from BPA for service to their Above-RHWM Load.

Because very few of BPA's customers are subject to exactly the same mix of PF rate components, BPA has developed a PF rate measure for an average customer purchasing at PF Tier 1 rates. This quantification, the Tier 1 Average Net Cost, is increasing from $33.75/MWh for the PF–16 rate to $34.94/MWh for the PF–18 rate, which is an increase of 3.5 percent for the two-year rate period, or 1.7 percent on an average annual basis.

The Base PF Exchange rate and its associated surcharges apply to the sale of power to regional utilities that participate in the REP established under section 5(c) of the Northwest Power Act. 16 U.S.C. 839c(c). The Base PF Exchange rate establishes the threshold for participation in the REP; only utilities with ASCs above the appropriate Base PF Exchange rate may receive REP benefits. If a utility meets the threshold, a utility-specific PF Exchange rate will be established in this proceeding for each eligible utility. The utility-specific PF Exchange rate is used in calculating the REP benefits each participant will receive during FY 2018–2019.

The proposed PF–18 rate schedule also includes resource support services rates for customers with non-Federal resources, and a melded PF rate for any Public customer that elects a power sales contract other than a CHWM contract for firm requirements service. Transfer service charges for delivery, operating reserves, and Western Electricity Coordinating Council (WECC) assessments are applicable to customers served under non-Federal transmission service agreements.

New Resource Firm Power Rate (NR–18)—The NR–18 rate applies to net requirements power sales to investor-owned utilities (IOUs) made pursuant to section 5(b) of the Northwest Power Act for resale to ultimate consumers; direct consumption; construction, testing and start-up; and station service. The NR–18

rate is also applied to sales of firm power to Public customers when this power is used to serve new large single loads. In addition, the NR rate schedule includes rates for services to support Public customers serving new large single loads with non-Federal resources. In the BP–18 Initial Proposal BPA is forecasting no sales at the NR rate. The average NR–18 rate in the Initial Proposal is $79.63/MWh, an increase of 7.9 percent from the NR–16 rate.

Industrial Firm Power Rate (IP–18)—The IP rate is applicable to firm power sales to DSI customers authorized by section 5(d)(1)(A) of the Northwest Power Act. 16 U.S.C. 839c(d)(1)(A). In the Initial Proposal BPA is forecasting annual sales of 75 average megawatts (aMW) to DSIs at the IP rate. The average IP–18 rate in the Initial Proposal is $42.82/MWh, an increase of 2.1 percent over the IP–16 rate.

Firm Power and Surplus Products and Services Rate (FPS–18)—The FPS rate schedule is applicable to sales of various surplus power products and surplus transmission capacity for use inside and outside the Pacific Northwest. The rates for these products are negotiated between BPA and the purchasers. The FPS–18 rate schedule also includes rates for customers with non-Federal resources; the Unanticipated Load Service rate; rates for other capacity, energy, and scheduling products and services; and rates for reserve services for use outside the BPA balancing authority area.

B. Summary of the Transmission Rate Proposal

BPA is proposing an overall 1.1 percent increase in transmission rates for the two-year rate period, or 0.5 percent on an average annual basis. BPA is proposing four rates for the use of its Network segment, four rates for use of intertie segments, and several other rates for various purposes. The four rates for use of the Network segment are:

Formula Power Transmission Rate (FPT–18)—The FPT rate is based on the cost of using specific types of facilities, including a distance component for the use of transmission lines, and is charged on a contract demand basis.

Integration of Resources Rate (IR–18)—The IR rate is a postage stamp, contract demand rate for use of the Network, similar to Point-to-Point (PTP) service (see below), and includes Scheduling, System Control, and Dispatch Service.

Network Integration Transmission Rate (NT–18)—The NT rate applies to customers taking network integration service under BPA's OATT and allows customers to flexibly serve their retail load.

Point-to-Point Rate (PTP–18)—The PTP rate is a contract demand rate that applies to customers taking Point-to-Point service on BPA's network facilities under the OATT. It provides customers with flexible service from identified Points of Receipt to identified Points of Delivery. There are separate PTP rates for long-term firm service, daily firm and non-firm service, and hourly firm and non-firm service.

BPA is proposing four rates for intertie use:

The Southern Intertie Rate (IS–18) is a contract demand rate that applies to customers taking Point-to-Point service under BPA's OATT on the Southern Intertie. BPA is proposing to recognize a reduction in the number of high demand hours which results in a 225 percent increase in the Southern Intertie hourly rate.

The Montana Intertie Rate (IM–18) applies to customers taking Point-to-Point service on the Eastern Intertie.

The Townsend-Garrison Transmission Rate (TGT–18) is a rate for firm service over BPA's section of the Montana Intertie and is available to parties to the Montana Intertie Agreement.

The Eastern Intertie Rate (IE–18) is a rate for non-firm service on the portion of the Eastern Intertie capacity that exceeds BPA's firm transmission rights and is available to parties to the Montana Intertie Agreement.

Other proposed transmission rates are:

The Use-of-Facilities Rate (UFT–18) establishes a formula rate for the use of a specific facility based on the annual cost of that facility.

The Advance Funding Rate (AF–18) allows BPA to collect the capital and related costs of specific facilities through an advance-funding mechanism.

The Scheduling, System Control, and Dispatch Service Rate and the Reactive Supply and Voltage Control from Generation Sources Service Rate are required ancillary services for transmission service on the Network, the Southern Intertie, and the Montana Intertie.

The WECC and Peak rates (PW–18) are rates for costs assessed to BPA to cover WECC and Peak reliability functions.

The Oversupply Rate (OS–18) recovers the costs BPA incurs to displace generation under the Oversupply Management Protocol, Attachment P to BPA's OATT.

Other charges that may apply include a Delivery Charge for the use of low-voltage delivery substations; a Reservation Fee for customers that postpone their service commencement dates; incremental rates for transmission requests that require new facilities; a penalty charge for failure to comply with dispatch, curtailment, redispatch, or load shedding orders; and an Unauthorized Increase Charge for customers whose use exceeds their contracted amounts.

C. Ancillary Service and Control Area Service Rates

Beginning in January 2016, BPA held rate case workshops and solicited stakeholder comments concerning generation inputs issues that form the foundation of most ancillary service and control area service rates. Starting in the summer of 2016, BPA and stakeholders developed a settlement agreement that would set the rates for most ancillary and control area services, including the Variable Energy Resource Balancing Service (VERBS) rates for wind and solar resources, the Dispatchable Energy Resource Balancing Service (DERBS) rate, the two Operating Reserves rates, and the Regulation and Frequency Response rate. The settlement agreement also provides for other limited changes to the rate schedules, as well as BPA's agreement to conduct certain analytical work associated with the future integration of solar generation into BPA's Balancing Authority Area.

BPA asked all entities that intended to be parties to the BP–18 rate proceeding to either sign the agreement or declare their intention to contest the agreement by October 5, 2016. By that deadline, 20 parties signed or agreed not to contest the settlement agreement. No party declared an intent to contest the agreement.

BPA will file the BP–18 generation inputs settlement agreement as part of the BP–18 Initial Proposal. Parties will be given an opportunity to contest the agreement pursuant to a timeline established by the Hearing Officer.

D. Financial Reserves Policy

In March 2016 BPA began public workshops to discuss establishing a financial reserves policy to guide management of the level of financial reserves available for risk (financial reserves) for BPA as a whole and for Power Services and Transmission Services separately. BPA received customer comment and feedback and used it to develop a financial reserves policy that will be filed as part of the BP–18 Initial Proposal.

The financial reserves policy is intended to provide a consistent, transparent, and financially prudent method for determining target financial

reserves levels and upper and lower financial reserves thresholds for Power Services, Transmission Services, and BPA as a whole. The policy also describes the actions BPA may take in response to financial reserves levels that either fall below a lower threshold or exceed an upper threshold.

E. Risk Mitigation Tools

BPA uses risk mitigation tools to buffer against poor financial performance over the rate period to protect the agency's solvency and strong credit rating. The main financial risk mitigation tool BPA relies upon is financial liquidity, which consists of financial reserves and a short-term liquidity facility with the U.S. Treasury.

1. Power Risk Mitigation Tools

For Power Services, BPA proposes to use financial reserves attributed to Power Services and the short-term liquidity facility as primary risk mitigation tools. In addition, BPA proposes to include two rate adjustment mechanisms in the power rate schedules (and in certain ancillary and control area services rate schedules) that may adjust rates in the event Power Service's financial reserves fall below or exceed certain thresholds. The Cost Recovery Adjustment Clause (CRAC) will adjust rates upward to generate additional cash within the rate period if financial reserves attributed to Power Services fall below a defined lower threshold. BPA is proposing to replace the current Dividend Distribution Clause with a provision that expands the Administrator's options for using financial reserves attributed to Power Services when Power Services financial reserves and agency financial reserves are above established thresholds. When available liquidity and the CRAC are insufficient to meet the Power Services Treasury Payment Probability (TPP) standard of at least 95 percent, BPA includes Planned Net Revenues for Risk (PNRR) in Power rates. The TPP is the probability of BPA making its Treasury payments on time and in full each year of the two-year rate period.

In the Initial Proposal, BPA proposes to include no PNRR and to cap the maximum revenue recoverable through the Power CRAC at $300 million per year. BPA also proposes to continue the National Marine Fisheries Service FCRPS Biological Opinion Adjustment (NFB Adjustment) and the Emergency NFB Surcharge, given the continuation of litigation regarding the Biological Opinion.

2. Transmission Risk Mitigation Tools

BPA proposes to use financial reserves attributed to Transmission Services as the primary risk mitigation tool. BPA also proposes to include provisions for two rate adjustments in the Transmission rate schedules similar to those in the Power rate schedules: (1) The CRAC, and (2) an adjustment that provides options for using financial reserves attributed to Transmission Services when Transmission Services financial reserves and agency financial reserves are above established thresholds. When available liquidity and the CRAC are insufficient for Transmission Services to meet the TPP standard, BPA includes PNRR in Transmission rates. In the Initial Proposal, BPA proposes to include no PNRR and to cap the maximum revenue recoverable through the Transmission CRAC at $100 million per year.

Part V—Proposed BP–18 Rate Schedules

BPA's proposed BP–18 Power Rate Schedules and Transmission Rate Schedules are a part of this notice and are available for viewing and downloading on BPA's Web site at *http://www.bpa.gov/goto/BP18.*

Issued this 1st day of November, 2016.

Elliot E. Mainzer,

Administrator and Chief Executive Officer.

[FR Doc. 2016–27181 Filed 11–9–16; 8:45 am]

BILLING CODE 6450–01–P

DEPARTMENT OF ENERGY

[FE Docket No. 16–110–LNG]

Lake Charles Exports, LLC; Application for Long-Term, Multi-Contract Authorization To Export Liquefied Natural Gas to Non-Free Trade Agreement Nations

AGENCY: Office of Fossil Energy, DOE.

ACTION: Notice of application.

SUMMARY: The Office of Fossil Energy (FE) of the Department of Energy (DOE) gives notice of receipt of an application (Application), filed on August 15, 2016, by Lake Charles Exports, LLC (LCE), requesting long-term, multi-contract authorization to export domestically produced liquefied natural gas (LNG), in a volume equivalent to 121 billion cubic feet per year (Bcf/yr) of natural gas (0.33 Bcf per day). LCE seeks authorization to export the LNG by vessel from the existing Lake Charles Terminal located in Lake Charles, Calcasieu Parish, Louisiana.[1] LCE requests authorization to export this LNG to any country with which the United States does not have a free trade agreement (FTA) requiring national treatment for trade in natural gas, and with which trade is not prohibited by U.S. law or policy (non-FTA countries).[2] The requested export volume (121 Bcf/yr) is incremental and therefore would be additive to the volume of LNG previously authorized for export from the Lake Charles Terminal to non-FTA countries in DOE/FE Order No. 3324–A (730 Bcf/yr).[3] LCE states that, through this request, it seeks to align its authorized LNG export volumes for non-FTA countries with the maximum liquefaction production capacity of the Lake Charles Terminal, as approved by the Federal Energy Regulatory Commission. LCE requests the authorization for a 20-year term to commence on the earlier of the date of first export or seven years from the date the requested authorization is issued. LCE seeks to export this LNG on its own behalf and as agent for other entities who hold title to the LNG at the time of export. The Application was filed under section 3 of the Natural Gas Act (NGA). Additional details can be found in LCE's Application, posted on the DOE/FE Web site at: *http://www.energy.gov/fe/lake-charles-exports-llc-fe-dkt-16-110-lng-export-fta-nftas.*

Protests, motions to intervene, notices of intervention, and written comments are invited.

DATES: Protests, motions to intervene or notices of intervention, as applicable, requests for additional procedures, and written comments are to be filed using procedures detailed in the Public Comment Procedures section no later than 4:30 p.m., Eastern time, January 9, 2017.

ADDRESSES:

Electronic Filing by email: fergas@hq.doe.gov.

Regular Mail: U.S. Department of Energy (FE–34), Office of Regulation

[1] Lake Charles LNG Company, LLC, owns and operates the Lake Charles Terminal. LCE will own the proposed liquefaction facility and hold the requested LNG export authorization. App. at 2.

[2] In the Application, LCE also requests authorization to export the same volume of LNG to any nation that currently has, or in the future may enter into, a FTA requiring national treatment for trade in natural gas, and with which trade is not prohibited by U.S. law or policy (FTA countries). DOE/FE will review that request for a FTA export authorization separately pursuant to NGA § 3(c), 15 U.S.C. 717b(c). The proposed export volumes for FTA and non-FTA countries are not additive.

[3] App. at 2; *see Lake Charles Exports, LLC,* DOE/FE Order No. 3324–A, FE Docket No. 11–59–LNG, Final Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from the Lake Charles Terminal in Calcasieu Parish, Louisiana, to Non-Free Trade Agreement Nations (July 29, 2016).

and International Engagement, Office of Fossil Energy, P.O. Box 44375, Washington, DC 20026–4375.

Hand Delivery or Private Delivery Services (e.g., FedEx, UPS, etc.): U.S. Department of Energy (FE–34), Office of Regulation and International Engagement, Office of Fossil Energy, Forrestal Building, Room 3E–042, 1000 Independence Avenue SW., Washington, DC 20585.

FOR FURTHER INFORMATION CONTACT:

Kyle W. Moorman or Larine Moore, U.S. Department of Energy (FE–34), Office of Regulation and International Engagement, Office of Fossil Energy, Forrestal Building, Room 3E–042, 1000 Independence Avenue SW., Washington, DC 20585, (202) 586–7970; (202) 586–9578.

Cassandra Bernstein, U.S. Department of Energy (GC–76), Office of the Assistant General Counsel for Electricity and Fossil Energy, Forrestal Building, 1000 Independence Avenue SW., Washington, DC 20585, (202) 586–9793.

SUPPLEMENTARY INFORMATION:

DOE/FE Evaluation

The Application will be reviewed pursuant to section 3(a) of the NGA, 15 U.S.C. 717b(a), and DOE will consider any issues required by law or policy. To the extent determined to be relevant, these issues will include the domestic need for the natural gas proposed to be exported, the adequacy of domestic natural gas supply, and U.S. energy security. DOE may also consider other factors bearing on the public interest, including the impact of the proposed exports on the U.S. economy, international considerations, and whether the authorization is consistent with DOE's policy of promoting competition in the marketplace by allowing commercial parties to freely negotiate their own trade arrangements. As part of this analysis, DOE will consider the following two studies examining the cumulative impacts of exporting domestically produced LNG:

• *Effect of Increased Levels of Liquefied Natural Gas Exports on U.S. Energy Markets,* conducted by the U.S. Energy Information Administration upon DOE's request (''2014 EIA LNG Export Study'');[4] and

• *The Macroeconomic Impact of Increasing U.S. LNG Exports,* conducted jointly by the Center for Energy Studies at Rice University's Baker Institute for Public Policy and Oxford Economics, on behalf of DOE (''2015 LNG Export Study'').[5]

Additionally, DOE will consider the following environmental documents:

• *Addendum to Environmental Review Documents Concerning Exports of Natural Gas from the United States,* 79 FR 48132 (Aug. 15, 2014);[6] and

• *Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from the United States,* 79 FR 32260 (June 4, 2014).[7]

Parties that may oppose this Application should address these issues in their comments and/or protests, as well as other issues deemed relevant to the Application.

The National Environmental Policy Act (NEPA), 42 U.S.C. 4321 *et seq.,* requires DOE to give appropriate consideration to the environmental effects of its proposed decisions. No final decision will be issued in this proceeding until DOE has met its environmental responsibilities.

Public Comment Procedures

In response to this Notice, any person may file a protest, comments, or a motion to intervene or notice of intervention, as applicable. Due to the complexity of the issues raised by the Applicant, interested persons will be provided 60 days from the date of publication of this Notice in which to submit comments, protests, motions to intervene, or notices of intervention.

Any person wishing to become a party to the proceeding must file a motion to intervene or notice of intervention. The filing of comments or a protest with respect to the Application will not serve to make the commenter or protestant a party to the proceeding, although protests and comments received from persons who are not parties will be considered in determining the appropriate action to be taken on the Application. All protests, comments, motions to intervene, or notices of intervention must meet the requirements specified by the regulations in 10 CFR part 590.

Filings may be submitted using one of the following methods: (1) Emailing the filing to *fergas@hq.doe.gov,* with FE Docket No. 16–110–LNG in the title line; (2) mailing an original and three paper copies of the filing to the Office of Regulation and International Engagement at the address listed in **ADDRESSES**; or (3) hand delivering an original and three paper copies of the filing to the Office of Regulation and International Engagement at the address listed in **ADDRESSES.** All filings must include a reference to FE Docket No. 16–110–LNG. PLEASE NOTE: If submitting a filing via email, please include all related documents and attachments (*e.g.,* exhibits) in the original email correspondence. Please do not include any active hyperlinks or password protection in any of the documents or attachments related to the filing. All electronic filings submitted to DOE must follow these guidelines to ensure that all documents are filed in a timely manner. Any hardcopy filing submitted greater in length than fifty (50) pages must also include, at the time of the filing, a digital copy on disk of the entire submission.

A decisional record on the Application will be developed through responses to this notice by parties, including the parties' written comments and replies thereto. Additional procedures will be used as necessary to achieve a complete understanding of the facts and issues. If an additional procedure is scheduled, notice will be provided to all parties. If no party requests additional procedures, a final Opinion and Order may be issued based on the official record, including the Application and responses filed by parties pursuant to this notice, in accordance with 10 CFR 590.316.

The Application is available for inspection and copying in the Office of Regulation and International Engagement docket room, Room 3E–042, 1000 Independence Avenue SW., Washington, DC 20585. The docket room is open between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday, except Federal holidays.

The Application and any filed protests, motions to intervene or notice of interventions, and comments will also be available electronically at: *http://energy.gov/fe/lake-charles-exports-llc-fe-dkt-16-110-lng-export-fta-nftas.*

Issued in Washington, DC, on November 4, 2016.

John A. Anderson,

Director, Office of Regulation and International Engagement. Office of Oil and Natural Gas

[FR Doc. 2016–27180 Filed 11–9–16; 8:45 am]

BILLING CODE 6450–01–P

[4] The 2014 EIA LNG Export Study, published on Oct. 29, 2014, is available at: *https://www.eia.gov/analysis/requests/fe/.*

[5] The 2015 LNG Export Study, published on Oct. 29, 2015, is available at: *http://energy.gov/sites/prod/files/2015/12/f27/20151113_macro_impact_of_lng_exports_0.pdf.*

[6] The Addendum and related documents are available at: *http://energy.gov/fe/addendum-environmental-review-documents-concerning-exports-natural-gas-united-states.*

[7] The Life Cycle Greenhouse Gas Report is available at: *http://energy.gov/fe/life-cycle-greenhouse-gas-perspective-exporting-liquefied-natural-gas-united-states.*

DEPARTMENT OF ENERGY

[FE Docket No. 16–109–LNG]

Lake Charles LNG Export Company, LLC; Application for Long-Term, Multi-Contract Authorization To Export Liquefied Natural Gas to Non-Free Trade Agreement Nations

AGENCY: Office of Fossil Energy, DOE.

ACTION: Notice of application.

SUMMARY: The Office of Fossil Energy (FE) of the Department of Energy (DOE) gives notice of receipt of an application (Application), filed on August 12, 2016, by Lake Charles LNG Export Company, LLC (Lake Charles LNG Export), requesting long-term, multi-contract authorization to export domestically produced liquefied natural gas (LNG), in a volume equivalent to 121 billion cubic feet per year (Bcf/yr) of natural gas (0.33 Bcf per day). Protests, motions to intervene, notices of intervention, and written comments are invited.

DATES: Protests, motions to intervene or notices of intervention, as applicable, requests for additional procedures, and written comments are to be filed using procedures detailed in the Public Comment Procedures section no later than 4:30 p.m., Eastern time, January 9, 2017.

ADDRESSES:

Electronic Filing by email: fergas@hq.doe.gov.

Regular Mail

U.S. Department of Energy (FE–34), Office of Regulation and International Engagement, Office of Fossil Energy, P.O. Box 44375, Washington, DC 20026–4375.

Hand Delivery or Private Delivery Services (e.g., FedEx, UPS, etc.)

U.S. Department of Energy (FE–34), Office of Regulation and International Engagement, Office of Fossil Energy, Forrestal Building, Room 3E–042, 1000 Independence Avenue SW., Washington, DC 20585.

FOR FURTHER INFORMATION CONTACT:

Kyle W. Moorman or Larine Moore, U.S. Department of Energy (FE–34), Office of Regulation and International Engagement, Office of Fossil Energy, Forrestal Building, Room 3E–042, 1000 Independence Avenue SW., Washington, DC 20585, (202) 586–7970; (202) 586–9578.

Cassandra Bernstein, U.S. Department of Energy (GC–76), Office of the Assistant General Counsel for, Electricity and Fossil Energy, Forrestal Building, 1000 Independence Avenue SW., Washington, DC 20585, (202) 586–9793.

SUPPLEMENTARY INFORMATION: Lake Charles LNG Export seeks authorization to export the LNG by vessel from the existing Lake Charles Liquefaction Terminal (Lake Charles Terminal) located in Lake Charles, Calcasieu Parish, Louisiana.[1] Lake Charles LNG Export requests authorization to export this LNG to any country with which the United States does not have a free trade agreement (FTA) requiring national treatment for trade in natural gas, and with which trade is not prohibited by U.S. law or policy (non-FTA countries).[2] Lake Charles LNG Export states that the requested export volume (121 Bcf/yr) is incremental and therefore additive to the volume of LNG previously authorized for export from the Lake Charles Terminal to non-FTA countries in DOE/FE Order No. 3868 (730 Bcf/yr).[3] Lake Charles LNG Export further states that, through this request, it seeks to align its authorized LNG export volumes for non-FTA countries with the maximum liquefaction production capacity of the Lake Charles Terminal, as approved by the Federal Energy Regulatory Commission. Lake Charles LNG Export requests the authorization for a 20-year term to commence on the earlier of the date of first export or seven years from the date the requested authorization is issued. Lake Charles LNG Export seeks to export this LNG on its own behalf and as agent for other entities who hold title to the LNG at the time of export. The Application was filed under section 3 of the Natural Gas Act (NGA). Additional details can be found in Lake Charles LNG Export's Application, posted on the DOE/FE Web site at: *http://www.energy.gov/fe/lake-charles-lng-export-company-llc-fe-docket-16–109-lng-export-fta-and-nftas.*

[1] Lake Charles LNG Export states that its affiliate, Lake Charles LNG Company, LLC, owns and operates the Lake Charles Terminal. Lake Charles LNG Export states that it will own the proposed liquefaction facility and hold the requested LNG export authorization.

[2] In the Application, Lake Charles LNG Export also requests authorization to export LNG to any nation that currently has, or in the future may enter into, a FTA requiring national treatment for trade in natural gas, and with which trade is not prohibited by U.S. law or policy (FTA countries). DOE/FE will review that request for a FTA export authorization separately pursuant to NGA § 3(c), 15 U.S.C. 717b(c). The proposed export volumes for FTA and non-FTA countries are not additive.

[3] *Lake Charles LNG Export Company, LLC,* DOE/FE Order No. 3868, FE Docket No. 13–04–LNG, Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from the Lake Charles Terminal in Calcasieu Parish, Louisiana, to Non-Free Trade Agreement Nations (July 29, 2016).

DOE/FE Evaluation

The Application will be reviewed pursuant to section 3(a) of the NGA, 15 U.S.C. 717b(a), and DOE will consider any issues required by law or policy. To the extent determined to be relevant, these issues will include the domestic need for the natural gas proposed to be exported, the adequacy of domestic natural gas supply, and U.S. energy security. DOE may also consider other factors bearing on the public interest, including the impact of the proposed exports on the U.S. economy, international considerations, and whether the authorization is consistent with DOE's policy of promoting competition in the marketplace by allowing commercial parties to freely negotiate their own trade arrangements. As part of this analysis, DOE will consider the following two studies examining the cumulative impacts of exporting domestically produced LNG:

- *Effect of Increased Levels of Liquefied Natural Gas Exports on U.S. Energy Markets,* conducted by the U.S. Energy Information Administration upon DOE's request (2014 EIA LNG Export Study);[4] and
- *The Macroeconomic Impact of Increasing U.S. LNG Exports,* conducted jointly by the Center for Energy Studies at Rice University's Baker Institute for Public Policy and Oxford Economics, on behalf of DOE (2015 LNG Export Study).[5]

Additionally, DOE will consider the following environmental documents:

- *Addendum to Environmental Review Documents Concerning Exports of Natural Gas From the United States, 79 FR 48132 (Aug. 15, 2014);*[6] and
- *Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from the United States,* 79 FR 32260 (June 4, 2014).[7]

Parties that may oppose this Application should address these issues in their comments and/or protests, as well as other issues deemed relevant to the Application.

The National Environmental Policy Act (NEPA), 42 U.S.C. 4321 *et seq.,*

[4] The 2014 EIA LNG Export Study, published on Oct. 29, 2014, is available at: *https://www.eia.gov/analysis/requests/fe/.*

[5] The 2015 LNG Export Study, dated Oct. 29, 2015, is available at: *http://energy.gov/sites/prod/files/2015/12/f27/20151113_macro_impact_of_lng_exports_0.pdf.*

[6] The Addendum and related documents are available at: *http://energy.gov/fe/addendum-environmental-review-documents-concerning-exports-natural-gas-united-states.*

[7] The Life Cycle Greenhouse Gas Report is available at: *http://energy.gov/fe/life-cycle-greenhouse-gas-perspective-exporting-liquefied-natural-gas-united-states.*

requires DOE to give appropriate consideration to the environmental effects of its proposed decisions. No final decision will be issued in this proceeding until DOE has met its environmental responsibilities.

Public Comment Procedures

In response to this Notice, any person may file a protest, comments, or a motion to intervene or notice of intervention, as applicable. Due to the complexity of the issues raised by the Applicant, interested persons will be provided 60 days from the date of publication of this Notice in which to submit comments, protests, motions to intervene, or notices of intervention.

Any person wishing to become a party to the proceeding must file a motion to intervene or notice of intervention. The filing of comments or a protest with respect to the Application will not serve to make the commenter or protestant a party to the proceeding, although protests and comments received from persons who are not parties will be considered in determining the appropriate action to be taken on the Application. All protests, comments, motions to intervene, or notices of intervention must meet the requirements specified by the regulations in 10 CFR part 590.

Filings may be submitted using one of the following methods: (1) Emailing the filing to *fergas@hq.doe.gov,* with FE Docket No. 16–109–LNG in the title line; (2) mailing an original and three paper copies of the filing to the Office of Regulation and International Engagement at the address listed in **ADDRESSES**; or (3) hand delivering an original and three paper copies of the filing to the Office of Regulation and International Engagement at the address listed in **ADDRESSES**. All filings must include a reference to FE Docket No. 16–109–LNG. Please note: If submitting a filing via email, please include all related documents and attachments (*e.g.,* exhibits) in the original email correspondence. Please do not include any active hyperlinks or password protection in any of the documents or attachments related to the filing. All electronic filings submitted to DOE must follow these guidelines to ensure that all documents are filed in a timely manner. Any hardcopy filing submitted greater in length than 50 pages must also include, at the time of the filing, a digital copy on disk of the entire submission.

A decisional record on the Application will be developed through responses to this notice by parties, including the parties' written comments and replies thereto. Additional procedures will be used as necessary to achieve a complete understanding of the facts and issues. If an additional procedure is scheduled, notice will be provided to all parties. If no party requests additional procedures, a final Opinion and Order may be issued based on the official record, including the Application and responses filed by parties pursuant to this notice, in accordance with 10 CFR 590.316.

The Application is available for inspection and copying in the Office of Regulation and International Engagement docket room, Room 3E–042, 1000 Independence Avenue SW., Washington, DC 20585. The docket room is open between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday, except Federal holidays.

The Application and any filed protests, motions to intervene or notice of interventions, and comments will also be available electronically by going to the following DOE/FE Web address: *http://energy.gov/fe/lake-charles-lng-export-company-llc-fe-docket-16-109-lng-export-fta-and-nftas.*

Issued in Washington, DC, on November 4, 2016.

John A. Anderson,

Director, Office of Regulation and International Engagement, Office of Oil and Natural Gas.

[FR Doc. 2016–27175 Filed 11–9–16; 8:45 am]

BILLING CODE 6450–01–P

DEPARTMENT OF ENERGY

U.S. Energy Information Administration

Agency Information Collection Activities: Proposed Collection; Comment Request; Generic Clearance for the Collection of Qualitative Feedback on Agency Service Delivery

AGENCY: U.S. Energy Information Administration (EIA), Department of Energy.

ACTION: 30-Day Notice of Submission of Information Collection Approval From 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, EIA has submitted a Generic Information Collection Request (Generic ICR): ''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 December 12, 2016.

ADDRESSES: Written comments may be submitted to:

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

Jacob Bournazian, Energy Information Administration, 1000 Independence Avenue SW., Washington, DC 20585, or by fax at 202–586–0552, or by email at *jacob.bournazian@eia.gov*.

FOR FURTHER INFORMATION CONTACT: Requests for additional information should be directed to Jacob Bournazian, U.S. Energy Information Administration, 1000 Independence Avenue SW., Washington, DC 20585, phone: 202–586–5562, email: *jacob.bournazian@eia.gov*.

SUPPLEMENTARY INFORMATION:

OMB Number: 1905–0210.

Title: Generic Clearance for the Collection of Qualitative Feedback on Agency Service Delivery.

Abstract: The proposed information collection activity provides a means to collect qualitative customer and stakeholder feedback in an efficient, timely manner, in accordance with the Administration's commitment to improving service delivery.

Qualitative feedback means data that provide 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. This feedback also provides an early warning of issues with service, or focuses attention on areas where communication, training or changes in operations might improve the accuracy of data reported on survey instruments or the 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 provides useful information, but it does not yield data that can be generalized to the overall population. This type of 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. Depending on the degree of influence the results are likely to have, such collections may still be eligible for submission for other generic mechanisms that are designed to yield quantitative results.

The 60-day notice was published in the **Federal Register** of August 1, 2016 at 81 FR 50492 and is available at *https://www.gpo.gov/fdsys/pkg/FR-2016-08-01/pdf/2016-18120.pdf*. EIA proposes to increase the burden hour estimate shown in the 60-day notice from 15,000 hours to 15,750 hours (5,250 hours annually) to reflect current program needs. Below we provide EIA's projected average estimates for the next three years:

Type of Review: Revision of a currently approved collection.

Affected Public: Individuals and Households, Businesses and Organizations, State, Local or Tribal Government.

Average Expected Annual Number of Activities: 10.

Average Number of Respondents per Activity: 5,000.

Annual Estimated Number of Responses: 50,000.

Frequency of Response: Once per request.

Average Minutes per Response: 6.3.

Annual Burden Hours: 5,250.

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 Office of Management and Budget control number.

Statutory Authority: Executive Order (EO) 13571, Streamlining Service Delivery and Improving Customer Service.

Issued in Washington, DC on November 4, 2016.

Nanda Srinivasan,

Director, Office of Survey Development and Statistical Integration, U.S. Energy Information Administration.

[FR Doc. 2016–27173 Filed 11–9–16; 8:45 am]

BILLING CODE 6450–01–P

ENVIRONMENTAL PROTECTION AGENCY

[EPA–HQ–ORD–2015–0365; FRL–9955–09–ORD]

Board of Scientific Counselors (BOSC) Air, Climate, and Energy Subcommittee Meeting—December 2016

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of meeting.

SUMMARY: Pursuant to the Federal Advisory Committee Act, Public Law 92–463, the U.S. Environmental Protection Agency (EPA), Office of Research and Development (ORD), gives notice of a meeting (via conference call) of the Board of Scientific Counselors (BOSC) Air, Climate, and Energy Subcommittee.

DATES: The conference call will be held on Friday, December 2, 2016, from 1:30 p.m. to 3:30 p.m., Eastern Time. These times are approximate; the conference call may adjourn early if all business is finished or may adjourn late if additional time is needed. Written comments and requests for the draft agenda or for making oral presentations at the meeting will be accepted through Thursday, December 1, 2016.

ADDRESSES: Participation in the conference call will be by teleconference only; meeting rooms will not be used. Members of the public may obtain the call-in number and access code for the call from Tim Benner, the Designated Federal Officer, via any of the contact methods listed in the **FOR FURTHER INFORMATION CONTACT** section below.

Submitting Comments: Submit your comments, identified by Docket ID No. EPA–HQ–ORD–2015–0365, by one of the following methods:

- *www.regulations.gov:* Follow the on-line instructions for submitting comments.
- *Email:* Send comments by electronic mail (email) to: *ORD.Docket@epa.gov,* Attention Docket ID No. EPA–HQ–ORD–2015–0365.
- *Fax:* Fax comments to: (202) 566–0224, Attention Docket ID No. EPA–HQ–ORD–2015–0365.
- *Mail:* Send comments by mail to: Board of Scientific Counselors (BOSC) Air, Climate, and Energy Subcommittee Docket, Mail Code: 2822T, 1301 Constitution Ave. NW., Washington, DC 20004, Attention Docket ID No. EPA–HQ–ORD–2015–0365.
- *Hand Delivery or Courier:* Deliver comments to: EPA Docket Center (EPA/DC), Room 3334, William Jefferson Clinton West Building, 1301 Constitution Ave. NW., Washington, DC, Attention Docket ID No. EPA–HQ–ORD–2015–0365. Note: this is not a mailing address. 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–ORD–2015–0365. The 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 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 *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. For additional information about the EPA's public docket visit the EPA Docket Center homepage at *http://www.epa.gov/dockets/.*

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 in *www.regulations.gov* or in hard copy at the Board of Scientific Counselors (BOSC) Air, Climate, and Energy Subcommittee Docket, EPA/DC, William Jefferson Clinton 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 ORD Docket is (202) 566–1752.

FOR FURTHER INFORMATION CONTACT: The Designated Federal Officer via mail at: Tim Benner, Mail Code 8104R, Office of Science Policy, Office of Research and Development, U.S. Environmental Protection Agency, 1200 Pennsylvania Ave. NW., Washington, DC 20460; via phone/voice mail at: (202) 564–6769; via fax at: (202) 565–2911; or via email at: *benner.tim@epa.gov.*

SUPPLEMENTARY INFORMATION:

General Information: The conference call is open to the public. Any member of the public interested in receiving a draft agenda, attending the conference call, or making a presentation during the conference call may contact Tim Benner, the Designated Federal Officer, via any of the contact methods listed in the **FOR FURTHER INFORMATION CONTACT** section above. In general, each individual making an oral presentation will be limited to a total of three minutes. Proposed agenda items for the meeting include, but are not limited to, the following: Presentation and discussion of the subcommittee's draft responses to the charge questions and approval of the final draft letter report prior to its submission to the BOSC Executive Committee.

Information on Services for Individuals with Disabilities: For information on access or services for individuals with disabilities, please contact Tim Benner at (202) 564–6769 or *benner.tim@epa.gov.* To request accommodation of a disability, please contact Tim Benner, preferably at least ten days prior to the conference call, to give the EPA as much time as possible to process your request.

Dated: November 3, 2016.

Fred S. Hauchman,

Director, Office of Science Policy.

[FR Doc. 2016–27187 Filed 11–9–16; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[EPA–HQ–OPP–2015–0021; FRL–9954–07]

Pesticide Product Registration; Receipt of Applications for New Uses

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: EPA has received applications to register new uses for pesticide products containing currently registered active ingredients. Pursuant to the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), EPA is hereby providing notice of receipt and opportunity to comment on these applications.

DATES: Comments must be received on or before December 12, 2016.

ADDRESSES: Submit your comments, identified by docket identification (ID) number EPA–HQ–OPP–2015–0021 and the file symbol of interest as shown in the body of this document, by one of the following methods:

- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the online instructions for submitting comments. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute.
- *Mail:* OPP Docket, Environmental Protection Agency Docket Center (EPA/DC), (28221T), 1200 Pennsylvania Ave. NW., Washington, DC 20460–0001.
- *Hand Delivery:* To make special arrangements for hand delivery or delivery of boxed information, please follow the instructions at *http://www.epa.gov/dockets/contacts.html.*

Additional instructions on commenting or visiting the docket, along with more information about dockets generally, is available at *http://www.epa.gov/dockets.*

FOR FURTHER INFORMATION CONTACT: Michael L. Goodis, Registration Division (7505P), and Robert McNally, Biopesticides and Pollution Prevention Division (7511P). The mailing address for each contact person is: Office of Pesticide Programs, Environmental Protection Agency, 1200 Pennsylvania Ave. NW., Washington, DC 20460–0001. As part of the mailing address, include the contact person's name, division, and mail code. The division to contact is listed at the end of each application summary.

SUPPLEMENTARY INFORMATION:

I. General Information

A. Does this action apply to me?

You may be potentially affected by this action if you are an agricultural producer, food manufacturer, or pesticide manufacturer. The following list of North American Industrial Classification System (NAICS) codes is not intended to be exhaustive, but rather provides a guide to help readers determine whether this document applies to them. Potentially affected entities may include:

- Crop production (NAICS code 111).
- Animal production (NAICS code 112).
- Food manufacturing (NAICS code 311).
- Pesticide manufacturing (NAICS code 32532).

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 preparing and submitting your comments, see the commenting tips at *http://www.epa.gov/dockets/comments.html.*

II. Registration Applications

EPA has received applications to register new uses for pesticide products containing currently registered active ingredients. Pursuant to the provisions of FIFRA section 3(c)(4) (7 U.S.C. 136a(c)(4)), EPA is hereby providing notice of receipt and opportunity to comment on these applications. Notice of receipt of these applications does not imply a decision by the Agency on these applications.

1. EPA Registration Number: 100–1374. *Docket ID number:* EPA–HQ–OPP–2016–0537. *Applicant:* Syngenta Crop Protection, LLC, P.O. Box 18300, Greensboro, NC 27419. *Active ingredient:* Sedaxane. *Product type:* Fungicide. *Proposed use:* Grain, cereal, group 15; Grain, cereal, forage, fodder and straw, group 16 and Peanut (seed treatment). *Contact:* RD.

2. EPA Registration Number: 100–1381. *Docket ID number:* EPA–HQ–OPP–2016–0537. *Applicant:* Syngenta Crop Protection, LLC, P.O. Box 18300, Greensboro, NC 27419. *Active ingredient:* Sedaxane. *Product type:* Fungicide. *Proposed use:* Grain, cereal, group 15; Grain, cereal, forage, fodder

and straw, group 16 and Peanut (seed treatment). *Contact:* RD.

3. EPA Registration Numbers: 100–1571. *Docket ID number:* EPA–HQ–OPP–2016–0049. *Applicant:* Syngenta Crop Protection, LLC, P.O. Box 18300, Greensboro, NC 27419. *Active ingredient:* Oxathiapiprolin. *Product type:* Fungicide. *Proposed use:* Cacao. *Contact:* RD.

4. EPA Registration Numbers: 100–1572. *Docket ID number:* EPA–HQ–OPP–2016–0049. *Applicant:* Syngenta Crop Protection, LLC, P.O. Box 18300, Greensboro, NC 27419. *Active ingredient:* Oxathiapiprolin. *Product type:* Fungicide. *Proposed use:* Cacao. *Contact:* RD.

5. EPA Registration Number: 264–1077. *Docket ID number:* EPA–HQ–OPP–2016–0541. *Applicant:* Bayer CropScience LP, 2 T.W. Alexander Drive, P.O. Box 12014, Research Triangle Park, NC 27709. *Active ingredient:* Fluopyram. *Product type:* Fungicide. *Proposed use:* Seed treatment use on Corn (seed treatment); Sorghum (seed treatment); Tobacco; and Wheat (seed treatment). *Contact:* RD.

6. EPA Registration Number: 264–1078. *Docket ID number:* EPA–HQ–OPP–2016–0541. *Applicant:* Bayer CropScience LP, 2 T.W. Alexander Drive, P.O. Box 12014, Research Triangle Park, NC 27709. *Active ingredient:* Fluopyram. *Product type:* Fungicide. *Proposed use:* Tobacco. *Contact:* RD.

7. EPA Registration Number: 264–1137. *Docket ID number:* EPA–HQ–OPP–2016–0508. *Applicant:* Bayer CropScience, 2 T.W. Alexander Drive, Research Triangle Park, NC 27709. *Active ingredient:* Fluoxastrobin. *Product type:* Fungicide. *Proposed Use:* Rapeseed subgroup 20A (seed treatment). *Contact:* RD.

8. EPA Registration Number: 264–1167. *Docket ID number:* EPA–HQ–OPP–2016–0541. *Applicant:* Bayer CropScience LP, 2 T.W. Alexander Drive, P.O. Box 12014, Research Triangle Park, NC 27709. *Active ingredient:* Fluopyram. *Product type:* Fungicide. *Proposed use:* Corn, Sorghum and Wheat (seed treatment). *Contact:* RD.

9. EPA Registration Number: 264–1169. *Docket ID number:* EPA–HQ–OPP–2016–0508. *Applicant:* Bayer CropScience, 2 T.W. Alexander Drive, Research Triangle Park, NC 27709. *Active ingredient:* Fluoxastrobin. *Product type:* Fungicide. *Proposed Use:* Rapeseed subgroup 20A (seed treatment). *Contact:* RD.

10. EPA File Symbol: 279–GANR. Docket ID Number: EPA–HQ–OPP–2015–0787. *Applicant:* FMC 2929 Walnut St, Philadelphia, PA 19104. *Active Ingredient:* Pyroxasulfone. *Product Type:* Herbicide. *Proposed Uses:* Dried Shelled Beans and Peas (Crop Subgroup 6C), Flax, and Sunflower subgroup 20B. *Contact:* RD.

11. EPA Registration Number: 352–890. *Docket ID number:* EPA–HQ–OPP–2016–0049. *Applicant:* DuPont Crop Protection, P.O. Box 30, Newark, DE 19714. *Active ingredient:* Oxathiapiprolin. *Product type:* Fungicide. *Proposed use:* Cacao. *Contact:* RD.

12. EPA Registration Number: 63588–91. Docket ID Number: EPA–HQ–OPP–2015–0787. *Applicant: K–I Chemical USA. Inc., 11* Martine Ave., Suite 970 White Plains, NY 10606. *Active Ingredient:* Pyroxasulfone. *Product Type:* Herbicide. *Proposed Uses:* Dried Shelled Beans and Peas (Crop Subgroup 6C), Flax, Peanut, Peanut Hay, and Sunflower subgroup 20B. *Contact:* RD.

13. EPA Registration Number: 63588–92. Docket ID Number: EPA–HQ–OPP–2015–0787. *Applicant: K–I Chemical USA. Inc., 11* Martine Ave., Suite 970 White Plains, NY 10606. *Active Ingredient:* Pyroxasulfone. *Product Type:* Herbicide. *Proposed Uses:* Dried Shelled Beans and Peas (Crop Subgroup 6C), Flax, Peanut, Peanut Hay, and Sunflower subgroup 20B. *Contact:* RD.

14. EPA Registration Number: 70506–173. *Docket ID number:* EPA–HQ–OPP–2016–0536. *Applicant:* United Phosphorus, Inc. c/o Pyxis Regulatory Consulting, Inc., 4110 136th St. CT NW., Gig Harbor, WA 98332. *Active ingredient:* Ziram. *Product type:* Fungicide. *Proposed use:* Filbert (Hazelnut). *Contact:* RD.

15. EPA Registration Number: 70506–179. *Docket ID number:* EPA–HQ–OPP–2016–0536. *Applicant:* United Phosphorus, Inc. c/o Pyxis Regulatory Consulting, Inc., 4110 136th St. CT NW., Gig Harbor, WA 98332. *Active ingredient:* Ziram. *Product type:* Fungicide. *Proposed use:* Filbert (Hazelnut). *Contact:* RD.

16. EPA Registration Number: 71693–2. *Docket ID number:* EPA–HQ–OPP–2016–0567. *Applicant:* Arizona Cotton Research and Protection Council, 3721 E. Wier Ave., Phoenix, AZ 85040. *Active ingredient: Aspergillus flavus* strain AF36. *Product type:* Fungicide. *Proposed use:* Almond and Fig. *Contact:* BPPD.

Authority: 7 U.S.C. 136 *et seq.*

Dated: October 28, 2016.

Rachel C. Holloman,

Acting Director, Registration Division, Office of Pesticide Programs.

[FR Doc. 2016–27192 Filed 11–9–16; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[EPA–HQ–OPP–2015–0021; FRL–9954–05]

Pesticide Product Registration; Receipt of Applications for New Active Ingredients

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: EPA has received applications to register pesticide products containing active ingredients not included in any currently registered pesticide products. Pursuant to the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), EPA is hereby providing notice of receipt and opportunity to comment on these applications.

DATES: Comments must be received on or before December 12, 2016.

ADDRESSES: Submit your comments, identified by docket identification (ID) number EPA–HQ–OPP–2015–0021 and the File Symbol of interest as shown in the body of this document, by one of the following methods:

- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the online instructions for submitting comments. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute.
- *Mail:* OPP Docket, Environmental Protection Agency Docket Center (EPA/DC), (28221T), 1200 Pennsylvania Ave. NW., Washington, DC 20460–0001.
- *Hand Delivery:* To make special arrangements for hand delivery or delivery of boxed information, please follow the instructions at *http://www.epa.gov/dockets/contacts.html.*

Additional instructions on commenting or visiting the docket, along with more information about dockets generally, is available at *http://www.epa.gov/dockets.*

FOR FURTHER INFORMATION CONTACT: Michael L. Goodis, Acting Director, Registration Division (7505P), Office of Pesticide Programs, Environmental Protection Agency, 1200 Pennsylvania Ave. NW., Washington, DC 20460–0001; main telephone number: (703) 305–7090; email address: *RDFRNotices@epa.gov.*

SUPPLEMENTARY INFORMATION:

I. General Information

A. Does this action apply to me?

You may be potentially affected by this action if you are an agricultural producer, food manufacturer, or

pesticide manufacturer. The following list of North American Industrial Classification System (NAICS) codes is not intended to be exhaustive, but rather provides a guide to help readers determine whether this document applies to them. Potentially affected entities may include:

- Crop production (NAICS code 111).
- Animal production (NAICS code 112).
- Food manufacturing (NAICS code 311).
- Pesticide manufacturing (NAICS code 32532).

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 preparing and submitting your comments, see the commenting tips at *http://www.epa.gov/dockets/comments.html.*

II. Registration Applications

EPA has received applications to register pesticide products containing active ingredients not included in any currently registered pesticide products. Pursuant to the provisions of FIFRA section 3(c)(4) (7 U.S.C. 136a(c)(4)), EPA is hereby providing notice of receipt and opportunity to comment on these applications. Notice of receipt of these applications does not imply a decision by the Agency on these applications.

1. EPA Registration Number: 279–GANA. *Docket ID number:* EPA–HQ–OPP–2016–0538. *Applicant:* FMC Agricultural Solutions, 1735 Market Street, Philadelphia, PA 19103. *Active ingredient:* Bixafen. *Product type:* Fungicide. *Proposed use:* Barley; Corn; Oats; Peanut; Potato; Rye; Sorghum; Soybean; Sugar beet; Triticale; Vegetable, root, subgroup 1A; Vegetable, tuberous and corm, subgroup 1C; and Wheat *Contact:* RD.

2. EPA Registration Number: 279–GANE. *Docket ID number:* EPA–HQ–OPP–2016–0538. *Applicant:* FMC Agricultural Solutions, 1735 Market Street, Philadelphia, PA 19103. *Active ingredient:* Bixafen and Iprodione. *Product type:* Fungicide. *Proposed use:* Potato *Contact:* RD.

3. EPA Registration Number: 279–GANG. *Docket ID number:* EPA–HQ–OPP–2016–0538. *Applicant:* FMC Agricultural Solutions, 1735 Market Street, Philadelphia, PA 19103. *Active ingredient:* Bixafen and Flutriafol. *Product type:* Fungicide. *Proposed use:* Corn; Peanut; Sorghum; Soybean; Sugar beet; Triticale; and Wheat *Contact:* RD.

4. EPA Registration Number: 279–GANL. *Docket ID number:* EPA–HQ–OPP–2016–0538. *Applicant:* FMC Agricultural Solutions, 1735 Market Street, Philadelphia, PA 19103. *Active ingredient:* Bixafen and Tebuconazole. *Product type:* Fungicide. *Proposed use:* Barley; Corn; Oats; Peanut; Soybean; and Wheat *Contact:* RD.

5. EPA Registration Number: 279–GANU. *Docket ID number:* EPA–HQ–OPP–2016–0538. *Applicant:* FMC Agricultural Solutions, 1735 Market Street, Philadelphia, PA 19103. *Active ingredient:* Bixafen and Azoxystrobin. *Product type:* Fungicide. *Proposed use:* Barley; Corn; Oats; Peanut; Rye; Soybean; Triticale; Vegetable, root, subgroup 1A; Vegetable, tuberous and corm, subgroup 1C; and and Wheat *Contact:* RD.

Authority: 7 U.S.C. 136 *et seq.*

Dated: October 28, 2016.

Rachael Holloman,

Acting Director, Registration Division, Office of Pesticide Programs.

[FR Doc. 2016–27202 Filed 11–9–16; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[EPA–HQ–OPPT–2013–0677; FRL–9954–24]

Receipt of Information Under the Toxic Substances Control Act

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: EPA is announcing its receipt of information submitted pursuant to a rule, order, or consent agreement issued under the Toxic Substances Control Act (TSCA). As required by TSCA, this document identifies each chemical substance and/or mixture for which information has been received; the uses or intended uses of such chemical substance and/or mixture; and describes the nature of the information received. Each chemical substance and/or mixture related to this announcement is identified in Unit I. under **SUPPLEMENTARY INFORMATION**.

FOR FURTHER INFORMATION CONTACT: *For technical information contact:* John Schaeffer, Chemical Control Division (7405M), Office of Pollution Prevention and Toxics, Environmental Protection Agency, 1200 Pennsylvania Ave. NW., Washington, DC 20460–0001; telephone number: (202) 564–8173; email address: *schaeffer.john@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. Chemical Substances and/or Mixtures

Information received about the following chemical substances and/or mixtures is identified in Unit IV.:

- Ethanedioic acid (CASRN 144–62–7).
- Octamethylcyclotetrasiloxane (D4) (CASRN 556–67–2).
- Phenol, 2,4-bis(1-methyl-1-phenylethyl)-6-[2-(2-nitrophenyl)diazenyl]- (CASRN 70693–50–4).

II. Authority

TSCA section 4(d) (15 U.S.C. 2603(d)) requires EPA to publish a notice in the **Federal Register** reporting the receipt of information submitted pursuant to a rule, order, or consent agreement promulgated under TSCA section 4 (15 U.S.C. 2603).

III. Docket Information

A docket, identified by the docket identification (ID) number EPA–HQ–OPPT–2013–0677, has been established for this **Federal Register** document, which announces the receipt of the information. Upon EPA's completion of its quality assurance review, the information received will be added to the docket identified in Unit IV., which represents the docket used for the TSCA section 4 rule, order, and/or consent agreement. In addition, once completed, EPA reviews of the information received will be added to the same docket. Use the docket ID number provided in Unit IV. to access the information received and any available EPA review.

EPA's dockets are available electronically at *http://www.regulations.gov* or in person at the Office of Pollution Prevention and Toxics Docket (OPPT Docket), Environmental Protection Agency

Docket Center (EPA/DC), West William Jefferson Clinton Bldg., Rm. 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 OPPT Docket is (202) 566–0280. Please review the visitor instructions and additional information about the docket available at *http://www.epa.gov/dockets.*

IV. Information Received

As specified by TSCA section 4(d), this unit identifies the information received by EPA.

A. Ethanedioic acid (CASRN 144–62–7)

1. *Chemical Use(s):* Ethanedioic acid is used as a rust remover; in antirust metal cleaners and coatings; as a flame-proofing and cross-linking agent in cellulose fabrics; as a reducing agent in mordent wool dying; as an acid dye stabilizing agent in nylon; as a scouring agent for cotton printing; and as a dye stripper for wool. Ethanedioic acid is also used for degumming silk; for the separation and recovery of rare earth elements from ore; for bleaching leather and masonry; for cleaning aluminum and wood decks; and as a synthetic intermediate for pharmaceuticals

2. *Applicable Rule, Order, or Consent Agreement:* Chemical testing requirements for second group of high production volume chemicals (HPV2), 40 CFR 799.5087.

3. *Applicable docket ID number:* The information received will be added to docket ID number EPA–HQ–OPPT–2007–0531.

4. *Information Received:* EPA received the following information:

▪ Request for an exemption from testing from Atotech USA Inc.

B. Octamethylcyclotetrasiloxane (D4) (CASRN 556–67–2)

1. *Chemical Use(s):* D4 is used as an intermediate for silicone copolymers and other chemicals. D4 is also used in industrial processing applications as a solvent (which becomes part of a product formulation or mixture), finishing agent, and an adhesive and sealant chemical. It is also used for both consumer and commercial purposes in paints and coatings, and plastic and rubber products and has consumer uses in polishes, sanitation, soaps, detergents, adhesives, and sealants.

2. *Applicable Rule, Order, or Consent Agreement:* Enforceable Consent Agreement for Environmental Testing for Octamethylcyclotetrasiloxane (D4) (CASRN 556–67–2).

3. *Applicable docket ID number:* The information received will be added to docket ID number EPA–HQ–OPPT–2012–0209.

4. *Information Received:* EPA received the following information:

a. Summary of the Quality Assurance Project Plan (QAPP) and Copy of the Field Notebook of the Wichita Kansas Sampling Event (Sampling of Benthic Organisms).

b. Request for a modification to a study plan to provide for the collection of additional quality assurance samples for biosolids and sediment.

C. *Phenol, 2,4-bis(1-methyl-1-phenylethyl)-6-[2-(2-nitrophenyl)diazenyl]-* (*CASRN 70693–50–4*).

1. *Chemical Use(s):* Used in UV absorber or as a light stabilizer for plastics.

2. *Applicable Rule, Order, or Consent Agreement:* Chemical testing requirements for third group of high production volume chemicals (HPV3), 40 CFR 799.5089.

3. *Applicable docket ID number:* The information received will be added to docket ID number EPA–HQ–OPPT–2009–0112.

4. *Information Received:* EPA received the following information:

▪ Physical/Chemical Properties (A1, A2). Melting Point and Boiling Point.

Authority: 15 U.S.C. 2601 *et seq.*

Dated: October 27, 2016.

Maria J. Doa,

Director, Chemical Control Division, Office of Pollution Prevention and Toxics.

[FR Doc. 2016–27190 Filed 11–9–16; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[EPA–HQ–OPPT–2016–0483; FRL–9952–84]

Certain New Chemicals; Receipt and Status Information for August 2016

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: EPA is required under the Toxic Substances Control Act (TSCA) to publish in the **Federal Register** a notice of receipt of a premanufacture notice (PMN); an application for a test marketing exemption (TME), both pending and/or expired; and a periodic status report on any new chemicals under EPA review and the receipt of notices of commencement (NOC) to manufacture those chemicals. This document covers the period from August 1, 2016 to August 31, 2016. This document also corrects the docket number of the previously published second Certain New Chemicals; Receipt and Status Information for June 2016 in the **Federal Register** of October 27, 2016.

DATES: Comments identified by the specific case number provided in this document, must be received on or before December 12, 2016.

ADDRESSES: Submit your comments, identified by docket identification (ID) number EPA–HQ–OPPT–2016–0483, and the specific PMN number or TME number for the chemical related to your comment, by one of the following methods:

• *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the online instructions for submitting comments. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute.

• *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:* To make special arrangements for hand delivery or delivery of boxed information, please follow the instructions at *http://www.epa.gov/dockets/contacts.html.*

Additional instructions on commenting or visiting the docket, along with more information about dockets generally, is available at *http://www.epa.gov/dockets.*

FOR FURTHER INFORMATION CONTACT: *For technical information contact:* Jim Rahai, IMD 7407M, Office of Pollution Prevention and Toxics, Environmental Protection Agency, 1200 Pennsylvania Ave. NW., Washington, DC 20460–0001; telephone number: (202) 564–8593; email address: *rahai.jim@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?

This action is directed to the public in general. As such, the Agency has not attempted to describe the specific entities that this action may apply to. Although others may be affected, this action applies directly to the submitters of the actions addressed in this document.

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 preparing and submitting your comments, see the commenting tips at *http://www.epa.gov/dockets/comments.html.*

II. What action is the agency taking?

This document provides receipt and status reports, which cover the period from August 1, 2016 to August 31, 2016, and consists of the PMNs and TMEs both pending and/or expired, and the NOCs to manufacture a new chemical that the Agency has received under TSCA section 5 during this time period.

III. What is the agency's authority for taking this action?

Under TSCA, 15 U.S.C. 2601 *et seq.,* EPA classifies a chemical substance as either an ''existing'' chemical or a ''new'' chemical. Any chemical substance that is not on EPA's TSCA Inventory is classified as a ''new chemical,'' while those that are on the TSCA Inventory are classified as an ''existing chemical.'' For more information about the TSCA Inventory, please go to: *http://www.epa.gov/opptintr/newchems/pubs/inventory.htm.*

Anyone who plans to manufacture or import a new chemical substance for a non-exempt commercial purpose is required by TSCA section 5 to provide EPA with a PMN, before initiating the activity. Section 5(h)(1) of TSCA authorizes EPA to allow persons, upon application, to manufacture (includes import) or process a new chemical substance, or a chemical substance subject to a significant new use rule (SNUR) issued under TSCA section 5(a), for ''test marketing'' purposes, which is referred to as a test marketing exemption, or TME. For more information about the requirements applicable to a new chemical go to: *http://www.epa.gov/oppt/newchems.*

Under TSCA sections 5(d)(2) and 5(d)(3), EPA is required to publish in the **Federal Register** a notice of receipt of a PMN or an application for a TME and to publish in the **Federal Register** periodic reports on the status of new chemicals under review and the receipt of NOCs to manufacture those chemicals.

IV. Receipt and Status Reports

As used in each of the tables in this unit, (S) indicates that the information in the table is the specific information provided by the submitter, and (G) indicates that the information in the table is generic information because the specific information provided by the submitter was claimed as CBI.

For the 57 PMNs received by EPA during this period, Table 1 provides the following information (to the extent that such information is not claimed as CBI): The EPA case number assigned to the PMN; the date the PMN was received by EPA; the projected end date for EPA's review of the PMN; the submitting manufacturer/importer; the potential uses identified by the manufacturer/importer in the PMN; and the chemical identity.

III. What is the agency's authority for taking this action?

Under TSCA, 15 U.S.C. 2601 *et seq.,* EPA classifies a chemical substance as either an ''existing'' chemical or a ''new'' chemical. Any chemical substance that is not on EPA's TSCA Inventory is classified as a ''new chemical,'' while those that are on the TSCA Inventory are classified as an ''existing chemical.'' For more information about the TSCA Inventory go to: *http://www.epa.gov/opptintr/newchems/pubs/inventory.htm.*

Anyone who plans to manufacture or import a new chemical substance for a non-exempt commercial purpose is required by TSCA section 5 to provide EPA with a notice before initiating the activity. TSCA furthermore prohibits such manufacturing or processing from commencing until EPA has conducted a review of the notice, made an appropriate determination on the notice, and taken such actions as are required in association with that determination (15 U.S.C. 2604(a)(1)(B)(ii)). Section 5(h)(1) of TSCA authorizes EPA to allow persons, upon application, to manufacture (includes import) or process a new chemical substance, or a chemical substance subject to a significant new use rule (SNUR) issued under TSCA section 5(a), for ''test marketing'' purposes, which is referred to as a test marketing exemption, or TME. For more information about the requirements applicable to a new chemical go to: *http://www.epa.gov/oppt/newchems.*

Under TSCA sections 5(d)(2) and 5(d)(3), EPA is required to publish in the **Federal Register** a notice of receipt of a PMN or an application for a TME and to publish in the **Federal Register** periodic reports on the status of new chemicals under review and the receipt of NOCs to manufacture those chemicals.

IV. Receipt and Status Reports

As used in each of the tables in this unit, (S) indicates that the information in the table is the specific information provided by the submitter, and (G) indicates that the information in the table is generic information because the specific information provided by the submitter was claimed as CBI.

For the 57 PMNs received by EPA during this period, the table provides the following information (to the extent that such information is not claimed as CBI): The EPA case number assigned to the PMN; the date the PMN was received by EPA; the projected end date for EPA's review of the PMN; the submitting manufacturer/importer; the potential uses identified by the manufacturer/importer in the PMN; and the chemical identity.

TABLE 1—PMNS RECEIVED FROM AUGUST 1, 2016 TO AUGUST 31, 2016

Case No.	Received date	Projected notice end date	Manufacturer importer	Use	Chemical
P–16–0502	8/1/2016	10/30/2016	CBI	(S) Corrosion inhibitor for penetrating or spray oils.	(S) Undecanoic acid, branched.

TABLE 1—PMNS RECEIVED FROM AUGUST 1, 2016 TO AUGUST 31, 2016—Continued

Case No.	Received date	Projected notice end date	Manufacturer importer	Use	Chemical
P–16–0502	8/1/2016	10/30/2016	CBI	(S) Chemical intermediate for ester production for oil additives and lubricants.	(S) Undecanoic acid, branched.
P–16–0502	8/1/2016	10/30/2016	CBI	(S) Corrosion inhibitor for gear oils	(S) Undecanoic acid, branched.
P–16–0502	8/1/2016	10/30/2016	CBI	(S) Chemical intermediate (neutralized) for use as a corrosion inhibitor.	(S) Undecanoic acid, branched.
P–16–0502	8/1/2016	10/30/2016	CBI	(S) Corrosion inhibitor for hydraulic fluids.	(S) Undecanoic acid, branched.
P–16–0502	8/1/2016	10/30/2016	CBI	(S) Export	(S) Undecanoic acid, branched.
P–16–0503	8/2/2016	10/31/2016	Allnex USA Inc.	(S) Site limited intermediate for production of a deck stain coating resin additive.	(G) Fatty acids, polymers with alkanoic acid, substituted carbomonocycle, alkyl peroxide-initiated.
P–16–0504	8/2/2016	10/31/2016	Colonial Chemical, Inc.	(S) Fire fighting foams	(S) Amides, soya, *N*-[-3(dimethylamino)propyl], *N*-oxides.
P–16–0504	8/2/2016	10/31/2016	Colonial Chemical, Inc.	(S) Household surfactant formulas	(S) Amides, soya, *N*-[-3(dimethylamino)propyl], *N*-oxides.
P–16–0505	8/2/2016	10/31/2016	CBI	(S) Polymeric resin for ultraviolet (uv) curable acrylates.	(S) Poly[oxy(methyl- 1, 2-ethanediyl)] , ?- (1- oxo- 2-propen- 1- yl) - ?- [(1- oxo- 2-propen- 1- yl) oxy].
P–16–0506	8/31/2016	11/29/2016	CBI	(G) Filler	(G) Organosilane modified alumina.
P–16–0507	8/3/2016	11/1/2016	Lamberti USA Inc..	(G) Additive for industrial purposes.	(G) Hydroxy acids, polymer, reaction product with polyethyleneimine.
P–16–0509	8/5/2016	11/3/2016	CBI	(G) For packaging application	(G) Modified evoh.
P–16–0510	8/5/2016	11/3/2016	International Flavors and Fragrances Inc.	(S) The notified polymer functions to reduce malodors. It will be sold to industrial and commercial customers for their incorporation into industrial, commercial, and household consumer products such as floor cleaners, cat litters, fabric refresher sprays, Etc.	(S) Oxirane, 2-methyl-, polymer with oxirane, bis[2-[(1-oxo-2-propen-1-yl)amino]propyl] ether.
P–16–0511	8/15/2016	11/13/2016	CBI	(G) Oilfield additive	(S) Benzenesulfonic acid, 4 - C_{10-13}-sec-alkyl derivs., compds. with ethanolamine.
P–16–0512	8/9/2016	11/7/2016	CBI	(S) Component of a ultraviolet curable printing inks.	(G) Fatty acid dimers, polymer with acrylic acid and pentaerythritol reaction products.
P–16–0513	8/8/2016	11/6/2016	CBI	(S) Intermediate for further reaction.	(G) Alkylphenol.
P–16–0514	8/9/2016	11/7/2016	CBI	(G) Catalyst	(G) Mixed metal oxide.
P–16–0515	8/9/2016	11/7/2016	CBI	(G) Additive	(G) Diamine substituted arylimidazole.
P–16–0516	8/12/2016	11/10/2016	CBI	(S) Intermediate for pesticide manufacture.	(G) Aminohalocarboxylate.
P–16–0517	8/12/2016	11/10/2016	CBI	(G) Monomer for polymer application.	(G) Methacrylic acid ester.
P–16–0518	8/12/2016	11/10/2016	CBI	(G) Adhesion resin	(G) Polyalkylether polyester
P–16–0519	8/12/2016	11/10/2016	CBI	(G) Adhesion resin	(G) Polyalkylether polyester.
P–16–0520	8/15/2016	11/13/2016	CBI	(G) The anticipated use is as a deposit control agent and pigment dispersant.	(G) 2-propenoic acid, polymer with *N*-(alkyl)-2propenamide, sodium alkyl alkene sulfonate (1:1) and sodium 2-methyl-2-[(1-oxo-2-propen-1-yl) amino]-1-propanesulfonate (1:1), peroxydisulfuric acid ([(ho)s(o)2]2o2) sodium salt (1:2)-initiated.

TABLE 1—PMNs RECEIVED FROM AUGUST 1, 2016 TO AUGUST 31, 2016—Continued

Case No.	Received date	Projected notice end date	Manufacturer importer	Use	Chemical
P–16–0521	8/15/2016	11/13/2016	CBI	(G) The anticipated use is as a deposit control agent and pigment dispersant.	(G) 2-propenoic acid, polymer with *N*-(alkyl)-2propenamide, sodium alkyl alkene sulfonate (1:1) and sodium 2-methyl-2-[(1-oxo-2-propen-1-yl) amino]-1-propanesulfonate (1:1), potassium salt, peroxydisulfuric acid ([(ho)s(o)2]2o2) sodium salt (1:2)-initiated.
P–16–0522	8/15/2016	11/13/2016	CBI	(G) The anticipated use is as a deposit control agent and pigment dispersant.	(G) 2-propenoic acid, polymer with *N*-(alkyl)-2propenamide, sodium alkyl alkene sulfonate (1:1) and sodium 2-methyl-2-[(1-oxo-2-propen-1-yl) amino]-1-propanesulfonate (1:1), sodium salt, peroxydisulfuric acid ([(ho)s(o)2]2o2) sodium salt (1:2)-initiated.
P–16–0523	8/15/2016	11/13/2016	CBI	(G) The anticipated use is as a deposit control agent and pigment dispersant.	(G) 2-propenoic acid, polymer with *N*-(alkyl)-2propenamide, sodium alkyl alkene sulfonate (1:1) and sodium 2-methyl-2-[(1-oxo-2-propen-1-yl) amino]-1-propanesulfonate (1:1), ammonium salt, peroxydisulfuric acid ([(ho)s(o)2]2o2) sodium salt (1:2)-initiated.
P–16–0524	8/18/2016	11/16/2016	Miwon North America, Inc..	(S) Resin for industrial coating	(G) Acrylated resin.
P–16–0525	8/18/2016	11/16/2016	CBI	(G) Ingredient for ink, coating and adhesive formulations.	(G) Polyester benzoate.
P–16–0526	8/18/2016	11/16/2016	CBI	(G) Coatings application	(G) Fluorinated alkyl derivative.
P–16–0526	8/18/2016	11/16/2016	CBI	(G) Electronic cleaner	(G) Fluorinated alkyl derivative.
P–16–0526	8/18/2016	11/16/2016	CBI	(G) Printing application	(G) Fluorinated alkyl derivative.
P–16–0527	8/19/2016	11/17/2016	CBI	(S) Uv absorber for plastic articles	(G) Bis[[(diphenyl-heteroaryl)-substituted phenoxy]ethyl] dodecanedioate.
P–16–0528	8/23/2016	11/21/2016	Shell Chemical LP.	(S) Coatings	(S) Hydrocarbons, $C_{16 - 22}$, branched and linear.
P–16–0528	8/23/2016	11/21/2016	Shell Chemical LP.	(S) Cleaning fluids	(S) Hydrocarbons, $C_{16 - 22}$, branched and linear.
P–16–0528	8/23/2016	11/21/2016	Shell Chemical LP.	(S) Sold as intermediate	(S) Hydrocarbons, $C_{16 - 22}$, branched and linear.
P–16–0528	8/23/2016	11/21/2016	Shell Chemical LP.	(S) Agrochemicals	(S) Hydrocarbons, $C_{16 - 22}$, branched and linear.
P–16–0528	8/23/2016	11/21/2016	Shell Chemical LP.	(S) Metal workings fluids/Rolling oils.	(S) Hydrocarbons, $C_{16 - 22}$, branched and linear.
P–16–0529	8/24/2016	11/22/2016	CBI	(S) Personal care products	(G) Polyalkyl methylsiloxane.
P–16–0529	8/24/2016	11/22/2016	CBI	(G) Textile treatment	(G) Polyalkyl methylsiloxane.
P–16–0529	8/24/2016	11/22/2016	CBI	(G) Commercial polish	(G) Polyalkyl methylsiloxane.
P–16–0530	8/25/2016	11/23/2016	CBI	(S) Concrete and Stone coating ...	(S) 2-propenoic acid, 2-methyl, 2-(dimethylamino) ethyl ester, polymer with ethyl 2-propenoate, 2-hydroxyethyl m2-propenoate and methyl 2-methyl 2-propenoate, acetate salt.
P–16–0530	8/25/2016	11/23/2016	CBI	(S) Concrete and Stone coating ...	(S) 2-propenoic acid, 2-methyl-, 2-(dimethylamino) ethyl ester, polymer with ethyl 2-propenoate, 2-hydroxyethyl 2-propenoate and methyl 2-methyl 2-propenoate, acetate (salt).
P–16–0531	8/24/2016	11/22/2016	CBI	(G) Additive for use in mineral processing.	(G) Alkyloxy propanamine.
P–16–0532	8/25/2016	11/23/2016	CBI	(G) Ingredient used in fertilizer manufacturing.	(G) Substituted heteromonocycle.
P–16–0533	8/25/2016	11/23/2016	CBI	(G) The blended final product is used as a cleaning agent for electronics manufacturing.	(G) Ethanaminium, alkyl-, salt with aromatic triazole.

TABLE 1—PMNS RECEIVED FROM AUGUST 1, 2016 TO AUGUST 31, 2016—Continued

Case No.	Received date	Projected notice end date	Manufacturer importer	Use	Chemical
P–16–0534	8/31/2016	11/29/2016	CBI	(G) Component of ink	(G) Alkyl alkenoic acid, polymer with alkenylcarbomonocycle telomer with substituted alkanoic acid hydroxyl alkyl substituted alkenyl substituted alkyl ester, polyalkylene glycol alkyl ether alkyl alkenoate, dialkylene glycol diheteromonocyclic ether and alkylcarbomonocyclic alkenoate, metal salt.
P–16–0535	8/31/2016	11/29/2016	CBI	(G) Component of ink	(G) Alkyl alkenoic acid, polymer with alkenylcarbomonocycle telomer with substituted alkanoic acid hydroxyl alkyl substituted alkenyl substituted alkyl ester, alkanediol diheteromonocyclic ether, polyalkylene glycol alkyl ether alkyl alkenoate and alkylcarbomonocyclic alkenoate, metal salt.
P–16–0536	8/31/2016	11/29/2016	CBI	(G) Component of ink	(G) Alkyl alkenoic acid, polymer with bis heteromonocyclic substituted alkyl carbomonocycle, alkenylcarbomonocycle telomer with substituted alkanoic acid hydroxyl alkyl substituted alkenyl substituted alkyl ester, polyalkylene glycol alkyl ether alkyl alkenoate and alkylcarbomonocyclic alkenoate, metal salt.
P–16–0538	8/26/2016	11/24/2016	Omnium International.	(S) PMN substance is a component in a metalworking fluid preparation imported into the U.S.	(S) 9-octadecenoic acid (9*z*)-, compound with *N*-cyclohexylcyclohexanamine (1:1).
P–16–0539	8/26/2016	11/24/2016	CBI	(G) Photolithography	(G) Organic sulfonate compound.
P–16–0540	8/29/2016	11/27/2016	CBI	(G) Polymeric film former for coatings.	(G) Diphenolic compound, polymer with 2-(chloromethyl)oxirane and 4,4′-methylenebis[di-alkyl-substituted phenol].
P–16–0541	8/29/2016	11/27/2016	Specialty Organics, Inc..	(S) Adhesive for wood particle/Chip/Fiber board.	(S) Soybean meal, reaction products with phosphoric trichloride.
P–16–0542	8/30/2016	11/28/2016	CBI	(G) Chemical/Polymer Modifier	(G) Polydimethylsiloxane with functional end-caps.
P–16–0543	8/31/2016	11/29/2016	CBI	(G) Battery ingredient	(G) Halogenophosphoric acid metal salt.
P–16–0544	8/31/2016	11/29/2016	Guardian Industries Corp.	(S) Additive to influence melting temperature of raw materials and physical characteristics of the final product during the manufacture of flat glass.	(S) Flue dust, glass-manufacturing desulfurization, calcium hydroxide-treated. Definition: The dust produced form the flue gas exhaust cleaning of a glass manufacturing process followed by treatment with hydrated lime. It consists primarily of caso4 and ca(co3).
P–16–0544	8/31/2016	11/29/2016	Guardian Industries Corp.	(S) Additive to influence melting temperature of raw materials and physical characteristics of the final product during the manufacture of flat glass.	(S) Flue dust, glass-manufg. desulfurization, calcium hydroxide-treated. Definition: The dust produced form the flue gas exhaust cleaning of a glass manufacturing process followed by treatment with hydrated lime. It consists primarily of caso4 and ca(co3).

For the 46 NOCs received by EPA during this period, Table 3 provides the following information (to the extent that such information is not claimed as CBI): The EPA case number assigned to the NOC; the date the NOC was received by EPA; the projected date of commencement provided by the submitter in the NOC; and the chemical identity.

TABLE 2—NOCs RECEIVED FROM AUGUST 1, 2016 TO AUGUST 31, 2016

Case No.	Received date	Commencement date	Chemical
P–04–0641	8/16/2016	8/14/2016	(G) Polyetherpolyol polymer with aromatic dialkylamine.
P–04–0641	8/16/2016	8/15/2016	(G) Polyetherpolyol polymer with aromatic dialkylamine.
P–06–0458	8/29/2016	5/21/2013	(S) 13-docosenoic acid, magnesium salt, (13z)-.
P–06–0458	8/29/2016	5/22/2013	(S) 13-docosenoic acid, magnesium salt, (13z)-.
P–12–0190	8/11/2016	7/10/2016	(G) Fatty acid ester.
P–12–0190	8/11/2016	7/11/2016	(G) Fatty acid ester.
P–12–0249	8/23/2016	7/12/2012	(S) Canola oil, reaction product with 1-butene.
P–12–0249	8/23/2016	7/13/2012	(S) Canola oil, reaction product with 1-butene.
P–12–0250	8/23/2016	7/18/2012	(S) Canola oil, reaction products with 1-butene, distillation residues.
P–12–0250	8/23/2016	7/19/2012	(S) Canola oil, reaction products with 1-butene, distillation residues.
P–12–0251	8/23/2016	8/14/2012	(S) Canola oil, reaction products with 1-butene, distillation residues, methyl esters.
P–12–0251	8/23/2016	8/15/2012	(S) Canola oil, reaction products with 1-butene, distillation residues, methyl esters.
P–12–0382	8/12/2016	7/13/2016	(S) Alkenes, C_{20-24} a-, reaction products with 1-hexacosene, 1-octacosene, 1-octadecene and polyethylene distn. residues.
P–12–0382	8/12/2016	7/14/2016	(S) Alkenes, c_{20-24} a-, reaction products with 1-hexacosene, 1-octacosene, 1-octadecene and polyethylene distn. residues.
P–12–0513	8/26/2016	7/15/2016	(G) Aromatic dicarboxylic acid, polymer with dialkyl alkanediol, alkyl-(hydroxyalkyl)-alkanediol, dicarboxylic acid, heteropolcyclic anhydride, alkanetriol, hydroxy-[(oxoalkyl)oxy]alkyl ester.
P–12–0513	8/26/2016	7/16/2016	(G) Aromatic dicarboxylic acid, polymer with dialkyl alkanediol, alkyl-(hydroxyalkyl)-alkanediol, dicarboxylic acid, heteropolcyclic anhydride, alkanetriol, hydroxy-[(oxoalkyl)oxy]alkyl ester.
P–14–0260	8/29/2016	8/3/2016	(S) Propene, 2-bromo-3,3,3-trifluoro-.
P–14–0260	8/29/2016	8/4/2016	(S) Propene, 2-bromo-3,3,3-trifluoro-.
P–14–0331	8/1/2016	7/17/2016	(G) 2-propenoic acid, 2-methyl-, octadecyl ester, polymer with butyl 2-propenoate and alkyl lactam.
P–14–0331	8/1/2016	7/18/2016	(G) 2-propenoic acid, 2-methyl-, octadecyl ester, polymer with butyl 2-propenoate and alkyl lactam.
P–14–0373	8/6/2016	8/3/2016	(S) Neononanoic acid, ethenyl ester, polymer with butyl 2-methyl-2-propenoate, butyl 2-propenoate, ethenylbenzene, 2-hydroxyethyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate and rel-(1r, 2r, 4r)-1,7,7-trimethylbicyclo [2.2.1]heptyl-2-yl 2-methyl-2-propenoate.
P–14–0373	8/6/2016	8/4/2016	(S) Neononanoic acid, ethenyl ester, polymer with butyl 2-methyl-2-propenoate, butyl 2-propenoate, ethenylbenzene, 2-hydroxyethyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate and rel-(1r, 2r, 4r)-1,7,7-trimethylbicyclo [2.2.1]heptyl-2-yl 2-methyl-2-propenoate.
P–14–0479	8/17/2016	6/28/2016	(S) Carbonic acid, dimethyl ester, polymer with 1,4-diisocyanatobenzene, 1,6-hexanediol, 1,5-pentanediol and 2,2′-[1,?4-phenylenebis(oxy)]bis[ethanol].
P–14–0479	8/17/2016	6/29/2016	(S) Carbonic acid, dimethyl ester, polymer with 1,4-diisocyanatobenzene, 1,6-hexanediol, 1,5-pentanediol and 2,2′-[1,?4-phenylenebis(oxy)]bis[ethanol].
P–14–0851	8/19/2016	7/24/2016	(G) Polyurethane.
P–14–0851	8/19/2016	7/25/2016	(G) Polyurethane.
P–14–0852	8/19/2016	7/24/2016	(G) Polyurethane.
P–14–0852	8/19/2016	7/25/2016	(G) Polyurethane.
P–14–0853	8/22/2016	7/24/2016	(G) Polyurethane.
P–14–0853	8/22/2016	7/25/2016	(G) Polyurethane.
P–14–0854	8/22/2016	7/24/2016	(G) Polyurethane.
P–14–0854	8/22/2016	7/25/2016	(G) Polyurethane.
P–15–0569	8/5/2016	8/3/2016	(S) Benzene, 2,4-diisocyanato-1-methyl,homopolymer, *N*1, *N*1-dimethyl-1,3-propanediamine-and polytheylene-polypropylene glycol mono-bu ether-blocked.
P–15–0569	8/5/2016	8/4/2016	(S) Benzene, 2,4-diisocyanato-1-methyl,homopolymer, *N*1, *N*1-dimethyl-1,3-propanediamine-and polytheylene-polypropylene glycol mono-bu ether-blocked.
P–16–0036	8/29/2016	8/1/2016	(G) Substituted heteropolycycle.
P–16–0036	8/29/2016	8/2/2016	(G) Substituted heteropolycycle.
P–16–0070	8/22/2016	8/7/2016	(S) Boron sodium oxide (b5nao8), labeled with boron-10.
P–16–0070	8/22/2016	8/8/2016	(S) Boron sodium oxide (b5nao8), labeled with boron-10.
P–16–0158	8/16/2016	7/21/2016	(G) Modified urethane polymer salt with polyether.
P–16–0158	8/16/2016	7/22/2016	(G) Modified urethane polymer salt with polyether.
P–16–0160	8/29/2016	7/31/2016	(S) Ethanol, 2-amino-, reaction products with ammonia, by-products from, distillation residues.
P–16–0160	8/29/2016	8/1/2016	(S) Ethanol, 2-amino-, reaction products with ammonia, by-products from, distillation residues.
P–16–0181	8/12/2016	7/21/2016	(G) Butenoic acid, thio-ethanediyl ester.
P–16–0181	8/12/2016	7/22/2016	(G) Butenoic acid, thio-ethanediyl ester.
P–16–0281	8/30/2016	8/11/2016	(G) Fatty alcohols—dimers, trimmers, polymers.

TABLE 2—NOCS RECEIVED FROM AUGUST 1, 2016 TO AUGUST 31, 2016—Continued

Case No.	Received date	Commencement date	Chemical
P–16–0281	8/30/2016	8/12/2016	(G) Fatty alcohols—dimers, trimmers, polymers.

V. Correction

In the **Federal Register** of October 27, 2016 (81 FR 74784) (FRL–9952–62), in the first column, the Docket Identification number is corrected to read EPA–HQ–OPPT–2016–0482.

Authority: 15 U.S.C. 2601 *et seq.*

Dated: October 26, 2016.

Pamela Myrick,

Director, Information Management Division, Office of Pollution Prevention and Toxics.

[FR Doc. 2016–27193 Filed 11–9–16; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[ER–FRL–9030–1]

Environmental Impact Statements; Notice of Availability

Responsible Agency: Office of Federal Activities, General Information (202) 564–7146 or *http://www.epa.gov/nepa.*

Weekly receipt of Environmental Impact Statements (EISs) Filed 10/31/2016 Through 11/04/2016.

Pursuant to 40 CFR 1506.9.

Notice

Section 309(a) of the Clean Air Act requires that EPA make public its comments on EISs issued by other Federal agencies. EPA's comment letters on EISs are available at: *http://www.epa.gov/compliance/nepa/eisdata.html.*

EIS No. 20160261, Draft, USFS, ID, Coeur d Alene Basin Natural Resource Restoration Plan, Comment Period Ends: 01/13/2017, Contact: Jo Christensen 208–765–7417

EIS No. 20160262, Draft Supplement, Caltrans, CA, State Route 241–91 Tolled Express Lanes Connector Project, Comment Period Ends: 01/09/2017, Contact: Bahar Heydari 657–328–6533

EIS No. 20160263, Draft, USN, WA, EA–18G ''Growler'' Airfield Operations at the NAS Whidbey Island Complex, Comment Period Ends: 01/25/2017, Contact: Sarah Stallings 757–322–4733

EIS No. 20160264, Final, USFWS, PRO, Programmatic—Eagle Rule Revision, Review Period Ends: 12/09/2016, Contact: Eliza Savage 703 358–2329

EIS No. 20160265, Draft Supplement, USFS, MT, Beaverhead-Deerlodge National Forest Land and Resource Management Plan to Comply with the District Court Order (Bighorn Sheep) 2009 Revised Forest Plan, Comment Period Ends: 02/09/2017, Contact: Jan Bowey 406–683–3853

EIS No. 20160266, Draft, NRC, MO, Construction Permit for the Northwest Medical Isotopes Radioisotope Production Facility, Comment Period Ends: 12/29/2016, Contact: David Drucker 301–415–6223

EIS No. 20160267, Final, VA, SD, National Historic Preservation Act Section 106 Consultation: Reconfiguration of VA Black Hills Health Care System, Review Period Ends: 12/09/2016, Contact: Billie J. Beal 605–720–7243

Dated: November 7, 2016.

Dawn Roberts,

Management Analyst, NEPA Compliance Division, Office of Federal Activities.

[FR Doc. 2016–27186 Filed 11–9–16; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[EPA–HQ–OPPT–2003–0004; FRL–9954–71]

Access to Confidential Business Information by Battelle Memorial Institute and Its Identified Subcontractor, Avanti Corporation

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: EPA has authorized its contractors, Battelle Memorial Institute (BMI) of Columbus, OH and Avanti Corporation of Alexandria, VA, to access information which has been submitted to EPA under sections 4, 5, 6, 8(a), 11 and 21 of the Toxic Substances Control Act (TSCA). Some of the information may be claimed or determined to be Confidential Business Information (CBI).

DATES: Access to the confidential data occurred on October 20, 2016.

FOR FURTHER INFORMATION CONTACT:

For technical information contact: Scott Sherlock, Environmental Assistance Division (7408M), Office of Pollution Prevention and Toxics, Environmental Protection Agency, 1200 Pennsylvania Ave. NW., Washington, DC 20460–0001; telephone number: (202) 564–8257; email address: *sherlock.scott@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?

This action is directed to the public in general. This action may, however, be of interest to all who manufacture, process, or distribute industrial chemicals. Since other entities may also be interested, the Agency has not attempted to describe all the specific entities that may be affected by this action.

B. How can I get copies of this document and other related information?

The docket for this action, identified by docket identification (ID) number EPA–HQ–OPPT–2003–0004 is available at *http://www.regulations.gov* or at the Office of Pollution Prevention and Toxics Docket (OPPT Docket), Environmental Protection Agency Docket Center (EPA/DC), West William Jefferson Clinton Bldg., Rm. 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 OPPT Docket is (202) 566–0280. Please review the visitor instructions and additional information about the docket available at *http://www.epa.gov/dockets.*

II. What action is the Agency taking?

Under EPA contract number EP–W–16–017, contractors BMI of 505 King Avenue, Columbus, OH and Avanti Corporation of 5520 Cherokee Avenue, Suite 205, Alexandria, VA are assisting the Office of Pollution Prevention and Toxics (OPPT) by providing statistical and technical support for the assessment of toxic substances. They are also providing statistical, mathematical, field data collection, and technical

analysis support and planning for OPPT programs such as Lead Programs and other technology and exposure related studies.

In accordance with 40 CFR 2.306(j), EPA has determined that under EPA contract number EP–W–16–017, BMI and Avanti Corporation required access to CBI submitted to EPA under sections 4, 5, 6, 8(a), 11 and 21 of TSCA to perform successfully the duties specified under the contract. BMI and Avanti Corporation personnel were given access to information submitted to EPA under sections 4, 5, 6, 8(a), 11 and 21 of TSCA. Some of the information may be claimed or determined to be CBI.

EPA is issuing this notice to inform all submitters of information under sections 4, 5, 6, 8(a), 11 and 21 of TSCA that EPA has provided BMI and Avanti Corporation access to these CBI materials on a need-to-know basis only. All access to TSCA CBI under this contract is taking place at EPA Headquarters and BMI's site located in Columbus, OH, in accordance with EPA's *TSCA CBI Protection Manual.*

Access to TSCA data, including CBI, will continue until June 12, 2021. If the contract is extended, this access will also continue for the duration of the extended contract without further notice.

BMI and Avanti Corporation personnel have signed nondisclosure agreements and were briefed on appropriate security procedures before they are permitted access to TSCA CBI.

Authority: 15 U.S.C. 2601 *et seq.*

Dated: November 2, 2016.

Pamela S. Myrick,

Director, Information Management Division, Office of Pollution Prevention and Toxics.

[FR Doc. 2016–27188 Filed 11–9–16; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[EPA–HQ–OPPT–2003–0004; FRL–9954–70]

Access to Confidential Business Information by Eastern Research Group, Inc.

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: EPA has authorized its contractor, Eastern Research Group, Inc. (ERG) of Lexington, MA, access to information which has been submitted to EPA under all sections of the Toxic Substances Control Act (TSCA). Some of the information may be claimed or determined to be Confidential Business Information (CBI).

DATES: Access to the confidential data occurred on or about October 5, 2016.

FOR FURTHER INFORMATION CONTACT:

For technical information contact: Scott Sherlock, Environmental Assistance Division (7408M), Office of Pollution Prevention and Toxics, Environmental Protection Agency, 1200 Pennsylvania Ave. NW., Washington, DC 20460–0001; telephone number: (202) 564–8257; fax number: (202) 564–8251; email address: *sherlock.scott@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?

This action is directed to the public in general. This action may, however, be of interest to all who manufacture, process, or distribute industrial chemicals. Since other entities may also be interested, the Agency has not attempted to describe all the specific entities that may be affected by this action.

B. How can I get copies of this document and other related information?

The docket for this action, identified by docket identification (ID) number EPA–HQ–OPPT–2003–0004 is available at *http://www.regulations.gov* or at the Office of Pollution Prevention and Toxics Docket (OPPT Docket), Environmental Protection Agency Docket Center (EPA/DC), West William Jefferson Clinton Bldg., Rm. 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 OPPT Docket is (202) 566–0280. Please review the visitor instructions and additional information about the docket available at *http://www.epa.gov/dockets.*

II. What action is the Agency taking?

Under EPA contract number EP–W–12–006, work assignment number 4–28, contractor ERG of 110 Hartwell Ave, Suite 1, Lexington, MA is assisting the Office of Pollution Prevention and Toxics (OPPT) in preparing engineering reports for the Premanufacture Notice (PMN) review program; performing analyses of Chemical Data Reporting (CDR) data; and reviewing CBI data for Existing Chemical engineering reports.

In accordance with 40 CFR 2.306(j), EPA has determined that under EPA contract number EP–W–12–006, work assignment number 4–28, ERG required access to CBI submitted to EPA under all sections of TSCA to perform successfully the duties specified under the contract. ERG's personnel were given access to information submitted to EPA under all sections of TSCA. Some of the information may be claimed or determined to be CBI.

EPA is issuing this notice to inform all submitters of information under all sections of TSCA that EPA has provided ERG access to these CBI materials on a need-to-know basis only. All access to TSCA CBI under this contract is taking place at EPA Headquarters and ERG's site located at 14555 Avion Parkway, Suite 200, Chantilly, Va. in accordance with EPA's *TSCA CBI Protection Manual.*

Access to TSCA data, including CBI, will continue until December 31, 2016. If the contract is extended, this access will also continue for the duration of the extended contract without further notice.

ERG personnel were required to sign nondisclosure agreements and were briefed on appropriate security procedures before they are permitted access to TSCA CBI.

Authority: 15 U.S.C. 2601 *et seq.*

Dated: November 2, 2016.

Pamela S. Myrick,

Director, Information Management Division, Office of Pollution Prevention and Toxics.

[FR Doc. 2016–27189 Filed 11–9–16; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[EPA–HQ–OPPT–2016–0484; FRL–9954–52]

Certain New Chemicals; Receipt and Status Information for September 2016

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: EPA is required under the Toxic Substances Control Act (TSCA) to publish in the **Federal Register** a notice of receipt of a premanufacture notice (PMN); an application for a test marketing exemption (TME), both pending and/or expired; and a periodic status report on any new chemicals under EPA review and the receipt of notices of commencement (NOC) to manufacture those chemicals. This document covers the period from

September 1, 2016 to September 30, 2016.

DATES: Comments identified by the specific case number provided in this document, must be received on or before December 12, 2016.

ADDRESSES: Submit your comments, identified by docket identification (ID) number EPA–HQ–OPPT–2016–0484, and the specific PMN number or TME number for the chemical related to your comment, by one of the following methods:

- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the online instructions for submitting comments. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute.
- *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:* To make special arrangements for hand delivery or delivery of boxed information, please follow the instructions at *http://www.epa.gov/dockets/contacts.html.*

Additional instructions on commenting or visiting the docket, along with more information about dockets generally, is available at *http://www.epa.gov/dockets.*

FOR FURTHER INFORMATION CONTACT:

For technical information contact: Jim Rahai, IMD 7407M, Office of Pollution Prevention and Toxics, Environmental Protection Agency, 1200 Pennsylvania Ave. NW., Washington, DC 20460–0001; telephone number: (202) 564–8593; email address: *rahai.jim@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?

This action is directed to the public in general. As such, the Agency has not attempted to describe the specific entities that this action may apply to. Although others may be affected, this action applies directly to the submitters of the actions addressed in this document.

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 preparing and submitting your comments, see the commenting tips at *http://www.epa.gov/dockets/comments.html.*

II. What action is the Agency taking?

This document provides receipt and status reports, which cover the period from September 1, 2016 to September 30, 2016, and consists of the PMNs and TMEs both pending and/or expired, and the NOCs to manufacture a new chemical that the Agency has received under TSCA section 5 during this time period.

III. What is the Agency's authority for taking this action?

Under TSCA, 15 U.S.C. 2601 *et seq.,* EPA classifies a chemical substance as either an ''existing'' chemical or a ''new'' chemical. Any chemical substance that is not on EPA's TSCA Inventory is classified as a ''new chemical,'' while those that are on the TSCA Inventory are classified as an ''existing chemical.'' For more information about the TSCA Inventory, please go to: *http://www.epa.gov/opptintr/newchems/pubs/inventory.htm.*

Anyone who plans to manufacture or import a new chemical substance for a non-exempt commercial purpose is required by TSCA section 5 to provide EPA with a PMN, before initiating the activity. Section 5(h)(1) of TSCA authorizes EPA to allow persons, upon application, to manufacture (includes import) or process a new chemical substance, or a chemical substance subject to a significant new use rule (SNUR) issued under TSCA section 5(a), for ''test marketing'' purposes, which is referred to as a test marketing exemption, or TME. For more information about the requirements applicable to a new chemical go to: *http://www.epa.gov/oppt/newchems.*

Under TSCA sections 5(d)(2) and 5(d)(3), EPA is required to publish in the **Federal Register** a notice of receipt of a PMN or an application for a TME and to publish in the **Federal Register** periodic reports on the status of new chemicals under review and the receipt of NOCs to manufacture those chemicals.

IV. Receipt and Status Reports

As used in each of the tables in this unit, (S) indicates that the information in the table is the specific information provided by the submitter, and (G) indicates that the information in the table is generic information because the specific information provided by the submitter was claimed as CBI.

For the 71 PMNs received by EPA during this period, Table 1 provides the following information (to the extent that such information is not claimed as CBI): The EPA case number assigned to the PMN; The date the PMN was received by EPA; the projected end date for EPA's review of the PMN; the submitting manufacturer/importer; the potential uses identified by the manufacturer/importer in the PMN; and the chemical identity.

TABLE 1—PMNS RECEIVED FROM SEPTEMBER 1, 2016 TO SEPTEMBER 30, 2016

Case No.	Received date	Projected notice end date	Manufacturer importer	Use	Chemical
P–16–0379	9/26/2016	12/25/2016	CBI	(G) Intermediate for polymer synthesis.	(G) Vinyl functional polymethylalkylpolymer.
P–16–0399	9/16/2016	12/15/2016	Tryeco LLC	(S) Compound to be used in preparation of advanced seed coatings.	(S) Starch, polymer with 2-propenoic acid, potassium salt. oxidized.

TABLE 1—PMNS RECEIVED FROM SEPTEMBER 1, 2016 TO SEPTEMBER 30, 2016—Continued

Case No.	Received date	Projected notice end date	Manufacturer importer	Use	Chemical
P–16–0399	9/16/2016	12/15/2016	Tryeco LLC	(S) Agricultural soil amendment for turf applications and direct soil injection with fertilizers.	(S) Starch, polymer with 2-propenoic acid, potassium salt. oxidized.
P–16–0399	9/16/2016	12/15/2016	Tryeco LLC	(S) Agricultural soil amendment for filed crops as ''agrisorb plus'' granular soil amendment.	(S) Starch, polymer with 2-propenoic acid, potassium salt. oxidized.
P–16–0429	9/20/2016	12/19/2016	CBI	(G) Universal tint paste resin having high solids.	(G) Endcapped polysiloxane.
P–16–0460	9/28/2016	12/27/2016	CBI	(G) Process aid	(G) Silane-treated aluminosilicate.
P–16–0461	9/28/2016	12/27/2016	CBI	(G) Process aid	(G) Silane-treated aluminosilicate.
P–16–0462	9/28/2016	12/27/2016	CBI	(G) Process aid	(G) Silane-treated aluminosilicate.
P–16–0463	9/28/2016	12/27/2016	CBI	(G) Process aid	(G) Silane-treated aluminosilicate.
P–16–0464	9/28/2016	12/27/2016	CBI	(G) Process aid	(G) Silane-treated aluminosilicate.
P–16–0487	9/22/2016	12/21/2016	Jaychem LLC ...	(S) Mass coloration of paper	(G) Benzenesulfonic acid 1,2-diazenediylbis[6-ethenyl]-3-sulfophenyl diazenyl-2-sulfophenyl ethenyl salt.
P–16–0520	9/26/2016	12/25/2016	CBI	(G) As described above, the notified polymer will be use as a pigment dispersant.	(G) 2-propenoic acid, polymer with *N*-(alkyl)-2propenamide, sodium alkyl alkene sulfonate (1:1) and sodium 2-methyl-2-[(1-oxo-2-propen-1-yl) amino]-1-propanesulfonate (1:1), peroxydisulfuric acid ([(ho)s(o)2]2o2) sodium salt (1:2)-initiated.
P–16–0520	9/26/2016	12/25/2016	CBI	(G) The anticipated use is as a deposit control agent and pigment dispersant.	(G) 2-propenoic acid, polymer with *N*-(alkyl)-2propenamide, sodium alkyl alkene sulfonate (1:1) and sodium 2-methyl-2-[(1-oxo-2-propen-1-yl) amino]-1-propanesulfonate (1:1), peroxydisulfuric acid ([(ho)s(o)2]2o2) sodium salt (1:2)-initiated.
P–16–0520	9/26/2016	12/25/2016	CBI	(G) The anticipated use is as a pigment dispersant.	(G) 2-propenoic acid, polymer with *N*-(alkyl)-2propenamide, sodium alkyl alkene sulfonate (1:1) and sodium 2-methyl-2-[(1-oxo-2-propen-1-yl) amino]-1-propanesulfonate (1:1), peroxydisulfuric acid ([(ho)s(o)2]2o2) sodium salt (1:2)-initiated.
P–16–0520	9/26/2016	12/25/2016	CBI	(G) The anticipated use is as a deposit control agent.	(G) 2-propenoic acid, polymer with *N*-(alkyl)-2propenamide, sodium alkyl alkene sulfonate (1:1) and sodium 2-methyl-2-[(1-oxo-2-propen-1-yl) amino]-1-propanesulfonate (1:1), peroxydisulfuric acid ([(ho)s(o)2]2o2) sodium salt (1:2)-initiated.
P–16–0521	9/26/2016	12/25/2016	CBI	(G) The anticipated use is as a deposit control agent.	(G) 2-propenoic acid, polymer with *N*-(alkyl)-2propenamide, sodium alkyl alkene sulfonate (1:1) and sodium 2-methyl-2-[(1-oxo-2-propen-1-yl) amino]-1-propanesulfonate (1:1), potassium salt, peroxydisulfuric acid ([(ho)s(o)2]2o2) sodium salt (1:2)-initiated.

TABLE 1—PMNS RECEIVED FROM SEPTEMBER 1, 2016 TO SEPTEMBER 30, 2016—Continued

Case No.	Received date	Projected notice end date	Manufacturer importer	Use	Chemical
P–16–0521	9/26/2016	12/25/2016	CBI	(G) As described above, the notified polymer will be use as a pigment dispersant.	(G) 2-propenoic acid, polymer with *N*-(alkyl)-2propenamide, sodium alkyl alkene sulfonate (1:1) and sodium 2-methyl-2-[(1-oxo-2-propen-1-yl) amino]-1-propanesulfonate (1:1), potassium salt, peroxydisulfuric acid ([(ho)s(o)2]2o2) sodium salt (1:2)-initiated.
P–16–0521	9/26/2016	12/25/2016	CBI	(G) The anticipated use is as a deposit control agent and pigment dispersant.	(G) 2-propenoic acid, polymer with *N*-(alkyl)-2propenamide, sodium alkyl alkene sulfonate (1:1) and sodium 2-methyl-2-[(1-oxo-2-propen-1-yl) amino]-1-propanesulfonate (1:1), potassium salt, peroxydisulfuric acid ([(ho)s(o)2]2o2) sodium salt (1:2)-initiated.
P–16–0521	9/26/2016	12/25/2016	CBI	(G) The anticipated use is as a pigment dispersant.	(G) 2-propenoic acid, polymer with *N*-(alkyl)-2propenamide, sodium alkyl alkene sulfonate (1:1) and sodium 2-methyl-2-[(1-oxo-2-propen-1-yl) amino]-1-propanesulfonate (1:1), potassium salt, peroxydisulfuric acid ([(ho)s(o)2]2o2) sodium salt (1:2)-initiated.
P–16–0522	9/26/2016	12/25/2016	CBI	(G) As described above, the notified polymer will be use as a pigment dispersant.	(G) 2-propenoic acid, polymer with *N*-(alkyl)-2propenamide, sodium alkyl alkene sulfonate (1:1) and sodium 2-methyl-2-[(1-oxo-2-propen-1-yl) amino]-1-propanesulfonate (1:1), sodium salt, peroxydisulfuric acid ([(ho)s(o)2]2o2) sodium salt (1:2)-initiated.
P–16–0522	9/26/2016	12/25/2016	CBI	(G) The anticipated use is as a pigment dispersant.	(G) 2-propenoic acid, polymer with *N*-(alkyl)-2propenamide, sodium alkyl alkene sulfonate (1:1) and sodium 2-methyl-2-[(1-oxo-2-propen-1-yl) amino]-1-propanesulfonate (1:1), sodium salt, peroxydisulfuric acid ([(ho)s(o)2]2o2) sodium salt (1:2)-initiated.
P–16–0522	9/26/2016	12/25/2016	CBI	(G) The anticipated use is as a deposit control agent and pigment dispersant.	(G) 2-propenoic acid, polymer with *N*-(alkyl)-2propenamide, sodium alkyl alkene sulfonate (1:1) and sodium 2-methyl-2-[(1-oxo-2-propen-1-yl) amino]-1-propanesulfonate (1:1), sodium salt, peroxydisulfuric acid ([(ho)s(o)2]2o2) sodium salt (1:2)-initiated.
P–16–0522	9/26/2016	12/25/2016	CBI	(G) The anticipated use is as a deposit control agent.	(G) 2-propenoic acid, polymer with *N*-(alkyl)-2propenamide, sodium alkyl alkene sulfonate (1:1) and sodium 2-methyl-2-[(1-oxo-2-propen-1-yl) amino]-1-propanesulfonate (1:1), sodium salt, peroxydisulfuric acid ([(ho)s(o)2]2o2) sodium salt (1:2)-initiated.

TABLE 1—PMNS RECEIVED FROM SEPTEMBER 1, 2016 TO SEPTEMBER 30, 2016—Continued

Case No.	Received date	Projected notice end date	Manufacturer importer	Use	Chemical
P–16–0523	9/26/2016	12/25/2016	CBI	(G) The anticipated use is as a pigment dispersant.	(G) 2-propenoic acid, polymer with *N*-(alkyl)-2propenamide, sodium alkyl alkene sulfonate (1:1) and sodium 2-methyl-2-[(1-oxo-2-propen-1-yl) amino]-1-propanesulfonate (1:1), ammonium salt, peroxydisulfuric acid ([(ho)s(o)2]2o2) sodium salt (1:2)-initiated.
P–16–0523	9/26/2016	12/25/2016	CBI	(G) As described above, the notified polymer will be use as a pigment dispersant.	(G) 2-propenoic acid, polymer with *N*-(alkyl)-2propenamide, sodium alkyl alkene sulfonate (1:1) and sodium 2-methyl-2-[(1-oxo-2-propen-1-yl) amino]-1-propanesulfonate (1:1), ammonium salt, peroxydisulfuric acid ([(ho)s(o)2]2o2) sodium salt (1:2)-initiated.
P–16–0523	9/26/2016	12/25/2016	CBI	(G) The anticipated use is as a deposit control agent.	(G) 2-propenoic acid, polymer with *N*-(alkyl)-2propenamide, sodium alkyl alkene sulfonate (1:1) and sodium 2-methyl-2-[(1-oxo-2-propen-1-yl) amino]-1-propanesulfonate (1:1), ammonium salt, peroxydisulfuric acid ([(ho)s(o)2]2o2) sodium salt (1:2)-initiated.
P–16–0523	9/26/2016	12/25/2016	CBI	(G) The anticipated use is as a deposit control agent and pigment dispersant.	(G) 2-propenoic acid, polymer with *N*-(alkyl)-2propenamide, sodium alkyl alkene sulfonate (1:1) and sodium 2-methyl-2-[(1-oxo-2-propen-1-yl) amino]-1-propanesulfonate (1:1), ammonium salt, peroxydisulfuric acid ([(ho)s(o)2]2o2) sodium salt (1:2)-initiated.
P–16–0528	9/14/2016	12/13/2016	Shell Chemical LP.	(S) Metal workings fluids/rolling oils.	(S) Hydrocarbons, $C_{16–22}$, branched and linear.
P–16–0528	9/14/2016	12/13/2016	Shell Chemical LP.	(S) Coatings	(S) Hydrocarbons, $C_{16–22}$, branched and linear.
P–16–0528	9/14/2016	12/13/2016	Shell Chemical LP.	(S) Agrochemicals	(S) Hydrocarbons, $C_{16–22,}$ branched and linear.
P–16–0528	9/14/2016	12/13/2016	Shell Chemical LP.	(S) Cleaning fluids	(S) Hydrocarbons, $C_{16–22,}$ branched and linear.
P–16–0528	9/14/2016	12/13/2016	Shell Chemical LP.	(S) Sold as intermediate	(S) Hydrocarbons, $C_{16–22}$, branched and linear.
P–16–0537	9/21/2016	12/20/2016	CBI	(G) Masking photopolymer	(G) Formaldehyde phenol isobenzofurandione polymer.
P–16–0540	9/28/2016	12/27/2016	CBI	(G) Polymeric film former for coatings.	(G) Diphenolic compound, polymer with 2-(chloromethyl)oxirane and 4,4′-methylenebis[di-alkyl-substituted phenol].
P–16–0541	9/19/2016	12/18/2016	Specialty Organics, Inc..	(S) Adhesive for wood particle/chip/fiberboard.	(S) Soybean meal, reaction products with phosphoric trichloride.
P–16–0545	9/2/2016	12/1/2016	CBI	(G) Device chemical	(G) Substituted siloxane polymer.
P–16–0546	9/16/2016	12/15/2016	Cardolite Corporation.	(S) GX–9203 is used for the adhesive application.	(G) Cashew, nutshell liquid, polymer with acid and halohydrin.
P–16–0547	9/6/2016	12/5/2016	CBI	(G) Catalyst	(G) Neodymium aluminum alkyl catalyst.
P–16–0548	9/8/2016	12/7/2016	CBI	(G) Resin catalyst	(G) Triarylsulfonium salt.
P–16–0570	9/21/2016	12/20/2016	CBI	(S) Aromatic polyester polyol for rigid foam.	(G) Aromatic polyester polyol.
P–16–0571	9/14/2016	12/13/2016	CBI	(G) Additive for coatings	(G) Alkyl alkenoate, alkanediyl, polymer with alkyl alkenoate, substituted carbomonocycle, alkyl alkenoate and heteromonocycle alkyl alkenoate, diazene bis alkyl heteromonocycle initiated.

TABLE 1—PMNS RECEIVED FROM SEPTEMBER 1, 2016 TO SEPTEMBER 30, 2016—Continued

Case No.	Received date	Projected notice end date	Manufacturer importer	Use	Chemical
P–16–0572	9/14/2016	12/13/2016	Hexion Inc	(S) Tackifier in hot melt adhesive and pressure sensitive adhesive formulation.	(G) Polyamine polyacid adducts.
P–16–0572	9/14/2016	12/13/2016	Hexion Inc	(G) Adhesive ingredient	(G) Polyamine polyacid adducts.
P–16–0572	9/14/2016	12/13/2016	Hexion Inc	(G) Adhesive for coating	(G) Polyamine polyacid adducts.
P–16–0572	9/14/2016	12/13/2016	Hexion Inc	(G) Adhesive for coating particulate materials.	(G) Polyamine polyacid adducts.
P–16–0573	9/14/2016	12/13/2016	Hexion Inc	(G) Adhesive ingredient	(G) Polyamine polyacid adducts.
P–16–0573	9/14/2016	12/13/2016	Hexion Inc	(S) Tackifier in hot melt adhesive and pressure sensitive adhesive formulation.	(G) Polyamine polyacid adducts.
P–16–0573	9/14/2016	12/13/2016	Hexion Inc	(G) Adhesive for coating particulate materials.	(G) Polyamine polyacid adducts.
P–16–0573	9/14/2016	12/13/2016	Hexion Inc	(G) Adhesive for coating	(G) Polyamine polyacid adducts.
P–16–0575	9/15/2016	12/14/2016	CBI	(S) Polymerization of glucose	(S) Glucosyltransferase—the CASRN was determined using the international union of biochemistry and molecular biology (iubmb) enzyme nomenclature recommendations for the noticed enzyme (see attachment—iubmb nomenclature). reaction catalyzed: sucrose+[(1--≤6)-?-d-glucosyl]n = d-fructose + [(1--≤6)-?-d-glucosyl]n+1iubmb number: 2.4.1.5 in addition to catalyzing the formation of alpha-1–6-glucan linkages as specified in the iubmb number 2.4.1.5, depending on the source organism and gene, the glycosyltransferase enzyme may catalyze other alpha linkages including alpha 1–3 for the noticed enzyme and other linkages (e.g. 1,4-, 1,6-).
P–16–0576	9/16/2016	12/15/2016	CBI	(G) Intermediate	(G) Modified alkyl polyamine.
P–16–0577	9/16/2016	12/15/2016	CBI	(G) Oil lubricant additive	(G) Alkyl polyamine.
P–16–0579	9/19/2016	12/18/2016	Allnex USA Inc.	(S) Ultraviolet (uv) curable coating resin.	(G) Waste plastics, poly(ethylene terephthalate), depolymd. with polypropylene glycol ether with glycerol (3:1), polymers with alkenoic and alkanoic acids.
P–16–0580	9/19/2016	12/18/2016	CBI	(G) Synthetic aircraft engine lubricant for contained use industrial lubricant.	(G) Trimethylolpropane ester of mixed linear and branched carboxylic acids.
P–16–0581	9/19/2016	12/18/2016	CBI	(S) Polymer additive	(G) Polysaccharide.
P–16–0581	9/19/2016	12/18/2016	CBI	(S) Fiber additive	(G) Polysaccharide.
P–16–0581	9/19/2016	12/18/2016	CBI	(S) Composite component	(G) Polysaccharide.
P–16–0581	9/19/2016	12/18/2016	CBI	(S) Paper coating component	(G) Polysaccharide.
P–16–0582	9/20/2016	12/19/2016	CBI	(S) Lubricity additive for industrial oils And other lubricants.	(G) Carboxylic acids, polyalkyl unsaturated, oligomers, polymers with substituted alkyl alkenol and alkylpolyol.
P–16–0582	9/20/2016	12/19/2016	CBI	(S) Lubricity additive for automotive engine oil.	(G) Carboxylic acids, polyalkyl unsaturated, oligomers, polymers with substituted alkyl alkenol and alkylpolyol.
P–16–0583	9/21/2016	12/20/2016	CBI	(S) Sealant for head lamps of cars	(G) Aromatic hydrocarbon resin.
P–16–0584	9/22/2016	12/21/2016	CBI	(G) Additive used to impart specific physicochemical property(ies) to finished articles.	(G) Multi-walled carbon nanotubes.
P–16–0585	9/22/2016	12/21/2016	CBI	(G) Additive used to impart specific physicochemical property(ies) to finished articles.	(G) Multi-walled carbon nanotubes.
P–16–0586	9/22/2016	12/21/2016	CBI	(G) Additive used to impart specific physicochemical property(ies) to finished articles.	(G) Muti-walled carbon nanotubes.
P–16–0587	9/22/2016	12/21/2016	Kemira Chemicals.	(S) Flocculant used in iron ore processing plant.	(S) Galactoarabinoxylan.

TABLE 1—PMNS RECEIVED FROM SEPTEMBER 1, 2016 TO SEPTEMBER 30, 2016—Continued

Case No.	Received date	Projected notice end date	Manufacturer importer	Use	Chemical
P–16–0588	9/22/2016	12/21/2016	CBI	(G) Additive for coatings	(G) Alkyl methacrylate, polymer with alkyl acrylate and polyesters.
P–16–0589	9/22/2016	12/21/2016	CBI	(G) Synthetic aircraft engine lubricant for contained use industrial lubricant.	(G) Pentaerythritol ester of mixed linear and branched carboxylic acids.
P–16–0593	9/28/2016	12/27/2016	CBI	(S) Aromatic polyester polyol for rigid foam.	(G) Aromatic polyester polyol.
P–16–0594	9/28/2016	12/27/2016	Chitec Technology Co., Ltd.	(G) Ink additive	(G) Alkanone, substituted oxyalkyl substituted alkyl carbomonocycle] substituted dialkyl alkylcarbomonocycle.
P–16–0595	9/29/2016	12/28/2016	CBI	(G) Polymer	(G) Polyether polyurethane.
P–16–0596	9/29/2016	12/28/2016	Allnex USA Inc.	(S) Site limited intermediate used for production of uv curable coating resin.	(G) Alkenoic acid, reaction products with polyethylene glycol ether with hydroxyalkyl substituted alkane.

For the 21 NOCs received by EPA during this period, Table 3 provides the following information (to the extent that such information is not claimed as CBI): The EPA case number assigned to the NOC; the date the NOC was received by EPA; the projected date of commencement provided by the submitter in the NOC; and the chemical identity.

TABLE 2—NOCS RECEIVED FROM SEPTEMBER 1, 2016 TO SEPTEMBER 30, 2016

Case No.	Received date	Commencement date	Chemical
P–05–0415	9/9/2016	9/6/2016	(G) Acrylic polymer with styrene, peroxy-initiated.
P–08–0724	9/22/2016	8/23/2016	(G) Cycloaliphatic anhydride, polymer with hydroxy alkyl diol, alkyl ester.
P–11–0012	9/1/2016	8/23/2016	(G) Slump retainer in concrete.
P–11–0424	9/19/2016	8/25/2016	(G) Alkenoyloxy arylphenone.
P–12–0504	9/21/2016	9/20/2016	(G) Phosphinic acid, sodium salt (1:1), reaction products with alkenedioic anhydride homopolymer, sodium salts.
P–13–0948	9/9/2016	8/31/2016	(G) Amine phosphate.
P–15–0109	9/22/2016	8/28/2016	(S) 1,2,4,5-benzenetetracarboxylic acid, mixed et and me esters, compds. with 4,4'-methylenebis[benzeneamine] mixed et and me 4,4'-carbonylbis[1,2-benzenedicarboxylate].
P–15–0545	9/28/2016	9/19/2016	(G) Amine-functional acrylic polymer.
P–15–0660	9/14/2016	8/19/2016	(G) Alicyclic anhydride, polymer with alkanepolyol, 2-(chloromethyl)oxirane, 4,4'-(1-methylethylidene)bis[phenol] and cyclic ester.
P–15–0662	9/14/2016	8/26/2016	(G) Alicyclic anhydride, polymer with alkanepolyol, 2-(chloromethyl)oxirane, , alkanediol,4,4'-(1-methylethylidene)bis[phenol] and cyclic ester.
P–15–0693	9/2/2016	8/25/2016	(G) 1,2-ethanediamine, *N*1-(2-aminoethyl)-, reaction products with polyethylenimine and polypropylene glycol -alkyl 3-(5-carboxy-1,3-dihydro-1,3-dioxo-2*H*-isoindol-2-yl) ethers.
P–15–0704	9/6/2016	8/10/2016	(S) Siloxanes and silicones, di-me, [(butylethenylmethylsilyl)oxy]- and hydrogen-terminated.
P–15–0745	9/12/2016	9/8/2016	(G) Naturally-occurring minerals, reaction products with boron sodium oxide (b4na2o7), hetero substituted alkyl acrylate polymer, kaolin and sodium silicate.
P–16–0036	9/13/2016	8/2/2016	(G) Monohydroxy substituted heteropolycycle.
P–16–0094	9/27/2016	9/24/2016	(G) Perfluoropolyether modified organosilane.
P–16–0237	9/15/2016	8/20/2016	(S) 2-propenoic acid, dodecyl ester, polymer with 2-hydroxyethyl 2-propenoate.
P–16–0263	9/8/2016	8/11/2016	(G) Alkene polymer with anhydride and imides.
P–16–0266	9/14/2016	9/8/2016	(G) Polyester polyurethane polyol.
P–16–0272	9/9/2016	8/24/2016	(S) Lecithins, soya, hydrogenated.
P–16–0340	9/7/2016	8/29/2016	(G) Glycerides, $C_{8–18}$ and C_{18} unsaturated, from algal fermentation.
P–16–0392	9/23/2016	9/6/2016	(S) Soybean oil, mixed with hydrogenated soybean oil, interesterified.

Authority: 15 U.S.C. 2601 *et seq.*

Dated: October 27, 2016.

Pamela Myrick,

Director, Information Management Division, Office of Pollution Prevention and Toxics.

[FR Doc. 2016–27195 Filed 11–9–16; 8:45 am]

BILLING CODE 6560–50–P

FEDERAL COMMUNICATIONS COMMISSION

[OMB 3060–0360]

Information Collection Being Submitted for Review and Approval to the Office of Management and Budget

AGENCY: Federal Communications Commission.

ACTION: Notice and request for comments.

SUMMARY: As part of its continuing effort to reduce paperwork burdens, and as required by the Paperwork Reduction Act (PRA) of 1995 (44 U.S.C. 3501–3520), the Federal Communication Commission (FCC or Commission) invites the general public and other Federal agencies to take this opportunity to comment on the following information collections. Comments are requested concerning: 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; the accuracy of the Commission's burden estimate; ways to enhance the quality, utility, and clarity of the information collected; 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 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 OMB 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 OMB control number.

DATES: Written comments should be submitted on or before December 12, 2016. 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 contacts below as soon as possible.

ADDRESSES: Direct all PRA comments to Nicholas A. Fraser, OMB, via email *Nicholas_A._Fraser@omb.eop.gov;* and to Cathy Williams, FCC, via email *PRA@fcc.gov* and to *Cathy.Williams@fcc.gov.* Include in the comments the OMB control number as shown in the **SUPPLEMENTARY INFORMATION** section below.

FOR FURTHER INFORMATION CONTACT: For additional information or copies of the information collection, contact Cathy Williams at (202) 418–2918. To view a copy of this information collection request (ICR) submitted to OMB: (1) Go to the Web page <*http://www.reginfo.gov/public/do/PRAMain*>, (2) look for the section of the Web page called ''Currently Under Review,'' (3) click on the downward-pointing arrow in the ''Select Agency'' box below the ''Currently Under Review'' heading, (4) select ''Federal Communications Commission'' from the list of agencies presented in the ''Select Agency'' box, (5) click the ''Submit'' button to the right of the ''Select Agency'' box, (6) when the list of FCC ICRs currently under review appears, look for the OMB control number of this ICR and then click on the ICR Reference Number. A copy of the FCC submission to OMB will be displayed.

SUPPLEMENTARY INFORMATION:

OMB Control No.: 3060–0360.

Title: Section 80.409, Station Logs (Maritime Services).

Form No.: N/A.

Type of Review: Extension of a currently approved collection.

Respondents: Business or other for-profit entities, not-for-profit institutions, and state, local and tribal government.

Number of Respondents: 19,919 respondents; 19,919 responses.

Estimated Time per Response: 27.3–95 hours.

Frequency of Response: Recordkeeping requirement.

Obligation to Respond: Required to obtain or retain benefits. The statutory authority for this collection is contained in 47 U.S.C. 151–155, 301–609.

Total Annual Burden: 561,188 hours.

Annual Cost Burden: None.

Privacy Act Impact Assessment: No impact(s).

Nature and Extent of Confidentiality: There is no need for confidentiality with this collection of information.

Needs and Uses: The Commission will submit this extension (no change in the recordkeeping requirement) to the OMB after this 60 day comment period to obtain the full three-year clearance from them. The information collection requirements are as follows:

Section 80.409(c), Public Coast Station Logs: This requirement is necessary to document the operation and public correspondence of public coast radio telegraph, public coast radiotelephone stations, and Alaska public-fixed stations, including the logging of distress and safety calls where applicable. Entries must be made giving details of all work performed which may affect the proper operation of the station. Logs must be retained by the licensee for a period of two years from the date of entry, and, where applicable, for such additional periods such as logs relating to a distress situation or disaster must be retained for three years from the date of entry in the log. If the Commission has notified the licensee of an investigation, the related logs must be retained until the licensee is specifically authorized in writing to destroy them. Logs relating to any claim or complaint of which the station licensee has notice must be retained until the claim or complaint has been satisfied or barred by statute limiting the time for filing suits upon such claims.

Section 80.409(d), Ship Radiotelegraph Logs: Logs of ship stations which are compulsorily equipped for radiotelegraphy and operating in the band 90 to 535 kHz must contain specific information in log entries according to this subsection.

Section 80.409(e), Ship Radiotelephone Logs: Logs of ship stations which are compulsorily equipped for radiotelephony must *62128 contain specific information in applicable log entries and the time of their occurrence.

The recordkeeping requirements contained in section 80.409 is necessary to document the operation and public correspondence service of public coast radiotelegraph, public coast radiotelephone stations and Alaska-public fixed stations, ship radiotelegraph, ship radiotelephone and applicable radiotelephone including the logging of distress and safety calls where applicable.

Federal Communications Commission.

Marlene H. Dortch,

Secretary, Office of the Secretary.

[FR Doc. 2016–27127 Filed 11–9–16; 8:45 am]

BILLING CODE 6712–01–P

FEDERAL ELECTION COMMISSION

Sunshine Act Meeting

AGENCY: Federal Election Commission.

DATE AND TIME: Tuesday, November 15, 2016 at 10:00 a.m.

PLACE: 999 E Street NW., Washington, DC.

STATUS: This meeting will be closed to the public.

ITEMS TO BE DISCUSSED: Compliance matters pursuant to 52 U.S.C. 30109.

Matters relating to internal personal decisions, or internal rules and practices. Matters concerning participation in civil actions or proceedings or arbitration. Information the premature disclosure of which would be likely to have a Considerable adverse effect on the implementation of a proposed Commission action.

* * * * *

PERSON TO CONTACT FOR INFORMATION: Judith Ingram, Press Officer, Telephone: (202) 694–1220.

Shelley E. Garr,

Deputy Secretary.

[FR Doc. 2016–27328 Filed 11–8–16; 4:15 pm]

BILLING CODE 6715–01–P

FEDERAL MARITIME COMMISSION

Notice of Agreements Filed

The Commission hereby gives notice of the filing of the following agreements under the Shipping Act of 1984. Interested parties may submit comments on the agreements to the Secretary, Federal Maritime Commission, Washington, DC 20573, within twelve days of the date this notice appears in the **Federal Register**. Copies of the agreements are available through the Commission's Web site (*www.fmc.gov*) or by contacting the Office of Agreements at (202) 523–5793 or *tradeanalysis@fmc.gov.*

Agreement No.: 010099–064.

Title: International Council of Containership Operators.

Parties: Maersk Line A/S; CMA CGM, S.A.; China COSCO Shipping Corporation Limited; Crowley Maritime Corp.; Evergreen Marine Corporation (Taiwan), Ltd.; Hamburg-Süd KG; Hapag-Lloyd AG and Hapag-Lloyd USA LLC; Hyundai Merchant Marine Co., Ltd.; Kawasaki Kisen Kaisha, Ltd.; MSC Mediterranean Shipping Company S.A.; Mitsui O.S.K. Lines, Ltd.; Nippon Yusen Kaisha; Orient Overseas Container Line, Ltd.; Pacific International Lines (Pte) Ltd.; United Arab Shipping Company (S.A.G.); Wan Hai Lines Ltd.; Yang Ming Transport Marine Corp.; and Zim Integrated Shipping Services Ltd.

Filing Party: John Longstreth, Esq.; K & L Gates LLP; 1601 K Street NW., Washington, DC 20006–1600.

Synopsis: The amendment deletes Hanjin Shipping Co., Ltd. as a party to the Agreement.

Agreement No.: 012129–002.

Title: EUKOR/''K'' Line Space Charter Agreement.

Parties: EUKOR Car Carriers, Inc. and Kawasaki Kisen Kaisha, Ltd.

Filing Party: John P. Meade, Esq.; Vice-President; K- Line America, Inc.; 6009 Bethlehem Road; Preston, MD 21655.

Synopsis: The amendment adds the Dominican Republic, Grand Cayman, St. Maarten, Haiti, and the Bahamas to the geographic scope of the Agreement.

Agreement No.: 012395–001.

Title: MSC/ACL Trans-Atlantic Space Charter.

Parties: Atlantic Container Line A.B. and MSC Mediterranean Shipping Company S.A.

Filing Party: Wayne R. Rohde, Esq.; Cozen O'Connor LLP; 1200 Nineteenth St. NW., Washington, DC 20036.

Synopsis: The amendment extends the duration of the Agreement for one year.

Agreement No.: 012439.

Title: THE Alliance Agreement.

Parties: Hapag-Lloyd AG and Hapag-Lloyd USA LLC (acting as one party); Kawasaki Kisen Kaisha, Ltd.; Mitsui O.S.K. Lines, Ltd.; Nippon Yusen Kaisha; and Yang Ming Marine Transport Corp.

Filing Party: David F. Smith, Esq.; Cozen O'Conner; 1200 Nineteenth Street NW., Washington, DC 20036.

Synopsis: The Agreement authorizes the Parties to charter and exchange space on one another's vessels and to rationalize, coordinate and cooperate with respect to the Parties' transportation services and operations.

By Order of the Federal Maritime Commission.

Dated: November 7, 2016.

Rachel E. Dickon,

Assistant Secretary.

[FR Doc. 2016–27185 Filed 11–9–16; 8:45 am]

BILLING CODE 6731–AA–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

[Docket No. FDA–2016–D–3275]

Product Labeling for Certain Ultrasonic Surgical Aspirator Devices; Draft Guidance for Industry and Food and Drug Administration Staff; Availability

AGENCY: Food and Drug Administration, HHS.

ACTION: Notice of availability.

SUMMARY: The Food and Drug Administration (FDA or Agency) is announcing the availability of the draft guidance entitled ''Product Labeling for Certain Ultrasonic Surgical Aspirator Devices.'' FDA is providing a specific labeling recommendation in this guidance to promote the safe and effective use of ultrasonic surgical aspirator devices. The labeling recommendation is being made in light of the risk of tissue dissemination and relates to use of these devices in the removal of uterine fibroid. This draft guidance is not final nor is it in effect at this time.

DATES: Although you can comment on any guidance at any time (see 21 CFR 10.115(g)(5)), to ensure that the Agency considers your comment of this draft guidance before it begins work on the final version of the guidance, submit either electronic or written comments on the draft guidance by January 9, 2017.

ADDRESSES: You may submit comments as follows:

Electronic Submissions

Submit electronic comments in the following way:

- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the instructions for submitting comments. Comments submitted electronically, including attachments, to *http://www.regulations.gov* will be posted to the docket unchanged. Because your comment will be made public, you are solely responsible for ensuring that your comment does not include any confidential information that you or a third party may not wish to be posted, such as medical information, your or anyone else's Social Security number, or confidential business information, such as a manufacturing process. Please note that if you include your name, contact information, or other information that identifies you in the body of your comments, that information will be posted on *http://www.regulations.gov.*
- If you want to submit a comment with confidential information that you do not wish to be made available to the public, submit the comment as a written/paper submission and in the manner detailed (see ''Written/Paper Submissions'' and ''Instructions'').

Written/Paper Submissions

Submit written/paper submissions as follows:

- *Mail/Hand delivery/Courier (for written/paper submissions):* Division of Dockets Management (HFA–305), Food and Drug Administration, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852.
- For written/paper comments submitted to the Division of Dockets Management, FDA will post your comment, as well as any attachments, except for information submitted,

marked and identified, as confidential, if submitted as detailed in ''Instructions.''

Instructions: All submissions received must include the Docket No. FDA–2016–D–3275 for ''Product Labeling for Certain Ultrasonic Surgical Aspirator Devices.'' Received comments will be placed in the docket and, except for those submitted as ''Confidential Submissions,'' publicly viewable at *http://www.regulations.gov* or at the Division of Dockets Management between 9 a.m. and 4 p.m., Monday through Friday.

• Confidential Submissions—To submit a comment with confidential information that you do not wish to be made publicly available, submit your comments only as a written/paper submission. You should submit two copies total. One copy will include the information you claim to be confidential with a heading or cover note that states ''THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION.'' The Agency will review this copy, including the claimed confidential information, in its consideration of comments. The second copy, which will have the claimed confidential information redacted/blacked out, will be available for public viewing and posted on *http://www.regulations.gov.* Submit both copies to the Division of Dockets Management. If you do not wish your name and contact information to be made publicly available, you can provide this information on the cover sheet and not in the body of your comments and you must identify this information as ''confidential.'' Any information marked as ''confidential'' will not be disclosed except in accordance with 21 CFR 10.20 and other applicable disclosure law. For more information about FDA's posting of comments to public dockets, see 80 FR 56469, September 18, 2015, or access the information at: *http://www.fda.gov/regulatoryinformation/dockets/default.htm.*

Docket: For access to the docket to read background documents or the electronic and written/paper comments received, go to *http://www.regulations.gov* and insert the docket number, found in brackets in the heading of this document, into the ''Search'' box and follow the prompts and/or go to the Division of Dockets Management, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852.

An electronic copy of the guidance document is available for download from the Internet. See the **SUPPLEMENTARY INFORMATION** section for information on electronic access to the guidance. Submit written requests for a single hard copy of the draft guidance document entitled ''Product Labeling for Certain Ultrasonic Surgical Aspirator Devices'' to the Office of the Center Director, Guidance and Policy Development, Center for Devices and Radiological Health, Food and Drug Administration, 10903 New Hampshire Ave., Bldg. 66, Rm. 5431, Silver Spring, MD 20993–0002. Send one self-addressed adhesive label to assist that office in processing your request.

FOR FURTHER INFORMATION CONTACT: Jismi Johnson, Center for Devices and Radiological Health, Food and Drug Administration, 10903 New Hampshire Ave., Bldg. 66, Rm.1524, Silver Spring, MD 20993–0002, 301–796–6424.

SUPPLEMENTARY INFORMATION:

I. Background

FDA is issuing a draft guidance to recommend the addition of a specific safety statement to the product labeling of certain ultrasonic surgical aspirator devices. This draft guidance applies to ultrasonic surgical aspirator devices intended for use in general surgery, laparoscopy, and/or gynecologic surgery. Ultrasonic surgical aspirator devices are surgical tools intended to fragment, emulsify, and aspirate hard and soft tissue. However, the mechanism of action of ultrasonic surgical aspirator devices creates the potential for tissue dissemination. In light of this risk, FDA is providing a specific labeling recommendation in this draft guidance regarding use of these devices in the removal of uterine fibroids.

FDA is aware that ultrasonic surgical aspirator devices are sometimes used to treat advanced malignancy through cytoreduction (also known as debulking). When used in advanced cancers, the risk of adverse clinical effects from tissue dissemination may be small compared to the device's potential benefits.

In certain clinical circumstances, however, the unintended dissemination of cancerous cells may have a significant adverse effect that outweighs any demonstrated benefits. Specifically, use of an ultrasonic surgical aspirator device during treatment for symptomatic uterine fibroids on a woman with an occult uterine sarcoma could result in dissemination of this cancer. Therefore, FDA recommends that manufacturers of ultrasonic surgical aspirator devices with a general indication for use in general surgery, laparoscopy, and/or gynecologic surgery prominently include a specific contraindication in their product labeling that the device is not indicated for and should not be used for the removal of uterine fibroids.

FDA is seeking comment on specifically how these devices are used in practice and whether the proposed contraindication appropriately limits the patient population when considering the clinical utility of ultrasonic surgical aspirator devices.

II. Significance of Guidance

This draft guidance is being issued consistent with FDA's good guidance practices regulation (21 CFR 10.115). The draft guidance, when finalized, will represent the current thinking of FDA on Product Labeling for Certain Ultrasonic Surgical Aspirator Devices. It does not establish any rights for any person and is not binding on FDA or the public. You can use an alternative approach if it satisfies the requirements of the applicable statutes and regulations.

III. Electronic Access

Persons interested in obtaining a copy of the draft guidance may do so by downloading an electronic copy from the Internet. A search capability for all Center for Devices and Radiological Health guidance documents is available at *http://www.fda.gov/MedicalDevices/DeviceRegulationandGuidance/GuidanceDocuments/default.htm.* Guidance documents are also available at *http://www.regulations.gov.* Persons unable to download an electronic copy of ''Product Labeling for Certain Ultrasonic Surgical Aspirator Devices'' may send an email request to *CDRH-Guidance@fda.hhs.gov* to receive an electronic copy of the document. Please use the document number 1500072 to identify the guidance you are requesting.

IV. Paperwork Reduction Act of 1995

This draft guidance refers to previously approved collections of information found in FDA regulations. These collections of information are subject to review by the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501–3520). The collections of information in 21 CFR part 807, subpart E have been approved under OMB control number 0910–0120; the collections of information in 21 CFR part 820 have been approved under OMB control number 0910–0073; and the collections of information in 21 CFR part 801 have been approved under OMB control number 0910–0485.

Dated: November 4, 2016.

Leslie Kux,

Associate Commissioner for Policy.

[FR Doc. 2016–27106 Filed 11–9–16; 8:45 am]

BILLING CODE 4164–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

[Docket No. FDA–2013–N–0618]

Agency Information Collection Activities; Proposed Collection; Comment Request; Electronic Products

AGENCY: Food and Drug Administration, HHS.

ACTION: Notice.

SUMMARY: The Food and Drug Administration (FDA) is announcing an opportunity for public comment on the proposed collection of certain information by the Agency. Under the Paperwork Reduction Act of 1995 (the PRA), Federal Agencies are required to publish notice in the **Federal Register** concerning each proposed collection of information, including each proposed extension of an existing collection of information, and to allow 60 days for public comment in response to the notice. This notice solicits comments on requirements for reporting and recordkeeping, general and specific requirements, and the availability of sample electronic products for manufacturers and distributors of electronic products.

DATES: Submit either electronic or written comments on the collection of information by January 9, 2017.

ADDRESSES: You may submit comments as follows:

Electronic Submissions

Submit electronic comments in the following way:

• *Federal eRulemaking Portal: http://www.regulations.gov*. Follow the instructions for submitting comments. Comments submitted electronically, including attachments, to *http://www.regulations.gov* will be posted to the docket unchanged. Because your comment will be made public, you are solely responsible for ensuring that your comment does not include any confidential information that you or a third party may not wish to be posted, such as medical information, your or anyone else's Social Security number, or confidential business information, such as a manufacturing process. Please note that if you include your name, contact information, or other information that identifies you in the body of your comments, that information will be posted on *http://www.regulations.gov*.

• If you want to submit a comment with confidential information that you do not wish to be made available to the public, submit the comment as a written/paper submission and in the manner detailed (see ''Written/Paper Submissions'' and ''Instructions'').

Written/Paper Submissions

Submit written/paper submissions as follows:

• *Mail/Hand delivery/Courier (for written/paper submissions):* Division of Dockets Management (HFA–305), Food and Drug Administration, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852.

• For written/paper comments submitted to the Division of Dockets Management, FDA will post your comment, as well as any attachments, except for information submitted, marked and identified, as confidential, if submitted as detailed in ''Instructions.''

Instructions: All submissions received must include the Docket No. FDA–2013–N–0618 for ''Agency Information Collection Activities; Proposed Collection; Comment Request; Electronic Products.'' Received comments will be placed in the docket and, except for those submitted as ''Confidential Submissions,'' publicly viewable at *http://www.regulations.gov* or at the Division of Dockets Management between 9 a.m. and 4 p.m., Monday through Friday.

• Confidential Submissions—To submit a comment with confidential information that you do not wish to be made publicly available, submit your comments only as a written/paper submission. You should submit two copies total. One copy will include the information you claim to be confidential with a heading or cover note that states ''THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION.'' The Agency will review this copy, including the claimed confidential information, in its consideration of comments. The second copy, which will have the claimed confidential information redacted/blacked out, will be available for public viewing and posted on *http://www.regulations.gov*. Submit both copies to the Division of Dockets Management. If you do not wish your name and contact information to be made publicly available, you can provide this information on the cover sheet and not in the body of your comments and you must identify this information as ''confidential.'' Any information marked as ''confidential'' will not be disclosed except in accordance with 21 CFR 10.20 and other applicable disclosure law. For more information about FDA's posting of comments to public dockets, see 80 FR 56469, September 18, 2015, or access the information at: *http://www.fda.gov/regulatoryinformation/dockets/default.htm*.

Docket: For access to the docket to read background documents or the electronic and written/paper comments received, go to *http://www.regulations.gov* and insert the docket number, found in brackets in the heading of this document, into the ''Search'' box and follow the prompts and/or go to the Division of Dockets Management, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852.

FOR FURTHER INFORMATION CONTACT: FDA PRA Staff, Office of Operations, Food and Drug Administration, Three White Flint North, 10A63, 11601 Landsdown St., North Bethesda, MD 20852, *PRAStaff@fda.hhs.gov*.

SUPPLEMENTARY INFORMATION: Under the PRA (44 U.S.C. 3501–3520), Federal Agencies must obtain approval from the Office of Management and Budget (OMB) for each collection of information they conduct or sponsor. ''Collection of information'' is defined in 44 U.S.C. 3502(3) and 5 CFR 1320.3(c) and includes Agency requests or requirements that members of the public submit reports, keep records, or provide information to a third party. Section 3506(c)(2)(A) of the PRA (44 U.S.C. 3506(c)(2)(A)) requires Federal Agencies to provide a 60-day notice in the **Federal Register** concerning each proposed collection of information, including each proposed extension of an existing collection of information, before submitting the collection to OMB for approval. To comply with this requirement, FDA is publishing notice of the proposed collection of information set forth in this document.

With respect to the following collection of information, FDA invites comments on these topics: (1) Whether the proposed collection of information is necessary for the proper performance of FDA's functions, including whether the information will have practical utility; (2) the accuracy of FDA's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used; (3) ways to enhance the quality, utility, and clarity of the information to be collected; and (4) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques,

when appropriate, and other forms of information technology.

Electronic Products—21 CFR parts 1002 Through 1010 (OMB Control Number 0910–0025)—Extension

Under sections 532 through 542 of the Federal Food, Drug, and Cosmetic Act (the FD&C Act) (21 U.S.C. 360ii through 360ss), FDA has the responsibility to protect the public from unnecessary exposure of radiation from electronic products. The regulations issued under these authorities are listed in Title 21 of the Code of Federal Regulations, chapter I, subchapter J, parts 1000 through 1050 (21 CFR parts 1000 through 1050).

Section 532 of the FD&C Act directs the Secretary of the Department of Health and Human Services (the Secretary), to establish and carry out an electronic product radiation control program, including the development, issuance, and administration of performance standards to control the emission of electronic product radiation from electronic products. The program is designed to protect the public health and safety from electronic radiation, and the FD&C Act authorizes the Secretary to procure (by negotiation or otherwise) electronic products for research and testing purposes and to sell or otherwise dispose of such products. Section 534(g) of the FD&C Act directs the Secretary to review and evaluate industry testing programs on a continuing basis; and section 535(e) and (f) of the FD&C Act directs the Secretary to immediately notify manufacturers of, and ensure correction of, radiation defects or noncompliance with performance standards. Section 537(b) of the FD&C Act contains the authority to require manufacturers of electronic products to establish and maintain records (including testing records), make reports, and provide information to determine whether the manufacturer has acted in compliance.

The regulations under parts 1002 through 1010 specify reports to be provided by manufacturers and distributors to FDA and records to be maintained in the event of an investigation of a safety concern or a product recall. FDA conducts laboratory compliance testing of products covered by regulations for product standards in parts 1020, 1030, 1040, and 1050.

FDA details product-specific performance standards that specify information to be supplied with the product or require specific reports. The information collections are either specifically called for in the FD&C Act or were developed to aid the Agency in performing its obligations under the FD&C Act. The data reported to FDA and the records maintained are used by FDA and the industry to make decisions and take actions that protect the public from radiation hazards presented by electronic products. This information refers to the identification of, location of, operational characteristics of, quality assurance programs for, and problem identification and correction of electronic products. The data provided to users and others are intended to encourage actions to reduce or eliminate radiation exposures.

FDA uses the following forms to aid respondents in the submission of information for this information collection:

Form FDA 2579 ''Report of Assembly of a Diagnostic X-Ray System''
Form FDA 2767 ''Notice of Availability of Sample Electronic Product''
Form FDA 2877 ''Declaration for Imported Electronic Products Subject to Radiation Control Standards''
Form FDA 3649 ''Accidental Radiation Occurrence (ARO)''
Form FDA 3626 ''A Guide for the Submission of Initial Reports on Diagnostic X-Ray Systems and Their Major Components''
Form FDA 3627 ''Diagnostic X-Ray CT Products Radiation Safety Report''
Form FDA 3628 ''General Annual Report (Includes Medical, Analytical, and Industrial X-Ray Products Annual Report)''
Form FDA 3629 ''Abbreviated Report''
Form FDA 3630 ''Guide for Preparing Product Reports on Sunlamps and Sunlamp Products''
Form FDA 3631 ''Guide for Preparing Annual Reports on Radiation Safety Testing of Sunlamp Products''
Form FDA 3632 ''Guide for Preparing Product Reports on Lasers and Products Containing Lasers''
Form FDA 3633 ''General Variance Request''
Form FDA 3634 ''Television Products Annual Report''
Form FDA 3635 ''Laser Light Show Notification''
Form FDA 3636 ''Guide for Preparing Annual Reports on Radiation Safety Testing of Laser and Laser Light Show Products''
Form FDA 3637 ''Laser Original Equipment Manufacturer (OEM) Report''
Form FDA 3638 ''Guide for Filing Annual Reports for X-Ray Components and Systems''
Form FDA 3639 ''Guidance for the Submission of Cabinet X-Ray System Reports Pursuant to 21 CFR 1020.40''
Form FDA 3640 ''Reporting Guide for Laser Light Shows and Displays''
Form FDA 3147 ''Application for a Variance From 21 CFR 1040.11(c) for a Laser Light Show, Display, or Device''
Form FDA 3641 ''Cabinet X-Ray Annual Report''
Form FDA 3642 ''General Correspondence''
Form FDA 3643 ''Microwave Oven Products Annual Report''
Form FDA 3644 ''Guide for Preparing Product Reports for Ultrasonic Therapy Products''
Form FDA 3645 ''Guide for Preparing Annual Reports for Ultrasonic Therapy Products''
Form FDA 3646 ''Mercury Vapor Lamp Products Radiation Safety Report''
Form FDA 3647 ''Guide for Preparing Annual Reports on Radiation Safety Testing of Mercury Vapor Lamps''
Form FDA 3659 ''Reporting and Compliance Guide for Television Products''
Form FDA 3660 ''Guidance for Preparing Reports on Radiation Safety of Microwave Ovens''
Form FDA 3661 ''A Guide for the Submission of an Abbreviated Report on X-Ray Tables, Cradles, Film Changers or Cassette Holders Intended for Diagnostic Use''
Form FDA 3662 ''A Guide for the Submission of an Abbreviated Radiation Safety Report on Cephalometric Devices Intended for Diagnostic Use''
Form FDA 3663 ''Abbreviated Reports on Radiation Safety for Microwave Products (Other than Microwave Ovens)''
Form FDA 3801 ''Guide for Preparing Initial Reports and Model Change Reports on Medical Ultraviolet Lamps and Products Containing Such Lamps''

The respondents to this information collection are electronic product and x-ray manufacturers, importers, and assemblers. The burden estimates were derived by consultation with FDA and industry personnel, and are based on data collected from industry, including recent product report submissions. An evaluation of the type and scope of information requested was also used to derive some time estimates.

FDA estimates the burden of this collection of information as follows:

TABLE 1—ESTIMATED ANNUAL REPORTING BURDEN [1] [2]

Activity/21 CFR section	FDA form	Number of respondents	Number of responses per respondent	Total annual responses	Average burden per response	Total hours
Product reports—1002.10(a) through (k).	3626—Diagnostic x-ray 3627—CT x-ray 3639—Cabinet x-ray 3632—Laser 3640—Laser light show 3630—Sunlamp 3646—Mercury vapor lamp 3644—Ultrasonic therapy. 3659—TV. 3660—Microwave oven. 3801—UV lamps.	1,400	2.2	3,080	24	73,920
Product safety or testing changes—1002.11(a) and (b).		480	2.5	1,200	0.5 (30 minutes)	600
Abbreviated reports—1002.12	3629—General abbreviated report. 3661—X-ray tables, etc. 3662—Cephalometric device 3663—Microwave products (non-oven).	60	1.8	108	5	540
Annual reports—1002.13(a) and (b).	3628—General 3634—TV. 3638—Diagnostic x-ray 3641—Cabinet x-ray 3643—Microwave oven 3636—Laser 3631—Sunlamp 3647—Mercury vapor lamp 3645—Ultrasonic therapy.	1,660	1.3	2,158	18	38,844
Quarterly updates for new models—1002.13(c).		120	1.4	168	0.5 (30 minutes)	84
Accidental radiation occurrence reports—1002.20.	3649—ARO	30	6.7	201	2	402
Exemption requests—1002.50(a) and 1002.51.	3642—General correspondence.	4	1.3	5	1	5
Product and sample information—1005.10.	2767—Sample product	5	1	5	0.1 (6 minutes)	1
Identification information and compliance status—1005.25.	2877—Imports declaration	12,620	2.5	31,550	0.2 (12 minutes)	6,310
Alternate means of certification—1010.2(d).		1	2	2	5	10
Variance—1010.4(b)	3633—General variance request. 3147—Laser show variance request. 3635—Laser show notification.	350	1.1	385	1.2 (1 hour and 12 minutes).	462
Exemption from performance standards—1010.5(c) and (d).		1	1	1	22	22
Alternate test procedures—1010.13.		1	1	1	10	10
Report of assembly of diagnostic x-ray components—1020.30(d), (d)(1), and (2).	2579—Assembler report	1,230	34	41,820	0.30 (18 minutes)	12,546
Microwave oven exemption from warning labels—1030.10(c)(6)(iv).		1	1	1	1	1
Laser products registration—1040.10(a)(3)(i).	3637—Original equipment manufacturer (OEM) report.	70	2.9	203	3	609
Total						134,366

[1] There are no capital costs or operating and maintenance costs associated with this collection of information.
[2] Numbers have been rounded.

TABLE 2—ESTIMATED ANNUAL RECORDKEEPING BURDEN [1] [2]

Activity/21 CFR section	Number of recordkeepers	Number of records per recordkeeper	Total annual records	Average burden per recordkeeping	Total hours
Manufacturers records—1002.30 and 1002.31(a)	1,650	1,650	2,722,500	0.12 (7 minutes)	326,700
Dealer/distributor records—1002.40 and 1002.41	3,110	50	155,500	0.05 (30 minutes)	7,775
Information on diagnostic x-ray systems—1020.30(g)	50	1	50	0.5 (30 minutes)	25
Laser products distribution records—1040.10(a)(3)(ii)	70	1	70	1	70
Total					334,570

[1] There are no capital costs or operating and maintenance costs associated with this collection of information.
[2] Numbers have been rounded.

TABLE 3—ESTIMATED ANNUAL THIRD-PARTY DISCLOSURE BURDEN [1] [2]

Activity/21 CFR section	Number of respondents	Number of disclosures per respondent	Total annual disclosures	Average burden per disclosure	Total hours
Technical and safety information for users—1002.3	1	1	1	12	12
Dealer/distributor records—1002.40 and 1002.41	30	3	90	1	90
Television receiver critical component warning—1020.10(c)(4)	1	1	1	1	1
Cold cathode tubes—1020.20(c)(4)	1	1	1	1	1
Information on diagnostic x-ray systems—1020.30(g)	6	1	6	55	330
Statement of maximum line current of x-ray systems—1020.30(g)(2)	6	1	6	10	60
Diagnostic x-ray system safety and technical information—1020.30(h)(1) through (4)	6	1	6	200	1,200
Fluoroscopic x-ray system safety and technical information—1020.30(h)(5) and (6) and 1020.32(a)(1), (g), and (j)(4)	5	1	5	25	125
CT equipment—1020.33(c), (d), (g)(4), and (j)	5	1	5	150	750
Cabinet x-ray systems information—1020.40(c)(9)(i) and (ii)	6	1	6	40	240
Microwave oven radiation safety instructions—1030.10(c)(4)	1	1	1	20	20
Microwave oven safety information and instructions—1030.10(c)(5)(i) through (iv)	1	1	1	20	20
Microwave oven warning labels—1030.10(c)(6)(iii)	1	1	1	1	1
Laser products information—1040.10(h)(1)(i) through (vi)	3	1	3	20	60
Laser product service information—1040.10(h)(2)(i) and (ii)	3	1	3	20	60
Medical laser product instructions—1040.11(a)(2)	2	1	2	10	20
Sunlamp products instructions—1040.20	1	1	1	10	10
Mercury vapor lamp labeling—1040.30(c)(1)(ii)	1	1	1	1	1
Mercury vapor lamp permanently affixed labels—1040.30(c)(2)	1	1	1	1	1
Ultrasonic therapy products—1050.10(d)(1) through (4), (f)(1), and (f)(2)(iii)	1	1	1	56	56
Total					3,058

[1] There are no capital costs or operating and maintenance costs associated with this collection of information.
[2] Numbers have been rounded.

Dated: November 4, 2016.

Leslie Kux,

Associate Commissioner for Policy.

[FR Doc. 2016–27199 Filed 11–9–16; 8:45 am]

BILLING CODE 4164–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

[Docket No. FDA–2009–D–0137]

Amendment to Guidance for Industry: Use of Serological Tests To Reduce the Risk of Transmission of Trypanosoma cruzi Infection in Whole Blood and Blood Components Intended for Transfusion; Draft Guidance for Industry; Availability

AGENCY: Food and Drug Administration, HHS.

ACTION: Notice of availability.

SUMMARY: The Food and Drug Administration (FDA or Agency) is announcing the availability of a draft document entitled ''Amendment to Guidance for Industry: Use of Serological Tests to Reduce the Risk of Transmission of *Trypanosoma cruzi* Infection in Whole Blood and Blood Components Intended for Transfusion; Draft Guidance for Industry.'' The draft guidance document, when finalized, is intended to amend the document entitled ''Guidance for Industry: Use of Serological Tests to Reduce the Risk of Transmission of *Trypanosoma cruzi* Infection in Whole Blood and Blood Components Intended for Transfusion'' dated December 2010 (2010 Chagas Guidance) by expanding the scope of the guidance to include the collection of blood and blood components for use in manufacturing a product, including donations intended as a component of, or used to manufacture, a medical device; removing the recommendation to ask donors about a history of Chagas disease; and providing a recommendation for a reentry algorithm for donors deferred on the basis of screening test results for antibodies to *Trypanosoma cruzi* (*T. cruzi*) or on the basis of answering ''yes'' to the Chagas screening question. Further, the guidance is intended to notify blood establishments that collect blood and blood components that FDA has licensed a supplemental test for antibodies to *T. cruzi* and further testing of donations found repeatedly reactive to a screening test for *T. cruzi* is therefore required. The draft guidance does not apply to the collection of Source Plasma.

DATES: Although you can comment on any guidance at any time (see 21 CFR 10.115(g)(5)), to ensure that the Agency considers your comment on this draft guidance before it begins work on the final version of the guidance, submit either electronic or written comments on the draft guidance by February 8, 2017.

ADDRESSES: You may submit comments as follows:

Electronic Submissions

Submit electronic comments in the following way:

- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the instructions for submitting comments. Comments submitted electronically, including attachments, to *http://www.regulations.gov* will be posted to the docket unchanged. Because your comment will be made public, you are solely responsible for ensuring that your comment does not include any confidential information that you or a third party may not wish to be posted, such as medical information, your or anyone else's Social Security number, or confidential business information, such as a manufacturing process. Please note that if you include your name, contact information, or other information that identifies you in the body of your comments, that information will be posted on *http://www.regulations.gov.*
- If you want to submit a comment with confidential information that you do not wish to be made available to the public, submit the comment as a written/paper submission and in the manner detailed (see ''Written/Paper Submissions'' and ''Instructions'').

Written/Paper Submissions

Submit written/paper submissions as follows:

- *Mail/Hand delivery/Courier (for written/paper submissions):* Division of Dockets Management (HFA–305), Food and Drug Administration, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852.
- For written/paper comments submitted to the Division of Dockets Management, FDA will post your comment, as well as any attachments, except for information submitted, marked and identified, as confidential, if submitted as detailed in ''Instructions.''

Instructions: All submissions received must include the Docket No. FDA–2009–D–0137 for ''Amendment to Guidance for Industry: Use of Serological Tests to Reduce the Risk of Transmission of *Trypanosoma cruzi* Infection in Whole Blood and Blood Components Intended for Transfusion; Draft Guidance for Industry.'' Received comments will be placed in the docket and, except for those submitted as ''Confidential Submissions,'' publicly viewable at *http://www.regulations.gov* or at the Division of Dockets Management between 9 a.m. and 4 p.m., Monday through Friday.

- Confidential Submissions—To submit a comment with confidential information that you do not wish to be made publicly available, submit your comments only as a written/paper submission. You should submit two copies total. One copy will include the information you claim to be confidential with a heading or cover note that states ''THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION.'' The Agency will review this copy, including the claimed confidential information, in its consideration of comments. The second copy, which will have the claimed confidential information redacted/blacked out, will be available for public viewing and posted on *http://www.regulations.gov.* Submit both copies to the Division of Dockets Management. If you do not wish your name and contact information to be made publicly available, you can provide this information on the cover sheet and not in the body of your comments and you must identify this information as ''confidential.'' Any information marked as ''confidential'' will not be disclosed except in accordance with 21 CFR 10.20 and other applicable disclosure law. For more information about FDA's posting of comments to public dockets, see 80 FR 56469, September 18, 2015, or access the information at: *http://www.fda.gov/regulatoryinformation/dockets/default.htm.*

Docket: For access to the docket to read background documents or the electronic and written/paper comments received, go to *http://www.regulations.gov* and insert the docket number, found in brackets in the heading of this document, into the ''Search'' box and follow the prompts and/or go to the Division of Dockets Management, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852.

Submit written requests for single copies of the draft guidance to the Office of Communication, Outreach and Development, Center for Biologics Evaluation and Research (CBER), Food and Drug Administration, 10903 New Hampshire Ave., Bldg. 71, Rm. 3128, Silver Spring, MD 20993–0002. Send one self-addressed adhesive label to assist the office in processing your requests. The draft guidance may also be obtained by mail by calling CBER at 1–800–835–4709 or 240–402–8010. See the **SUPPLEMENTARY INFORMATION** section for electronic access to the draft guidance document.

FOR FURTHER INFORMATION CONTACT: Tami Belouin, Center for Biologics Evaluation and Research, Food and Drug Administration, 10903 New

Hampshire Ave., Bldg. 71, Rm. 7301, Silver Spring, MD 20993–0002, 240–402–7911.

SUPPLEMENTARY INFORMATION:

I. Background

FDA is announcing the availability of a draft document entitled ''Amendment to Guidance for Industry: Use of Serological Tests to Reduce the Risk of Transmission of *Trypanosoma cruzi* Infection in Whole Blood and Blood Components Intended for Transfusion; Draft Guidance for Industry.'' The draft guidance, when finalized, is intended to amend the 2010 Chagas Guidance (75 FR 75810, December 6, 2010) by expanding the scope of the guidance to include the collection of blood and blood components for use in manufacturing a product, including donations intended as a component of, or used to manufacture, a medical device; removing the recommendation to ask donors about a history of Chagas disease; and providing a recommendation for a reentry algorithm for donors deferred on the basis of screening test results for antibodies to *T. cruzi* or on the basis of answering ''yes'' to the Chagas screening question.

In the **Federal Register** of May 22, 2015 (80 FR 29842), FDA published the final rule entitled ''Requirements for Blood and Blood Components Intended for Transfusion or for Further Manufacturing Use.'' The final rule became effective May 23, 2016. The draft guidance is intended to notify blood establishments that collect blood and blood components that *T. cruzi* is defined as a relevant transfusion-transmitted infection in 21 CFR 630.3(h)(1), subject to the testing requirements in 21 CFR 610.40, the donor deferral practices in 21 CFR 610.41, and the donor notification requirements in 21 CFR 630.40 under the final rule. In addition, the draft guidance is intended to notify blood establishments that collect blood and blood components that FDA has licensed a supplemental test for antibodies to *T. cruzi* and further testing of donations found repeatedly reactive to a screening test for *T. cruzi* is therefore required under 21 CFR 610.40(e). The draft guidance does not apply to the collection of Source Plasma. All other recommendations in the 2010 Chagas Guidance would remain unchanged.

This draft guidance is being issued consistent with FDA's good guidance practices regulation (21 CFR 10.115). The draft guidance, when finalized, will represent the current thinking of FDA on ''Amendment to Guidance for Industry: Use of Serological Tests to Reduce the Risk of Transmission of *Trypanosoma cruzi* Infection in Whole Blood and Blood Components Intended for Transfusion; Draft Guidance for Industry.'' It does not establish any rights for any person and is not binding on FDA or the public. You can use an alternative approach if it satisfies the requirements of the applicable statutes and regulations.

II. Paperwork Reduction Act of 1995

This draft guidance refers to previously approved collections of information found in FDA regulations. These collections of information are subject to review by the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501–3520). The collections of information in 21 CFR 601.12 have been approved under OMB control number 0910–0338; and the collections of information in 21 CFR 610.40 and 630.40 have been approved under OMB control numbers 0910–0116 and 0910–0795.

III. Electronic Access

Persons with access to the Internet may obtain the draft guidance at either *http://www.fda.gov/BiologicsBloodVaccines/GuidanceComplianceRegulatoryInformation/Guidances/default.htm* or *http://www.regulations.gov.*

Dated: November 3, 2016.

Leslie Kux,

Associate Commissioner for Policy.

[FR Doc. 2016–27107 Filed 11–9–16; 8:45 am]

BILLING CODE 4164–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Health IT Standards Committee Advisory Meeting; Notice of Meeting

AGENCY: Office of the National Coordinator for Health Information Technology, HHS.

ACTION: Notice of meeting

This notice announces updated dates for meetings of a public advisory committee of the Office of the National Coordinator for Health Information Technology (ONC). These meetings are open to the public.

Name of Committee: Health IT Standards Committee.

General Function of the Committee: To provide recommendations to the National Coordinator on standards, implementation specifications, and certification criteria for the electronic exchange and use of health information for purposes of adoption, consistent with the implementation of the Federal Health IT Strategic Plan, and in accordance with policies developed by the Health IT Policy Committee.

2016 Meeting Dates and Times

- December 6, 2016 from 9:30 a.m. to 1:30 p.m./Eastern Time (replacing the formerly announced November 2 and December 7 meetings)
  - This will be a virtual Joint Health IT Policy and Health IT Standards Committee meeting

For meeting locations, web conference information, and the most up-to-date information, please visit the calendar on the ONC Web site, *http://www.healthit.gov/FACAS/calendar.*

Contact Person: Michelle Consolazio, email: *michelle.consolazio@hhs.gov.* Please email Michelle Consolazio for the most current information about meetings. 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.

Agenda: The committee will hear reports from its workgroups/task forces and updates from ONC and other federal agencies. ONC intends to make background material available to the public no later than 24 hours prior to the meeting start time. If ONC is unable to post the background material on its Web site prior to the meeting, it will be made publicly available at the location of the advisory committee meeting, and the background material will be posted on ONC's Web site after the meeting, at *http://www.healthit.gov/facas/health-it-standards-committee.*

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 prior to the meeting date. Oral comments from the public will be scheduled prior to the lunch break and at the conclusion of each meeting. Time allotted for each presentation will be limited to three minutes. If the number of speakers requesting to comment is greater than can be reasonably accommodated during the scheduled open public session, ONC will take written comments after the meeting.

Persons attending ONC's advisory committee meetings are advised that the agency is not responsible for providing wireless access or access to electrical outlets.

ONC welcomes the attendance of the public at its advisory committee meetings. Seating is limited at the location, and ONC will make every effort to accommodate persons with

physical disabilities or special needs. If you require special accommodations due to a disability, please contact Michelle Consolazio at least seven (7) days in advance of the meeting.

Notice of this meeting is given under the Federal Advisory Committee Act (Pub. L. 92–463, 5 U.S.C., App. 2).

Dated: October 31, 2016.

Michelle Consolazio,

FACA Program Director, Office of Policy, Office of the National Coordinator for Health Information Technology.

[FR Doc. 2016–27172 Filed 11–9–16; 8:45 am]

BILLING CODE 4150–45–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Health IT Policy Committee Advisory Meeting; Notice of Meeting

AGENCY: Office of the National Coordinator for Health Information Technology, HHS.

ACTION: Notice of meeting.

This notice announces updated dates for meetings of a public advisory committee of the Office of the National Coordinator for Health Information Technology (ONC). These meetings are open to the public.

Name of Committee: Health IT Policy Committee.

General Function of the Committee: To provide recommendations to the National Coordinator on a policy framework for the development and adoption of a nationwide health information technology infrastructure that permits the electronic exchange and use of health information as is consistent with the Federal Health IT Strategic Plan and that includes recommendations on the areas in which standards, implementation specifications, and certification criteria are needed.

2016 Meeting Dates and Times

- November 3, 2016 from 9:30 a.m. to 3:00 p.m./Eastern Time (Cancelled)
- December 6, 2016 from 9:30 a.m. to 1:30 p.m./Eastern Time
  - This will be a virtual Joint Health IT Policy and Health IT Standards Committee meeting

For meeting locations, web conference information, and the most up-to-date information, please visit the calendar on the ONC Web site, *http://www.healthit.gov/FACAS/calendar.*

Contact Person: Michelle Consolazio, email: *michelle.consolazio@hhs.gov.* Please email Michelle Consolazio for the most current information about meetings. 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.

Agenda: The committee will hear reports from its task forces and updates from ONC and other federal agencies. ONC intends to make background material available to the public no later than 24 hours prior to the meeting start time. If ONC is unable to post the background material on its Web site prior to the meeting, it will be made publicly available at the location of the advisory committee meeting, and the background material will be posted on ONC's Web site after the meeting, at *http://www.healthit.gov/FACAS/health-it-policy-committee.*

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 prior to the meeting date. Oral comments from the public will be scheduled prior to the lunch break and at the conclusion of each meeting. Time allotted for each presentation will be limited to three minutes. If the number of speakers requesting to comment is greater than can be reasonably accommodated during the scheduled open public session, ONC will take written comments after the meeting.

Persons attending ONC's advisory committee meetings are advised that the agency is not responsible for providing wireless access or access to electrical outlets.

ONC welcomes the attendance of the public at its advisory committee meetings. Seating is limited at the location, and ONC will make every effort to accommodate persons with physical disabilities or special needs. If you require special accommodations due to a disability, please contact Michelle Consolazio at least seven (7) days in advance of the meeting.

Notice of this meeting is given under the Federal Advisory Committee Act (Pub. L. 92–463, 5 U.S.C., App. 2).

Dated: October 31, 2016.

Michelle Consolazio,

FACA Program Director, Office of Policy, Office of the National Coordinator for Health Information Technology.

[FR Doc. 2016–27174 Filed 11–9–16; 8:45 am]

BILLING CODE 4150–45–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Institute of Environmental Health Sciences; 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: National Institute of Environmental Health Sciences Special, Emphasis Panel; E-Learning Review Meeting.

Date: November 29, 2016.

Time: 11:30 a.m. to 4:00 p.m.

Agenda: To review and evaluate grant applications.

Place: NIEHS/National Institutes of Health, Keystone Building, Room 2128, 530 Davis Drive, Research Triangle Park, NC 27709 (Telephone Conference Call).

Contact Person: Janice B. Allen, Ph.D., Scientific Review Officer, Scientific Review Branch, Division of Extramural Research and Training, Nat. Institute of Environmental Health Science, P.O. Box 12233, MD EC–30/Room 3170 B, Research Triangle Park, NC 27709, 919/541–7556.

Name of Committee: National Institute of Environmental Health Sciences Special Emphasis Panel; R13 Conference Grant Applications Review Meeting Group 1.

Date: November 30, 2016.

Time: 11:30 a.m. to 4:00 p.m.

Agenda: To review and evaluate grant applications.

Place: NIEHS/National Institutes of Health, Keystone Building, Room 2128, 530 Davis Drive, Research Triangle Park, NC 27709 (Telephone Conference Call).

Contact Person: Janice B. Allen, Ph.D., Scientific Review Officer, Scientific Review Branch, Division of Extramural Research and Training, Nat. Institute of Environmental Health Science, P.O. Box 12233, MD EC–30/Room 3170 B Research Triangle Park, NC 27709, 919/541–7556.

(Catalogue of Federal Domestic Assistance Program Nos. 93.115, Biometry and Risk Estimation—Health Risks from Environmental Exposures; 93.142, NIEHS Hazardous Waste Worker Health and Safety Training; 93.143, NIEHS Superfund Hazardous Substances—Basic Research and Education; 93.894, Resources and Manpower Development in the Environmental Health Sciences; 93.113, Biological Response to

Environmental Health Hazards; 93.114, Applied Toxicological Research and Testing, National Institutes of Health, HHS)

Dated: November 4, 2016.

Michelle Trout,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2016–27143 Filed 11–9–16; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Institute of Allergy and Infectious Diseases; 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 National Advisory Allergy and Infectious Diseases Council.

The meetings 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 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: National Advisory Allergy and Infectious Diseases Council.

Date: January 30, 2017.

Open: 10:30 a.m. to 11:40 a.m.

Agenda: Report from the Institute Director.

Place: National Institutes of Health, Natcher Building, Conference Rooms E1/E2, 45 Center Drive, Bethesda, MD 20892.

Closed: 11:40 a.m. to 12:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Natcher Building Conference Rooms E1/E2, 45 Center Drive, Bethesda, MD 20892.

Contact Person: Matthew J. Fenton, Ph.D., Director, Division of Extramural Activities, National Institute of Allergy and Infectious Diseases, 5601 Fishers Lane, Rm. 4F50, Bethesda, MD 20892, 301–496–7291, *fentonm@niaid.nih.gov.*

Name of Committee: National Advisory Allergy and Infectious Diseases Council, Acquired Immunodeficiency Syndrome Subcommittee.

Date: January 30, 2017.

Closed: 8:30 a.m. to 10:15 a.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Natcher Building, Conference Room A, 45 Center Drive, Bethesda, MD 20892.

Open: 1:00 p.m. to adjournment.

Agenda: Program advisory discussions and reports from division staff.

Place: National Institutes of Health, Natcher Building, Conference Rooms E1/E2, 45 Center Drive, Bethesda, MD 20892.

Contact Person: Matthew J. Fenton, Ph.D., Director, Division of Extramural Activities, National Institute of Allergy and Infectious Diseases, 5601 Fishers Lane, Rm. 4F50, Bethesda, MD 20892, 301–496–7291, *fentonm@niaid.nih.gov.*

Name of Committee: National Advisory Allergy and Infectious Diseases Council, Allergy, Immunology and Transplantation Subcommittee.

Date: January 30, 2017.

Closed: 8:30 a.m. to 10:15 a.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Natcher Building, Conference Room D, 45 Center Drive, Bethesda, MD 20892.

Open: 1:00 p.m. to adjournment.

Agenda: Reports from the Division Director and other staff.

Place: National Institutes of Health, Natcher Building, Conference Room D, 45 Center Drive, Bethesda, MD 20892.

Contact Person: Matthew J. Fenton, Ph.D., Director, Division of Extramural Activities, National Institute of Allergy and Infectious Diseases, 5601 Fishers Lane, Rm. 4F50, Bethesda, MD 20892, 301–496–7291, *fentonm@niaid.nih.gov.*

Name of Committee: National Advisory Allergy and Infectious Diseases Council, Microbiology and Infectious Diseases Subcommittee.

Date: January 30, 2017.

Closed: 8:30 a.m. to 10:15 a.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Natcher Building, Conference Rooms F1/F2, 45 Center Drive, Bethesda, MD 20892.

Open: 1:00 p.m. to adjournment

Agenda: Reports from the Division Director and other staff.

Place: National Institutes of Health, Natcher Building, Conference Rooms F1/F2, 45 Center Drive, Bethesda, MD 20892.

Contact Person: Matthew J. Fenton, Ph.D., Director, Division of Extramural Activities, National Institute of Allergy and Infectious Diseases, 5601 Fishers Lane, Rm. 4F50, Bethesda, MD 20892, 301–496–7291, *fentonm@niaid.nih.gov.*

Name of Committee: National Advisory Allergy and Infectious Diseases Council, Acquired Immunodeficiency Syndrome Subcommittee.

Date: June 5, 2017.

Closed: 8:30 a.m. to 10:15 a.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Natcher Building, Conference Room A, 45 Center Drive, Bethesda, MD 20892.

Open: 1:00 p.m. to adjournment.

Agenda: Program advisory discussions and reports from division staff.

Place: National Institutes of Health, Natcher Building, Conference Rooms E1/E2, 45 Center Drive, Bethesda, MD 20892.

Contact Person: Matthew J. Fenton, Ph.D., Director, Division of Extramural Activities, National Institute of Allergy and Infectious Diseases, 5601 Fishers Lane, Rm. 4F50, Bethesda, MD 20892, 301–496–7291, *fentonm@niaid.nih.gov.*

Name of Committee: National Advisory Allergy and Infectious Diseases Council, Microbiology and Infectious Diseases Subcommittee.

Date: June 5, 2017.

Time: 8:30 a.m. to 5:00 p.m.

Agenda: Grant applications and/or proposals.

Place: National Institutes of Health, Natcher Building, Conference Rooms F1/F2, 45 Center Drive, Bethesda, MD 20892.

Contact Person: Matthew J. Fenton, Ph.D., Director, Division of Extramural Activities, National Institute of Allergy and Infectious Diseases, 5601 Fishers Lane, Rm. 4F50, Bethesda, MD 20892, 301–496–7291, *fentonm@niaid.nih.gov.*

Name of Committee: National Advisory Allergy and Infectious Diseases Council.

Date: June 5, 2017.

Open: 10:30 a.m. to 11:40 a.m.

Agenda: Report from the Institute Director.

Place: National Institutes of Health, Natcher Building, Conference Rooms E1/E2, 45 Center Drive, Bethesda, MD 20892.

Closed: 11:40 a.m. to 12:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Natcher Building, Conference Rooms E1/E2, 45 Center Drive, Bethesda, MD 20892.

Contact Person: Matthew J. Fenton, Ph.D., Director, Division of Extramural Activities, National Institute of Allergy and Infectious Diseases, 5601 Fishers Lane, Rm. 4F50, Bethesda, MD 20892, 301–496–7291, *fentonm@niaid.nih.gov.*

Name of Committee: National Advisory Allergy and Infectious Diseases Council; Allergy, Immunology and Transplantation Subcommittee.

Date: June 5, 2017.

Closed: 8:30 a.m. to 10:15 a.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Natcher Building, Conference Room D, 45 Center Drive, Bethesda, MD 20892.

Open: 1:00 p.m. to adjournment.

Agenda: Reports from the Division Director and other staff.

Place: National Institutes of Health, Natcher Building, Conference Room D, 45 Center Drive, Bethesda, MD 20892.

Contact Person: Matthew J. Fenton, Ph.D., Director, Division of Extramural Activities, National Institute of Allergy and Infectious Diseases, 5601 Fishers Lane, Rm. 4F50, Bethesda, MD 20892, 301–496–7291, *fentonm@niaid.nih.gov.*

Name of Committee: National Advisory Allergy and Infectious Diseases Council.

Date: September 11, 2017.

Open: 10:30 a.m. to 11:40 a.m.

Agenda: Report from the Institute Director.

Place: National Institutes of Health, Natcher Building, Conference Rooms E1/E2, 45 Center Drive, Bethesda, MD 20892.

Closed: 11:40 a.m. to 12:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Natcher Building, Conference Rooms E1/E2, 45 Center Drive, Bethesda, MD 20892.

Contact Person: Matthew J. Fenton, Ph.D., Director, Division of Extramural Activities, National Institute of Allergy and Infectious Diseases, 5601 Fishers Lane, Rm. 4F50, Bethesda, MD 20892, 301–496–7291, *fentonm@niaid.nih.gov*.

Name of Committee: National Advisory Allergy and Infectious Diseases Council, Acquired Immunodeficiency Syndrome Subcommittee.

Date: September 11, 2017.

Closed: 8:30 a.m. to 10:15 a.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Natcher Building, Conference Room A, 45 Center Drive, Bethesda, MD 20892.

Open: 1:00 p.m. to adjournment.

Agenda: Program advisory discussions and reports from division staff.

Place: National Institutes of Health, Natcher Building, Conference Rooms E1/E2, 45 Center Drive, Bethesda, MD 20892.

Contact Person: Matthew J. Fenton, Ph.D., Director Division of Extramural Activities, National Institute of Allergy and Infectious Diseases, 5601 Fishers Lane, Rm. 4F50, Bethesda, MD 20892, 301–496–7291, *fentonm@niaid.nih.gov*.

*Name of Committee:*National Advisory Allergy and Infectious Diseases Council Allergy, Immunology and Transplantation Subcommittee.

*Date:*September 11, 2017.

Closed: 8:30 a.m. to 10:15 a.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Natcher Building, Conference Room D, 45 Center Drive, Bethesda, MD 20892.

Open: 1:00 p.m. to adjournment.

Agenda: Reports from the Division Director and other staff.

Place: National Institutes of Health, Natcher Building, Conference Room D, 45 Center Drive, Bethesda, MD 20892.

Contact Person: Matthew J. Fenton, Ph.D., Director, Division of Extramural Activities, National Institute of Allergy and Infectious Diseases, 5601 Fishers Lane, Rm. 4F50, Bethesda, MD 20892, 301–496–7291, *fentonm@niaid.nih.gov*.

Name of Committee: National Advisory Allergy and Infectious Diseases Council, Microbiology and Infectious Diseases Subcommittee.

Date: September 11, 2017.

Closed: 8:30 a.m. to 10:15 a.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Natcher Building, Conference Rooms F1/F2, 45 Center Drive, Bethesda, MD 20892.

Open: 1:00 p.m. to adjournment.

Agenda: Reports from the Division Director and other staff.

Place: National Institutes of Health, Natcher Building, Conference Rooms F1/F2, 45 Center Drive, Bethesda, MD 20892.

Contact Person: Matthew J. Fenton, Ph.D., Director, Division of Extramural Activities, National Institute of Allergy and Infectious Diseases, 5601 Fishers Lane, Rm. 4F50, Bethesda, MD 20892, 301–496–7291, *fentonm@niaid.nih.gov*.

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.niaid.nih.gov/facts/facts.htm,* where an agenda and any additional information for the meeting will be posted when available.

(Catalogue of Federal Domestic Assistance Program Nos. 93.855, Allergy, Immunology, and Transplantation Research; 93.856, Microbiology and Infectious Diseases Research, National Institutes of Health, HHS)

Dated: November 4, 2016.

Natasha M. Copeland,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2016–27138 Filed 11–9–16; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Eye Institute; 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 Eye Institute Special Emphasis Panel, NEI R21 Secondary Data Analysis and R13 Conference Grant Applications.

Date: November 16, 2016.

Time: 8:00 a.m. to 5:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, 5635 Fishers Lane, Bethesda, MD 20892 (Virtual Meeting).

Contact Person: Brian Hoshaw, Ph.D., Scientific Review Officer, National Eye Institute, National Institutes of Health, Division of Extramural Research, 5635 Fishers Lane, Suite 1300, Rockville, MD 20892, 301–451–2020, *hoshawb@mail.nih.gov.*

This notice is being published less than 15 days prior to the meeting due to the timing limitations imposed by the review and funding cycle.

(Catalogue of Federal Domestic Assistance Program Nos. 93.867, Vision Research, National Institutes of Health, HHS)

Dated: November 4, 2016.

Natasha M. Copeland,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2016–27136 Filed 11–9–16; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Institute of Allergy and Infectious Diseases; Notice of Meetings

Pursuant to section 10(a) of the Federal Advisory Committee Act, as amended (5 U.S.C. App.), notice is hereby given of meetings of the AIDS Research Advisory Committee, NIAID.

The meetings will be open to the public, 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: AIDS Research Advisory Committee, NIAID.

Date: January 30, 2017.

Time: 1:00 p.m. to 5:00 p.m.

Agenda: Reports from the Division Director and other staff.

Place: National Institutes of Health, Natcher Building Conference Rooms E1/E2 45 Center Drive, Bethesda, MD 20892

Contact Person: Mark A. Mueller, Executive Secretary, AIDS Research Advisory Committee Division of AIDS, NIAID/NIH, 5601 Fishers Lane, RM 8D39, Bethesda, MD 20892, 301–402–2308, *mark.mueller@nih.gov.*

Name of Committee: AIDS Research Advisory Committee, NIAID.

Date: June 5, 2017.

Time: 1:00 p.m. to 5:00 p.m.

Agenda: Reports from the Division Director and other staff.

Place: National Institutes of Health, Natcher Building Conference Rooms E1/E2 45 Center Drive, Bethesda, MD 20892.

Contact Person: Mark A. Mueller, Executive Secretary, AIDS Research Advisory Committee Division of AIDS, NIAID/NIH, 5601 Fishers Lane, RM 8D39, Bethesda, MD 20892, 301–402–2308, *mark.mueller@nih.gov*.

Name of Committee: AIDS Research Advisory Committee, NIAID.

Date: September 11, 2017.

Time: 1:00 p.m. to 5:00 p.m.

Agenda: Reports from the Division Director and other staff.

Place: National Institutes of Health, Natcher Building Conference Rooms E1/E2 45 Center Drive, Bethesda, MD 20892.

Contact Person: Mark A. Mueller, Executive Secretary, AIDS Research Advisory Committee Division of AIDS, NIAID/NIH, 5601 Fishers Lane, RM 8D39, Bethesda, MD 20892, 301–402–2308, *mark.mueller@nih.gov*.

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 Nos. 93.855, Allergy, Immunology, and Transplantation Research; 93.856, Microbiology and Infectious Diseases Research, National Institutes of Health, HHS)

Dated: November 4, 2016.

Natasha M. Copeland,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2016–27139 Filed 11–9–16; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Institute on Drug Abuse; 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: National Institute on Drug Abuse Special Emphasis Panel, Improved Technologies and Ligands for Non-Invasive Brain Imaging (R41/R42).

Date: November 29, 2016.

Time: 1:00 p.m. to 4:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Neuroscience Center, 6001 Executive Boulevard, Rockville, MD 20852 (Telephone Conference Call).

Contact Person: Gerald L. McLaughlin, Ph.D., Scientific Review Officer, Office of Extramural Policy and Review, National Institute on Drug Abuse, NIH, DHHS, 6001 Executive Blvd., Room 4238, MSC 9550, Bethesda, MD 20892–9550, 301–827–5819, *gm145a@nih.gov*.

Name of Committee: National Institute on Drug Abuse Special Emphasis Panel, R13 Conference Grant Review.

Date: December 1, 2016.

Time: 10:00 a.m. to 12:30 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, Neuroscience Center, 6001 Executive Boulevard, Rockville, MD 20852 (Telephone Conference Call).

Contact Person: Hiromi Ono, Ph.D., Scientific Review Officer, Office of Extramural Affairs, National Institute on Drug Abuse, National Institutes of Health, DHHS, 6001 Executive Boulevard, Room 4238, MSC 9550, Bethesda, MD 20892, (301) 827–5820, *hiromi.ono@nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos.: 93.279, Drug Abuse and Addiction Research Programs, National Institutes of Health, HHS)

Dated: November 4, 2016.

Natasha M. Copeland,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2016–27142 Filed 11–9–16; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Institute of Allergy and Infectious Diseases; 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: National Institute of Allergy and Infectious Diseases Special Emphasis Panel, NIAID Clinical Trial Implementation Grant (R01).

Date: November 29, 2016.

Time: 11:00 a.m. to 1:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, 5601 Fishers Lane, Rockville, MD 20892 (Telephone Conference Call).

Contact Person: Chelsea D. Boyd, Ph.D., Scientific Review Officer, Scientific Review Program, DEA/NIAID/NIH/DHHS, 5601 Fishers Lane, MSC–9823, Rockville, MD 20852–9834, 240–669–2081, *chelsea.boyd@nih.gov*.

Name of Committee: National Institute of Allergy and Infectious Diseases Special Emphasis Panel, NIAID Clinical Trial Implementation Cooperative Agreement (U01).

Date: December 5, 2016.

Time: 11:00 a.m. to 1:00 p.m.

Agenda: To review and evaluate cooperative agreement applications.

Place: National Institutes of Health, 5601 Fishers Lane, Rockville, MD 20892 (Telephone Conference Call).

Contact Person: Chelsea D. Boyd, Ph.D., Scientific Review Officer, Scientific Review Program, DEA/NIAID/NIH/DHHS, 5601 Fishers Lane, MSC–9823, Rockville, MD 20852–9834, 240–669–2081, *chelsea.boyd@nih.gov*.

Name of Committee: National Institute of Allergy and Infectious Diseases Special Emphasis Panel, NIAID Peer Review Meeting.

Date: December 7–9, 2016.

Time: 8:00 a.m. to 5:00 p.m.

Agenda: To review and evaluate contract proposals.

Place: The William F. Bolger Center, 9600 Newbridge Drive, Potomac, MD 20854.

Contact Person: Jane K. Battles, Ph.D., Scientific Review Officer, Scientific Review Program, Division of Extramural Activities, National Institutes of Health/NIAID, 5601 Fishers Lane, Room 3F30B, Rockville, MD 20852, 240–669–5029, *battlesja@mail.nih.gov*.

Name of Committee: National Institute of Allergy and Infectious Diseases Special Emphasis Panel, NIAID Investigator Initiated Program Project Applications (P01).

Date: December 7, 2016.

Time: 10:00 a.m. to 2:00 p.m.

Agenda: To review and evaluate grant applications.

Place: National Institutes of Health, 5601 Fishers Lane, Rockville, MD 20892 (Telephone Conference Call).

Contact Person: Raymond R. Schleef, Ph.D., Senior Scientific Review Officer, Scientific Review Program, Division of Extramural Activities, Room 3E61, National Institutes of Health/NIAID, 5601 Fishers Lane, MSC 9823, Bethesda, MD 20892–9823, (240) 669–5019, *schleefrr@niaid.nih.gov*.

Name of Committee: National Institute of Allergy and Infectious Diseases Special Emphasis Panel, NIAID Peer Review Meeting.

Date: December 12–14, 2016.
Time: 8:00 a.m. to 5:00 p.m.
Agenda: To review and evaluate contract proposals.
Place: The William F. Bolger Center, 9600 Newbridge Drive, Potomac, MD 20854.
Contact Person: Jane K. Battles, Ph.D., Scientific Review Officer, Scientific Review Program Division of Extramural Activities, National Institutes of Health/NIAID, 5601 Fishers Lane, Room 3F30B, Rockville, MD 20852, 240–669–5029, *battlesja@mail.nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.855, Allergy, Immunology, and Transplantation Research; 93.856, Microbiology and Infectious Diseases Research, National Institutes of Health, HHS)

Dated: November 4, 2016.

Natasha M. Copeland,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2016–27140 Filed 11–9–16; 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, PAR Panel: Basic Research on HIV Persistence.
Date: November 30, 2016.
Time: 11:00 a.m. to 3:00 p.m.
Agenda: To review and evaluate grant applications.
Place: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).
Contact Person: Kenneth A Roebuck, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 5106, MSC 7852, Bethesda, MD 20892, (301) 435–1166, *roebuckk@csr.nih.gov.*

Name of Committee: Center for Scientific Review Special Emphasis Panel, Member Conflict: AIDS and AIDS Related Research.
Date: December 2, 2016.
Time: 11:00 a.m. to 4:00 p.m.
Agenda: To review and evaluate grant applications.
Place: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).
Contact Person: Mark P Rubert, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 5218, MSC 7852, Bethesda, MD 20892, 301–435–1775, *rubertm@csr.nih.gov.*

Name of Committee: Center for Scientific Review Special Emphasis Panel, Member Conflict: AIDS Clinical Studies and Epidemiology.
Date: December 2, 2016.
Time: 12:00 p.m. to 6:00 p.m.
Agenda: To review and evaluate grant applications.
Place: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892 (Telephone Conference Call).
Contact Person: Jose H Guerrier, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 5218, MSC 7852, Bethesda, MD 20892, 301–435–1137, *guerriej@csr.nih.gov.*

Name of Committee: Center for Scientific Review Special Emphasis Panel, Member Conflict: Reproductive, Musculoskeletal, Respiratory, Neurological, Infectious, and Global Disease.
Date: December 6, 2016.
Time: 11:00 a.m. to 3:00 p.m.
Agenda: To review and evaluate grant applications.
Place: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).
Contact Person: George Vogler, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 3140, MSC 7770, Bethesda, MD 20892, (301) 237–2693, *voglergp@csr.nih.gov.*

Name of Committee: Center for Scientific Review Special Emphasis Panel, Member Conflict: Medical Imaging Investigations.
Date: December 8, 2016.
Time: 10:00 a.m. to 5:00 p.m.
Agenda: To review and evaluate grant applications.
Place: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).
Contact Person: Mehrdad Mohseni, MD, Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 5211, MSC 7854, Bethesda, MD 20892, 301–435–0484, *mohsenim@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: November 4, 2016.

Michelle Trout,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2016–27134 Filed 11–9–16; 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, Disorders in Brain Development.
Date: November 21, 2016.
Time: 3:00 p.m. to 7:00 p.m.
Agenda: To review and evaluate grant applications.
Place: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892 (Telephone Conference Call).
Contact Person: Pat Manos, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 5200, MSC 7846, Bethesda, MD 20892, 301–408–9866, *manospa@csr.nih.gov*.

This notice is being published less than 15 days prior to the meeting due to the timing limitations imposed by the review and funding cycle.

Name of Committee: Center for Scientific Review Special Emphasis Panel, PAR Panel: Global Infectious Diseases Research Training Program.
Date: December 9, 2016.
Time: 11:00 a.m. to 6:00 p.m.
Agenda: To review and evaluate grant applications.
Place: National Institutes of Health, 6701 Rockledge Drive, Bethesda, MD 20892 (Virtual Meeting).
Contact Person: Kenneth M Izumi, Ph.D., Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 3204, MSC 7808, Bethesda, MD 20892, 301–496–6980, *izumikm@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: November 4, 2016.

Anna Snouffer,

Deputy Director, Office of Federal Advisory Committee Policy.

[FR Doc. 2016–27135 Filed 11–9–16; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Heart, Lung, and Blood Institute; 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: Heart, Lung, and Blood Initial Review Group, Heart, Lung, and Blood Program Project Review Committee.

Date: December 2, 2016.

Time: 8:00 a.m. to 2:00 p.m.

Agenda: To review and evaluate grant applications.

Place: Sheraton BWI (Baltimore), 1100 Old Elkridge Landing Road, Baltimore, MD 21090.

Contact Person: Jeffrey H Hurst, Ph.D., Scientific Review Officer, Office of Scientific Review/DERA, National Heart, Lung, and Blood Institute, National Institutes of Health, 6701 Rockledge Drive, Room 7208, Bethesda, MD 20892, 301–435–0303, *hurstj@nhlbi.nih.gov*.

(Catalogue of Federal Domestic Assistance Program Nos. 93.233, National Center for Sleep Disorders Research; 93.837, Heart and Vascular Diseases Research; 93.838, Lung Diseases Research; 93.839, Blood Diseases and Resources Research, National Institutes of Health, HHS)

Dated: November 4, 2016.

Michelle Trout,

Program Analyst, Office of Federal Advisory Committee Policy.

[FR Doc. 2016–27137 Filed 11–9–16; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HOMELAND SECURITY

U.S. Customs and Border Protection

Notice of Issuance of Final Determination Concerning Certain Treadmills

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

ACTION: Notice of final determination.

SUMMARY: This document provides notice that U.S. Customs and Border Protection (''CBP'') has issued a final determination concerning the country of origin of certain treadmills. Based upon the facts presented, CBP has concluded that, for purposes of U.S. Government procurement, the country of origin of the treadmills is the United States in Scenario One and Taiwan in Scenario Two.

DATES: The final determination was issued on November 1, 2016. A copy of the final determination is attached. Any party-at-interest, as defined in 19 CFR § 177.22(d), may seek judicial review of this final determination within December 12, 2016.

FOR FURTHER INFORMATION CONTACT: Ross Cunningham, Valuation and Special Programs Branch, Regulations and Rulings, Office of Trade (202) 325–0034.

SUPPLEMENTARY INFORMATION: Notice is hereby given that on November 1, 2016, pursuant to subpart B of Part 177, U.S. Customs and Border Protection Regulations (19 CFR part 177, subpart B), CBP issued a final determination concerning the country of origin of certain treadmills, which may be offered to the U.S. Government under an undesignated government procurement contract. This final determination, HQ H262943, was issued under procedures set forth at 19 CFR part 177, subpart B, which implements Title III of the Trade Agreements Act of 1979, as amended (19 U.S.C. 2511–18). In the final determination, CBP concluded that in both scenarios, the processing in the United States or in Taiwan results in a substantial transformation. Therefore, for purposes of U.S. Government procurement, the country of origin of the treadmills is the United States in Scenario One and Taiwan in Scenario Two.

Section 177.29, CBP Regulations (19 CFR 177.29), provides that a notice of final determination shall be published in the **Federal Register** within 60 days of the date the final determination is issued. Section 177.30, CBP Regulations (19 CFR 177.30), provides that any party-at-interest, as defined in 19 CFR 177.22(d), may seek judicial review of a final determination within 30 days of publication of such determination in the **Federal Register**.

Dated: November 1, 2016.

Alice A. Kipel,

Executive Director, Regulations and Rulings, Office of Trade.

HQ H262943

November 01, 2016

OT:RR:CTF:VS H262943 RMC

CATEGORY: Country of Origin

John A. Knab
Garvey Shubert Barer PC
1000 Potomac Street NW
Suite 200
Washington, DC 20007

Re: U.S. Government Procurement; Country of Origin of Treadmills; Substantial Transformation

Dear Mr. Knab:

This is in response to your letter dated March 16, 2015, requesting a final determination on behalf of Johnson Health Tech North America (''Johnson'') pursuant to subpart B of Part 177 of the U.S. Customs and Border Protection (''CBP'') Regulations (19 CFR part 177). Under these regulations, which implement Title III of the Trade Agreements Act of 1979 (''TAA''), as amended (19 U.S.C. § 2511 *et seq.*), CBP issues country of origin advisory rulings and final determinations as to whether an article is or would be a product of a designated country or instrumentality for the purposes of granting waivers of certain ''Buy American'' restrictions in U.S. law or for products offered for sale to the U.S. Government. This final determination concerns the country of origin of treadmills. As a U.S. importer, Johnson is a party-at-interest within the meaning of 19 CFR § 177.22(d)(1) and is entitled to request this final determination.

Facts

Johnson is an exercise equipment manufacturer based in Cottage Grove, Wisconsin. It is a wholly-owned subsidiary of the Taiwanese entity Johnson Health Tech. Co., Ltd. (''JHT''). JHT, through its subsidiaries, operates in Taiwan, China, and the United States.

The equipment at issue is the Matrix® T3xe commercial treadmill. Johnson describes the Matrix® T3xe as a ''state of the art, electric, motorized treadmill controlled by software in a control box located in a user-friendly console supported by a console mast.''

In its submission, Johnson describes two scenarios for assembling the Matrix® T3xe. In short, the first involves welding the metal components comprising the treadmills' major subassemblies in the United States, assembling the components in the United States to form the finished product, and then partially disassembling the treadmills for shipment to U.S. customers. The second is similar to the first, except that the welding and assembly will occur in Taiwan before the finished treadmill is partially disassembled and sent to the U.S. customer.

1. Scenario One—Final Assembly in the United States

a. Design in the United States

Johnson states it designs and engineers the Matrix® T3xe and similar models of treadmills in Wisconsin based on product development done in the United States and in consultation with designers and engineers in Taiwan. The engineering and design group uses SolidWorks software to create 3D computer-aided design (''CAD'') models and 2D models for use as diagrams to guide the manufacturing process. Each treadmill generally has between 200 and 400 2D CAD drawings representing between 400 and 700 separate components or subassemblies used in the treadmill.

Johnson also states that the Matrix® T3xe's console software is designed in the United States, while the ''detailed coding'' is done in Taiwan.

b. Component Parts and Materials Come From China & Other Countries

According to the bill of materials that Johnson provided, the Matrix® T3xe consists of approximately 466 individual parts. The vast majority of these parts are produced in China from Chinese materials.

Under both scenarios, however, the Matrix® T3xe will also include some parts from the United States, Italy, and Taiwan. Under Scenario 1, the coated wooden deck that comprises the base will be of U.S. origin, and the elastic belt that the user walks on will be of Italian origin. Additionally, the elastometer, the cover for the driver motor, the television tuner, and the heart-rate monitor will be of Taiwanese origin. All other parts will be of Chinese origin.

c. Assembly, Time & Employees

i. Description of Major Subassemblies

Johnson states that the finished treadmills will consist of three major subassemblies: (1) the treadmill base; (2) the console; and (3) the console mast.

The treadmill base is the part of a treadmill that lies flat on the floor. It comprises a deck and belt that form the running surface; a set of motors and rollers that control the speed of the belt and the pitch of the running surface; and side rails and covers to protect the equipment and the user. These parts are joined together by numerous bolts, washers, and screws.

The console is essentially the computer that allows the user to control the treadmill's operation. It is situated roughly at chest height to allow the user to adjust the treadmill while in operation. Here, it consists of a touch-screen display and also incorporates a heart-rate monitor and a television tuner.

The console mast houses the console and connects it to the treadmill base. It also incorporates left and right arms to support the user and a rack for reading materials.

ii. Chinese Operations

In China, the console control board will be assembled and the rest of the parts that make up the finished treadmill will then be shipped to the United States for assembly.

iii. Assembly & Testing in the United States

Johnson describes the U.S. assembly process as involving welding various components and ''connecting, lining up, adjusting and bolting frames, tightening and torqueing frame bolts, attaching motors, installing power switches, wiring, pulleys and filters.'' First, workers will weld together the metal frames that comprise the three major subassemblies. The treadmill base will require 18 welding seams, the console frame, which houses the console, will require seven welding seams, and the console mast will require two welding seams.

Once the major subassemblies have been welded together, several major components will be assembled including the console parts, console mast parts, rollers, side rails, and deck and belt. The rollers, side rails, and deck and belt will then be combined with the metal treadmill base to form the ''rudimentary base.''

Next, the electronic components will be bolted and wired into the rudimentary base to make the motorized and operational treadmill base. The U.S. assembly team will then temporarily assemble and wire the motorized base with the console and the console mast to make the substantially final product. The product will then be spot-checked and subjected to quality control and operational testing.

This quality control and operational testing will involve bringing the finished treadmills to a ''quiet room'' to ensure that the treadmill is operating properly. During testing, the assembler will run tests at different speeds and elevations and use natural hearing, noise detection equipment, and a vibrograph to check for unusual noises and vibrations.

Johnson estimates that the total time necessary for U.S. assembly and testing will be 116 minutes.

iv. Labor in the United States

Johnson estimates that assembly in the United States under Scenario 1 will require 68 employees. This figure includes employees involved in the assembly process from sub-assembly welding, assembly, quality control, and packaging, but does not include those involved in design, engineering, or post-assembly installation.

v. Disassembly for Shipment

Finally, the finished product will be partially disassembled by separating the treadmill base from the console and the console mast so that it can be packaged for shipment to U.S. customers.

2. Scenario Two—Final Assembly in Taiwan

As noted above, Scenario Two is similar to Scenario One, with the key difference being that the subassembly-welding and final-assembly operations will occur in Taiwan before the finished treadmill is partially disassembled and sent to the U.S. client. In addition, certain parts that are Chinese in Scenario One will be swapped out for Taiwanese parts in Scenario Two (specifically, the motor chassis, the side rails, the roller set, the packaging box, the polystyrene set, and the screw set).

Issue

What is the country of origin for purposes of U.S. Government procurement of the Matrix® T3xe treadmill under Scenario 1 and Scenario 2?

Law and Analysis

Pursuant to Subpart B of Part 177, 19 CFR § 177.21 *et seq.,* which implements Title III of the Trade Agreements Act of 1979, as amended (19 U.S.C. § 2511 *et seq.*), CBP issues country of origin advisory rulings and final determinations as to whether an article is or would be a product of a designated country or instrumentality for the purposes of granting waivers of certain ''Buy American'' restrictions in U.S. law or practice for products offered for sale to the U.S. Government.

Under the rule of origin set forth under 19 U.S.C. § 2518(4)(B):

An article is a product of a country or instrumentality only if (i) it is wholly the growth, product, or manufacture of that country or instrumentality, or (ii) in the case of an article which consists in whole or in part of materials from another country or instrumentality, it has been substantially transformed into a new and different article of commerce with a name, character, or use distinct from that of the article or articles from which it was so transformed.

See also 19 CFR § 177.22(a).

In rendering advisory rulings and final determinations for purposes of U.S. government procurement, CBP applies the provisions of subpart B of Part 177 consistent with the Federal Acquisition Regulations. *See* 19 CFR § 177.21. In this regard, CBP recognizes that the Federal Acquisition Regulations restrict the U.S. Government's purchase of products to U.S.-made or designated country end products for acquisitions subject to the TAA. *See* 48 CFR § 25.403(c)(1). The Federal Acquisition Regulations define ''U.S.-made end product'' as:

. . . an article that is mined, produced, or manufactured in the United States or that is substantially transformed in the United States into a new and different article of commerce with a name, character, or use distinct from that of the article or articles from which it was transformed.

48 CFR 25.003.

In order to determine whether a substantial transformation occurs when components of various origins are assembled into completed products, the determinative issue is the extent of operations performed and whether the parts lose their identity and become an integral part of the new article. *See Belcrest Linens* v. *United States,* 6 CIT 204 (1983), *aff'd,* 741 F.2d 1368 (Fed. Cir. 1984). The country of origin of the item's components, extent of the processing that occurs within a country, and whether such processing renders a product with a new name, character, and use are primary considerations in such cases. Additionally, factors such as the resources expended on product design and development, extent and nature of post-assembly inspection and testing procedures, and the degree of skill required during the actual manufacturing process may be relevant when determining whether a

substantial transformation has occurred. No one factor is determinative.

The Court of International Trade has also applied the ''essence test'' to determine whether the identity of an article is changed through assembly or processing. For example, in *Uniroyal, Inc.* v. *United States,* 3 CIT 220, 225, 542 F. Supp. 1026, 1030 (1982), *aff'd* 702 F.2d 1022 (Fed. Cir. 1983), the court held that imported shoe uppers added to an outer sole in the United States were the ''very essence of the finished shoe'' and thus were not substantially transformed into a product of the United States. Similarly, in *National Juice Products Association* v. *United States,* 10 CIT 48, 61, 628 F. Supp. 978, 991 (1986), the court held that imported orange juice concentrate ''imparts the essential character'' to the completed orange juice and thus was not substantially transformed into a product of the United States.

In Headquarters Ruling (''HQ'') H270580, dated May 10, 2016, we considered whether a substantial transformation occurred when Johnson, the importer here, assembled ''G3 Dip'' and ''G3 Back Extension'' exercise machines in the United States. As in this case, Johnson proposed two different assembly scenarios. Under Scenario One, which applied to both machines, we held that although nearly all the parts were of Chinese origin, the extent of U.S. assembly operations was sufficiently complex and meaningful to result in a substantial transformation. Specifically, the assembly involved U.S. workers welding nine separate subassemblies with 49 seams for the ''G3 Dip'' and three separate subassemblies with 22 seams for the ''G3 Back Extension.'' In addition to the welding, U.S. workers also cleaned and degreased parts, ground down and painted the frame, and sprayed the frame with clear coat. The 200 to 500 parts that comprise the final products were then assembled in a process involving fastening hardware; adding rubber grips; capping off tube ends; positioning pulleys; adding weights, cables, or belts; and placing warning placards. We found that a substantial transformation had occurred because the assembly operations caused the individual parts to lose their separate identities and to become integral components of a product with a new name, character, and use.

However, under Scenario Two in HQ H270580, which applied only to the ''G3 Dip,'' three of the nine subassemblies were imported from China as pre-assembled components. Under *Uniroyal,* 3 CIT 220, these critical components together imparted the ''very essence'' of the finished product. The processing in the United States thus did not result in a substantial transformation in Scenario Two. *See also National Juice Prods. Ass'n,* 10 CIT 48.

Similarly, in HQ 733188, dated July 5, 1990, we held that no substantial transformation occurred when Venezuelan exercise benches and boards were assembled in the United States. The Venezuelan metal frames as imported were essentially complete, and the U.S. assembly consisted primarily of attaching the cushions and minor parts. Further, no machining was done in the United States and no specialized training, skill, or equipment was required to assemble the exercise equipment. CBP thus held that no substantial transformation occurred in the United States.

Here, although nearly all the parts will be of Chinese origin, the extent of U.S. or Taiwanese assembly operations is sufficiently complex and meaningful to result in a substantial transformation in both scenarios. Unlike the exercise equipment at issue in HQ 733188, the treadmill parts will not be essentially complete when they are imported into either the United States or Taiwan for assembly. To the contrary, they will require substantial additional work to create a functional treadmill. Most importantly, U.S. or Taiwanese workers will need to weld a total of 27 seams to create the three major subassemblies (the treadmill base, the console frame, and the console mast) that comprise the finished treadmill. The additional assembly steps, which involve approximately 466 individual parts and ''connecting, lining up, adjusting and bolting frames, tightening and torqueing frame bolts, attaching motors, installing power switches, wiring, pulleys and filters,'' are similar in scope and complexity to those that we found sufficient to effect a substantial transformation under Scenario One in HQ H270580. Under these circumstances, the Matrix® T3xe's country of origin for purposes of government procurement is the United States under Scenario One and Taiwan under Scenario Two.

Holding

The finished treadmill's country of origin for purposes of government procurement is the United States under Scenario One and Taiwan under Scenario Two.

Notice of this final determination will be given in the **Federal Register**, as required by 19 CFR § 177.29. Any party-at-interest other than the party which requested this final determination may request, pursuant to 19 CFR § 177.31, that CBP reexamine the matter anew and issue a new final determination. Pursuant to 19 CFR § 177.30, any party-at-interest may, within 30 days of publication of the **Federal Register** Notice referenced above, seek judicial review of this final determination before the Court of International Trade.

Sincerely,

Alice A. Kipel,

Executive Director, Regulations & Rulings, Office of Trade.

[FR Doc. 2016–27159 Filed 11–9–16; 8:45 am]

BILLING CODE 9111–14–P

DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

[Internal Agency Docket No. FEMA–4285–DR; Docket ID FEMA–2016–0001]

North Carolina; Amendment No. 10 to Notice of a Major Disaster Declaration

AGENCY: Federal Emergency Management Agency, DHS.

ACTION: Notice.

SUMMARY: This notice amends the notice of a major disaster declaration for the State of North Carolina (FEMA–4285–DR), dated October 10, 2016, and related determinations.

DATES: *Effective Date:* October 31, 2016.

FOR FURTHER INFORMATION CONTACT: Dean Webster, Office of Response and Recovery, Federal Emergency Management Agency, 500 C Street SW., Washington, DC 20472, (202) 646–2833.

SUPPLEMENTARY INFORMATION: The notice of a major disaster declaration for the State of North Carolina is hereby amended to include the following areas among those areas determined to have been adversely affected by the event declared a major disaster by the President in his declaration of October 10, 2016.

Brunswick County for Individual Assistance (already designated for assistance for debris removal and emergency protective measures [Categories A and B], including direct federal assistance, under the Public Assistance program)

Halifax County for Individual Assistance and assistance for assistance for debris removal and emergency protective measures (Categories A and B), including direct federal assistance, under the Public Assistance program.

The following Catalog of Federal Domestic Assistance Numbers (CFDA) are to be used for reporting and drawing funds: 97.030, Community Disaster Loans; 97.031, Cora Brown Fund; 97.032, Crisis Counseling; 97.033, Disaster Legal Services; 97.034, Disaster Unemployment Assistance (DUA); 97.046, Fire Management Assistance Grant; 97.048, Disaster Housing Assistance to Individuals and Households In Presidentially Declared Disaster Areas; 97.049, Presidentially Declared Disaster Assistance—Disaster Housing Operations for Individuals and Households; 97.050 Presidentially Declared Disaster Assistance to Individuals and Households—Other Needs; 97.036, Disaster Grants—Public Assistance (Presidentially Declared Disasters); 97.039, Hazard Mitigation Grant.

W. Craig Fugate,

Administrator, Federal Emergency Management Agency.

[FR Doc. 2016–27128 Filed 11–9–16; 8:45 am]

BILLING CODE 9111–23–P

DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

[Internal Agency Docket No. FEMA–4280–DR; Docket ID FEMA–2016–0001]

Florida; Amendment No. 3 to Notice of a Major Disaster Declaration

AGENCY: Federal Emergency Management Agency, DHS.

ACTION: Notice.

SUMMARY: This notice amends the notice of a major disaster declaration for the State of Florida (FEMA–4280–DR), dated September 28, 2016, and related determinations.

DATES: *Effective Date:* November 2, 2016.

FOR FURTHER INFORMATION CONTACT: Dean Webster, Office of Response and Recovery, Federal Emergency Management Agency, 500 C Street SW., Washington, DC 20472, (202) 646–2833.

SUPPLEMENTARY INFORMATION: The notice of a major disaster declaration for the State of Florida is hereby amended to include the following areas among those areas determined to have been adversely affected by the event declared a major disaster by the President in his declaration of September 28, 2016.

Manatee, Taylor, and Wakulla Counties for Individual Assistance (already designated for Public Assistance).

The following Catalog of Federal Domestic Assistance Numbers (CFDA) are to be used for reporting and drawing funds: 97.030, Community Disaster Loans; 97.031, Cora Brown Fund; 97.032, Crisis Counseling; 97.033, Disaster Legal Services; 97.034, Disaster Unemployment Assistance (DUA); 97.046, Fire Management Assistance Grant; 97.048, Disaster Housing Assistance to Individuals and Households In Presidentially Declared Disaster Areas; 97.049, Presidentially Declared Disaster Assistance—Disaster Housing Operations for Individuals and Households; 97.050 Presidentially Declared Disaster Assistance to Individuals and Households—Other Needs; 97.036, Disaster Grants—Public Assistance (Presidentially Declared Disasters); 97.039, Hazard Mitigation Grant.

W. Craig Fugate,

Administrator, Federal Emergency Management Agency.

[FR Doc. 2016–27121 Filed 11–9–16; 8:45 am]

BILLING CODE 9111–23–P

DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

[Internal Agency Docket No. FEMA–4285–DR; Docket ID FEMA–2016–0001]

North Carolina; Amendment No. 11 to Notice of a Major Disaster Declaration

AGENCY: Federal Emergency Management Agency, DHS.

ACTION: Notice.

SUMMARY: This notice amends the notice of a major disaster declaration for the State of North Carolina (FEMA–4285–DR), dated October 10, 2016, and related determinations.

DATES: Effective Date: November 1, 2016.

FOR FURTHER INFORMATION CONTACT: Dean Webster, Office of Response and Recovery, Federal Emergency Management Agency, 500 C Street SW., Washington, DC 20472, (202) 646–2833.

SUPPLEMENTARY INFORMATION: The notice of a major disaster declaration for the State of North Carolina is hereby amended to include the following area among those areas determined to have been adversely affected by the event declared a major disaster by the President in his declaration of October 10, 2016.

Hertford County for Individual Assistance (already designated for assistance for debris removal and emergency protective measures [Categories A and B], including direct federal assistance, under the Public Assistance program)

The following Catalog of Federal Domestic Assistance Numbers (CFDA) are to be used for reporting and drawing funds: 97.030, Community Disaster Loans; 97.031, Cora Brown Fund; 97.032, Crisis Counseling; 97.033, Disaster Legal Services; 97.034, Disaster Unemployment Assistance (DUA); 97.046, Fire Management Assistance Grant; 97.048, Disaster Housing Assistance to Individuals and Households In Presidentially Declared Disaster Areas; 97.049, Presidentially Declared Disaster Assistance—Disaster Housing Operations for Individuals and Households; 97.050 Presidentially Declared Disaster Assistance to Individuals and Households—Other Needs; 97.036, Disaster Grants—Public Assistance (Presidentially Declared Disasters); 97.039, Hazard Mitigation Grant.

W. Craig Fugate,

Administrator, Federal Emergency Management Agency.

[FR Doc. 2016–27122 Filed 11–9–16; 8:45 am]

BILLING CODE 9111–23–P

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

[Docket No. FR–5907–N–46]

Federal Property Suitable as Facilities To Assist the Homeless

AGENCY: Office of the Assistant Secretary for Community Planning and Development, HUD.

ACTION: Notice.

SUMMARY: This Notice identifies unutilized, underutilized, excess, and surplus Federal property reviewed by HUD for suitability for use to assist the homeless.

FOR FURTHER INFORMATION CONTACT: Juanita Perry, Department of Housing and Urban Development, 451 Seventh Street SW., Room 7266, Washington, DC 20410; telephone (202) 402–3970; TTY number for the hearing- and speech-impaired (202) 708–2565 (these telephone numbers are not toll-free), call the toll-free Title V information line at 800–927–7588 or send an email to *title5@hud.gov*.

SUPPLEMENTARY INFORMATION: In accordance with 24 CFR part 581 and section 501 of the Stewart B. McKinney Homeless Assistance Act (42 U.S.C. 11411), as amended, HUD is publishing this Notice to identify Federal buildings and other real property that HUD has reviewed for suitability for use to assist the homeless. The properties were reviewed using information provided to HUD by Federal landholding agencies regarding unutilized and underutilized buildings and real property controlled by such agencies or by GSA regarding its inventory of excess or surplus Federal property. This Notice is also published in order to comply with the December 12, 1988 Court Order in *National Coalition for the Homeless* v. *Veterans Administration,* No. 88–2503–OG (D.D.C.).

Properties reviewed are listed in this Notice according to the following categories: Suitable/available, suitable/unavailable, and suitable/to be excess, and unsuitable. The properties listed in the three suitable categories have been reviewed by the landholding agencies, and each agency has transmitted to HUD: (1) Its intention to make the property available for use to assist the homeless, (2) its intention to declare the property excess to the agency's needs, or (3) a statement of the reasons that the property cannot be declared excess or made available for use as facilities to assist the homeless.

Properties listed as suitable/available will be available exclusively for homeless use for a period of 60 days

from the date of this Notice. Where property is described as for ''off-site use only'' recipients of the property will be required to relocate the building to their own site at their own expense. Homeless assistance providers interested in any such property should send a written expression of interest to HHS, addressed to: Ms. Theresa M. Ritta, Chief Real Property Branch, the Department of Health and Human Services, Room 12–07, Parklawn Building, 5600 Fishers Lane, Rockville, MD 20857, (301)-443–2265 (This is not a toll-free number.) HHS will mail to the interested provider an application packet, which will include instructions for completing the application. In order to maximize the opportunity to utilize a suitable property, providers should submit their written expressions of interest as soon as possible. For complete details concerning the processing of applications, the reader is encouraged to refer to the interim rule governing this program, 24 CFR part 581.

For properties listed as suitable/to be excess, that property may, if subsequently accepted as excess by GSA, be made available for use by the homeless in accordance with applicable law, subject to screening for other Federal use. At the appropriate time, HUD will publish the property in a Notice showing it as either suitable/available or suitable/unavailable.

For properties listed as suitable/unavailable, the landholding agency has decided that the property cannot be declared excess or made available for use to assist the homeless, and the property will not be available.

Properties listed as unsuitable will not be made available for any other purpose for 20 days from the date of this Notice. Homeless assistance providers interested in a review by HUD of the determination of unsuitability should call the toll free information line at 1–800–927–7588 or send an email to *title5@hud.gov* for detailed instructions, or write a letter to Ann Marie Oliva at the address listed at the beginning of this Notice. Included in the request for review should be the property address (including zip code), the date of publication in the **Federal Register**, the landholding agency, and the property number.

For more information regarding particular properties identified in this Notice (*e.g.,* acreage, floor plan, condition of property, existing sanitary facilities, exact street address), providers should contact the appropriate landholding agencies at the following address(es): GSA: Mr. Flavio Peres, General Services Administration, Office of Real Property Utilization and Disposal, 1800 F Street NW., Room 7040 Washington, DC 20405, (This is not a toll-free number).

Dated: November 3, 2016.

Brian P. Fitzmaurice,

Director, Division of Community Assistance, Office of Special Needs Assistance Programs.

TITLE V, FEDERAL SURPLUS PROPERTY PROGRAM FEDERAL REGISTER REPORT FOR 11/11/2016

Unsuitable Properties

Land

New Jersey

49 Acres
Woodbridge Avenue
Edison NJ 08817
Landholding Agency: GSA
Property Number: 54201610006
Status: Excess
GSA Number: NJ–0944–AA
Comments: REDETERMINATION: Elevated concentrations of PAHs, PCBs, beryllium, xylene, lead, arsenic and DDT in soil and VOCs in groundwater present a clear threat to human health
Reasons: Contamination

[FR Doc. 2016–27115 Filed 11–9–16; 8:45 am]

BILLING CODE 4210–67–P

INTER-AMERICAN FOUNDATION

Sunshine Act Meetings

TIME AND DATE: November 14, 2016, 9:00 a.m.–1:00 p.m.

PLACE: Offices of Baker/McKenzie LLP, 815 Connecticut Avenue NW., Washington, DC 20006.

STATUS: Meeting of the Advisory Council, Open to the Public.

MATTERS TO BE CONSIDERED:

- Approval of the Minutes of the May 2, 2016, Meeting of the Board of Directors
- Management Report
- Advisory Council Engagement
- Donor Engagement Strategy
- Adjournment

CONTACT PERSON FOR MORE INFORMATION: Paul Zimmerman, General Counsel, (202) 683–7118.

Paul Zimmerman,

General Counsel.

[FR Doc. 2016–27246 Filed 11–8–16; 11:15 am]

BILLING CODE 7025–01–P

INTER-AMERICAN FOUNDATION

Sunshine Act Meetings

TIME AND DATE: November 14, 2016, 9:00 a.m.–2:30 p.m.

PLACE: Offices of Baker/McKenzie LLP, 815 Connecticut Avenue NW., Washington, DC 20006.

STATUS: Meeting of the Board of Directors, Open to the Public.

MATTERS TO BE CONSIDERED:

- Approval of the Minutes of the May 2, 2016, Meeting of the Board of Directors
- Management Report
- Advisory Council Engagement
- Donor Engagement Strategy
- CEO Recruitment
- Adjournment

CONTACT PERSON FOR MORE INFORMATION: Paul Zimmerman, General Counsel (202) 683–7118.

Paul Zimmerman,

General Counsel.

[FR Doc. 2016–27243 Filed 11–8–16; 11:15 am]

BILLING CODE 7025–01–P

DEPARTMENT OF THE INTERIOR

Geological Survey

[GX13SB00C2G9100]

Agency Information Collection Activities: Request for Comments

AGENCY: U.S. Geological Survey (USGS), Interior.

ACTION: Notice of revision of a currently approved information collection, (1028–0107).

SUMMARY: We (the U.S. Geological Survey) are notifying the public that we have submitted to the Office of Management and Budget (OMB) the information collection request (ICR) described below. To comply with the Paperwork Reduction Act of 1995 (PRA) and as part of our continuing efforts to reduce paperwork and respondent burden, we invite the general public and other Federal agencies to take this opportunity to comment on this ICR. This collection is scheduled to expire on November 30, 2016.

DATE: To ensure that your comments on this ICR are considered, OMB must receive them on or before December 12, 2016.

ADDRESSES: Please submit written comments on this information collection directly to the Office of Management and Budget (OMB), Office of Information and Regulatory Affairs, Attention: Desk Officer for the Department of the Interior, via email: (*OIRA_@omb.eop.gov*); or by fax (202) 395–5806; and identify your submission with 'OMB Control Number 1028–0107, Economic Contribution of Federal Investments in Restoration of Degraded, Damaged, or Destroyed Ecosystems'. Please also forward a copy of your comments and suggestions on this

information collection to the Information Collection Clearance Officer, U.S. Geological Survey, 12201 Sunrise Valley Drive MS 807, Reston, VA 20192 (mail); (703) 648–7195 (fax); or *gs-info_collections@usgs.gov* (email). Please reference 'OMB Information Collection 1028–0107, Economic Contribution of Federal Investments in Restoration of Degraded, Damaged, or Destroyed Ecosystems' in all correspondence.

FOR FURTHER INFORMATION CONTACT: Catherine Cullinane Thomas, Fort Collins Science Center, U.S. Geological Survey, 2150 Centre Ave., Fort Collins, CO 80526 (mail); 970–226–9164 (phone); or *ccullinanethomas@usgs.gov* (email). You may also find information about this ICR at *www.reginfo.gov.*

SUPPLEMENTARY INFORMATION:

I. Abstract

Federal investments in ecosystem restoration projects protect Federal trusts, ensure public health and safety, and preserve and enhance essential ecosystem services. These investments also generate business activity and create jobs. The Economic Impacts of Ecosystem Restoration project aims to increase the availability of information on the costs and activities associated with ecosystem restoration, and to gauge the economic effects of these investments to local economies. The project is comprised of a series of case studies that quantify the economic impacts of restoration projects. The case studies include examples of collaboratively funded and managed projects to restore a wide range of degraded, damaged, or destroyed ecosystems. In addition to providing improved information on the economic impacts of restoration, these case studies highlight DOI restoration efforts and tell personalized stories about each project and the communities that are positively affected by restoration activities. Project methods include the collection of primary expenditure data and economic input/output modeling. Results from the first phase of case studies are available online at *https://www.fort.usgs.gov/economic-impacts-restoration* and in a USGS report titled 'Estimating the economic impacts of ecosystem restoration—methods and case studies'. The report provides a detailed description of the methods used to estimate economic impacts of case study projects and also provides suggestions, lessons learned, and trade-offs between potential analysis methods. This second phase of case studies aims to refine the survey methods and fill in some data gaps on specific types of restoration activities.

II. Data

OMB Control Number: 1028–0107.

Form Number: 2 forms, not numbered.

Title: Economic Contribution of Federal Investments in Restoration of Degraded, Damaged, or Destroyed Ecosystems.

Type of Request: Revision of a currently approved information collection.

Respondent Obligation: None, participation is voluntary.

Frequency of Collection: One time only.

Description of Respondents: Restoration project managers working on selected case study restoration projects; this includes project managers from state and local government, and from non-profit industry.

Estimated Total Number of Annual Responses: We expect to do up to 10 case studies per year, and many of these case studies will have Federal project managers.

Estimated Time per Response: We estimate that it will take approximately 3.5 hours per person to complete the surveys, including correspondence time.

Estimated Annual Burden Hours: 21 hours.

Estimated Reporting and Recordkeeping ''*Non-Hour Cost*'' *Burden:* There are no ''non-hour cost'' burdens associated with this collection of information.

Public Disclosure Statement: The PRA (44 U.S.C. 3501, *et seq.*) provides that an agency may not conduct or sponsor and you are not required to respond to a collection of information unless it displays a currently valid OMB control number. Until the OMB approves a collection of information, you are not obliged to respond.

Comments: On July 1, 2016, we published a **Federal Register** notice (81 FR 43224) announcing that we would submit this ICR to OMB for approval and soliciting comments. The comment period closed on August 30, 2016. We received no comments.

III. Request for Comments

We again invite comments concerning this ICR as to: (a) Whether the proposed collection of information is necessary for the agency to perform its duties, including whether the information is useful; (b) the accuracy of the agency's estimate of the burden of the proposed collection of information; (c) how to enhance the quality, usefulness, and clarity of the information to be collected; and (d) how to minimize the burden on the respondents, including the use of automated collection techniques or other forms of information technology.

Please note that comments submitted in response to this notice are a matter of public record. Before including your personal mailing address, phone number, email address, or other personally identifiable information in your comment, you should be aware that your entire comment, including your personally identifiable information, may be made publicly available at any time. While you can ask us and the OMB in your comment to withhold your personal identifying information from public review, we cannot guarantee that it will be done.

William Lellis,

Acting Associate Director, Ecosystems.

[FR Doc. 2016–27194 Filed 11–9–16; 8:45 am]

BILLING CODE 4338–11–P

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

[LLORS05000.L63100000.HD0000. 16XL1116AF HAG 16–0118]

Notice of Emergency Temporary Closure of Public Lands in Benton County, Oregon

AGENCY: Bureau of Land Management, Department of the Interior.

ACTION: Notice of emergency temporary closure.

SUMMARY: Notice is hereby given that an emergency closure is in effect on public lands administered by the Marys Peak Field Office, Bureau of Land Management (BLM), to provide for public health and safety during operations of the Fall-Cole Timber Sale.

DATES: The Emergency Temporary Closure took effect on 12:01 a.m. Monday, May 1, 2016, and lasts through 11:59 p.m. Friday, October 31, 2017.

FOR FURTHER INFORMATION CONTACT: Field Manager Paul Tigan, Marys Peak Field Office, BLM Salem District Office, 1717 Fabry Road, Salem, OR 97306, telephone 503–315–5968, email: *pdtigan@blm.gov.* Persons who use a telecommunications device for the deaf (TDD) may call the Federal Relay Service at 1–800–877–8339 to contact the above individual during normal business hours. The Service is available 24 hours a day, 7 days a week, to leave a message or question for the above individual. You will receive a reply during normal business hours.

SUPPLEMENTARY INFORMATION: This Emergency Temporary Closure affects

public lands near the Alsea Falls Recreation Area, Fall Creek Trail System, in the Marys Peak Field Office, Benton County, Oregon. The closure is necessary to ensure public safety while logging and road renovation and reconstruction is taking place.

The public lands affected by this closure are described as follows:

Willamette Meridian, Oregon

T. 14 S., R. 7 W.,
Sec. 25, All;
Sec. 26, S½N½, S½;
Sec. 27, All;
Sec. 34, All.

The area described contains approximately 2,400 acres. The roads and trails subject to the closure are: the 14–7–25 road, the 14–7–27 road, the Upper Whistlepunk Trail, and the Lower Whistlepunk Trail. Detour routes will be provided for safe access to the portions of the Fall Creek Trail System not included in this Emergency Temporary Closure.

The Emergency Temporary Closure is necessary to ensure public safety on lands included and adjacent to the Fall-Cole Timber Sale logging operation.

The BLM will post closure signs at roads and trails leading into this area. This closure order will be posted at the Fall Creek Trailhead Kiosk, the Alsea Falls Campground, Alsea Falls Trailhead and Day Use Area Kiosks. The closure notice and map of the affected area will be posted at the BLM Salem District Office, 1717 Fabry Road, Salem, Oregon, 97306, and the BLM Salem District Web site: *http://www.blm.gov/or/districts/salem/index.php.*

The closure order is issued under the authority of 43 CFR 8364.1, which allows the BLM to establish closures for the protection of persons; property; and public lands and resources. Violation of any of the terms, conditions, or restrictions contained within this closure order may subject the violator to citation or arrest with a penalty or fine or imprisonment or both as specified by law.

Closure Restrictions: The following acts are prohibited during the Emergency Temporary Closure of the Fall-Cole Timber Sale Area:

1. Being present on or walking, hiking, bicycling, or driving on any road or trail within the closed area.

2. Includes all public use, including but not limited to, bicycle, pedestrian, and motorized vehicles.

Exceptions: This closure is in effect every weekday (Monday-Friday, holidays included) for the duration of the closure. The roads and trails will be open to foot and bicycle traffic on Saturdays and Sundays. Closure restrictions do not apply to BLM personnel, emergency, or law enforcement personnel in the performance of their official duties.

Penalties: Any person who violates this closure may be tried before a United States magistrate and fined in accordance with 18 U.S.C. 3571, imprisoned no more than 12 months under 43 U.S.C. 1733(a) and 43 CFR 8360.0–7, or both. In accordance with 43 CFR 8365.1–7, State or local officials may also impose penalties for violations of Oregon law.

Paul Tigan,

Field Manager, Marys Peak Resource Area.

[FR Doc. 2016–27168 Filed 11–9–16; 8:45 am]

BILLING CODE 4310–33–P

DEPARTMENT OF THE INTERIOR

National Park Service

[NPS–PWRO–TUSK–22317; PPPWTUSK00, PPMPSPD1Z.YM0000]

Notice of December 12, 2016, Meeting for Tule Springs Fossil Beds National Monument Advisory Council

AGENCY: National Park Service, Interior.

ACTION: Meeting notice.

SUMMARY: This notice sets forth the date of the second meeting of the Tule Springs Fossil Beds National Monument Advisory Council.

DATES: The public meeting of the Tule Springs Fossil Beds National Monument Advisory Council will be held on Monday, December 12, 2016, at 5:30 p.m. (PACIFIC).

ADDRESSES: The second meeting of the Tule Springs Fossil Beds National Monument Advisory Council will take place on Monday, December 12, 2016, at 5:30 p.m., at the Interagency Office Building, 4701 North Torrey Pines Drive, Las Vegas, Nevada 89130, to discuss the following:

1. Introduction of Designated Federal Officer (DFO) and Council Members
2. Request for Public Comments
3. Committee Roll
4. Approval of Agenda
5. Review and Approval of Minutes
6. Reports
   a. Superintendent's Report
   b. Old Business
   c. New Business
7. Public Comments Submitted
8. Adjourn

FOR FURTHER INFORMATION CONTACT: Further information concerning the meeting may be obtained from Jon Burpee, Superintendent and DFO, Tule Springs Fossil Beds National Monument, 601 Nevada Way, Boulder City, Nevada 89005, via telephone at (702) 902–0431 or through email at *tusk_information@nps.gov.*

SUPPLEMENTARY INFORMATION: The Council was established pursuant to section 3092(a)(6) of Public Law 113–291 and in accordance with the provisions of the Federal Advisory Management Act (5 U.S.C. Appendix 1–16). The purpose of the Council is to advise the Secretary of the Interior, or her designee, with respect to the preparation and implementation of the management plan.

The meeting is open to the public. It is expected that 60 persons will be able to attend the meeting in addition to Council members. Interested persons may make oral/written presentations to the Commission during the business meeting or file written statements. Such requests should be made to the park superintendent prior to the meeting. Before including your address, telephone 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 may 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.

Alma Ripps,

Chief, Office of Policy.

[FR Doc. 2016–27179 Filed 11–9–16; 8:45 am]

BILLING CODE 4312–52–P

DEPARTMENT OF THE INTERIOR

National Park Service

[NPS–USPP–22368; PPWOUSPPS1, PPMPRPP02.Y00000 (177)]

Information Collection Request Sent to the Office of Management and Budget (OMB) for Approval; United States Park Police Pre-Employment Suitability Determination Process

AGENCY: National Park Service, Interior.

ACTION: Notice; request for comments.

SUMMARY: We (National Park Service, NPS) have sent an Information Collection Request (ICR) to OMB for review and approval. We summarize the ICR below and describe the nature of the collection and the estimated burden and cost. This information collection is scheduled to expire on March 31, 2017. We 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. However, under OMB regulations, we may continue to conduct or sponsor this information collection while it is pending at OMB.

DATES: You must submit comments on or before December 12, 2016.

ADDRESSES: Send your comments and suggestions on this information collection to the Desk Officer for the Department of the Interior at OMB–OIRA at (202) 395–5806 (fax) or *OIRA_Submission@omb.eop.gov* (email). Please provide a copy of your comments to the Information Collection Clearance Officer, National Park Service, 12201 Sunrise Valley Dr., (MS–242), Reston, VA 20192 (mail); or *madonna_baucum@nps.gov* (email). Please reference OMB Control Number 1024–0245 in the subject line of your comments. You may review the ICR online at *http://www.reginfo.gov.* Follow the instructions to review Department of the Interior collections under review by OMB.

FOR FURTHER INFORMATION CONTACT: To request additional information about this IC, contact Pamela Blyth, United States Park Police, 1100 Ohio Drive SW., Washington, DC 20242 (mail); or at *pamela_blyth@nps.gov* (email).

SUPPLEMENTARY INFORMATION:

I. Abstract

The United States Park Police (USPP) is a unit of the National Park Service, Department of the Interior, with jurisdiction in all National Park Service areas and certain other Federal and State lands. The USPP are highly trained, professional police officers who prevent and detect criminal activity; conduct investigations; apprehend individuals suspected of committing offenses against Federal, State, and local laws; provide protection to the President of the United States and visiting dignitaries; and provide protective services to some of the most recognizable monuments and memorials in the world. Applicants for USPP officer positions must complete and pass a competitive written examination, an oral interview, a medical examination and psychological evaluation, and a battery of physical fitness and agility tests. As part of this application and screening process, the USPP uses the following forms:

Form 10–2201, ''*Personal Qualifications Statement*'' provides information on the personal history of the candidate. We have not made any substantive changes to the form, only minor edits to clarify instructions or improve readability and formatting changes to meet new DOI and NPS forms standards. Investigators verify the information provided and use it to determine an applicant's suitability for a USPP officer position.

The following forms have been in use without approval due to the USPP and are now being submitted with this revision for clearance by OMB.

Form 10–2201A, ''*Information Release Form*'', authorizes the release of all personal and confidential records, to include medical records concerning physical and mental health, to the USPP necessary as part of the Pre-employment Suitability Determination Phase to determine the suitability of the candidate for employment with the USPP.

Form 10–2201B, ''*Release to Obtain a Credit Report*'', authorizes the release of information from consumer reporting agencies to the USPP necessary as part of the Pre-employment Suitability Determination Phase to determine the suitability of the candidate for employment with the USPP.

Form 10–2201C, ''*Lautenberg Certification*'', requires information and certification by the applicant regarding a conviction of a misdemeanor crime of domestic violence. This certification is required to determine the suitability of the candidate to move forward in the Pre-employment Suitability Determination Phase of the USPP candidate selection process.

Form 10–2201D, ''*Physical Efficiency Battery* ''*Waiver*'' '', requires the candidate to provide the following information regarding medical conditions which may impede their ability to meet the minimum efficiency score on the Physical Efficiency Battery (PEB), a requirement of the Pre-employment Suitability Determination Phase of the USPP candidate selection process.

Form 10–2201E, ''*Physician Consent Form*'', is required to document the medical clearance by a physician for the candidate to participate in the PEB as part of the Pre-employment Suitability Determination Phase of the USPP candidate selection process.

Form 10–2201F, ''*Applicant Documentation Form*'', is completed by the applicant when declining or deferring employment with the USPP.

II. Data

OMB Control Number: 1024–0245.

Title: United States Park Police Pre-Employment Suitability Determination Process.

Service Form Number(s):

- 10–2201, ''Personal History Statement''
- 10–2201A, ''Information Release Form''
- 10–2201B, ''Release to Obtain a Credit Report''
- 10–2201C, ''Lautenberg Certification Form''
- 10–2201D, ''Physical Efficiency Battery ''Waiver'' ''
- 10–2201E, ''Physician Consent Form''
- 10–2201F, ''Applicant Documentation Form''

Type of Request: Revision of a currently approved collection to incorporate additional forms in use without OMB approval.

Description of Respondents: Candidates for employment as a United States Park Police officer.

Respondent's Obligation: Required to obtain or retain a benefit.

Frequency of Collection: On occasion.

Activity	Estimated annual number of responses	Estimated completion time per response	Estimated total annual burden hours
Form 10–2201, ''Personal Qualification Statement'' (Individual)	2,500	7 Hours	17,500
Form 10–2201A, ''Information Release Form'' (Individual)	2,500	15 Min	625
Form 10–2201B, ''Release to Obtain a Credit Report'' (Individual)	2,500	10 Min	417
Form 10–2201C, ''Lautenberg Certification'' (Individual)	2,500	5 Min	208
Form 10–2201D, ''Physical Efficiency Battery ''Waiver'' '' (Individual)	2,500	10 Min	417
Form 10–2201E, ''Physician Consent Form'' (Private Sector)	2,500	15 Min	625
Form 10–2201F, ''Applicant Documentation Form'' (Individual)	15	5 Min	1
Totals	15,015		19,793

Estimated Annual Nonhour Burden Cost: $238,752 primarily for costs (1) associated with printing and notarizing the application and (2) incurred to provide supporting documentation.

III. Comments

On May 29, 2015, we published in the **Federal Register** (80 FR 30721) a notice of our intent to request that OMB renew approval for this information collection. In that notice, we solicited comments for 60 days, ending on July 28, 2015. We did not receive any comments in response to that notice.

We again invite comments concerning this information collection on:

- Whether or not the collection of information is necessary, including whether or not the information will have practical utility;
- The accuracy of our estimate of the burden for this collection of information;
- Ways to enhance the quality, utility, and clarity of the information to be collected; and
- Ways to minimize the burden of the collection of information on respondents.

Comments that you submit in response to this notice are a matter of public record. 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 OMB in your comment to withhold your personal identifying information from public review, we cannot guarantee that it will be done.

Dated: November 4, 2016.

Madonna L. Baucum,

Information Collection Clearance Officer, National Park Service.

[FR Doc. 2016–27129 Filed 11–9–16; 8:45 am]

BILLING CODE 4310–EH–P

DEPARTMENT OF THE INTERIOR

National Park Service

[NPS–NER–BOHA–22292; PPMPSPD1Z.YM0000 PPNEBOHAS1]

Notice of December 14, 2016, Meeting of the Boston Harbor Islands National Recreation Area Advisory Council

AGENCY: National Park Service, Interior.

ACTION: Notice of meeting.

SUMMARY: This notice announces a meeting of the Boston Harbor Islands National Recreation Area Advisory Council (Council). The agenda includes a discussion of the next steps for the Boston Harbor Islands Partnership and the Council, a presentation of the Urban Agenda, and the National Parks of Boston updates.

DATES: December 14, 2016, from 4:00 p.m. to 6:00 p.m. (Eastern).

ADDRESSES: New England Aquarium, Harborside Learning Lab, Central Wharf, Boston, MA 02110.

FOR FURTHER INFORMATION CONTACT: Giles Parker, Superintendent and Designated Federal Official (DFO), Boston Harbor Islands National Recreation Area, 15 State Street, Suite 1100, Boston, MA 02109, telephone (617) 223–8669, or email *giles_parker@nps.gov.*

SUPPLEMENTARY INFORMATION: This meeting is open to the public. Those wishing to submit written comments may contact the DFO for the Council, Giles Parker, by mail at National Park Service, Boston Harbor Islands, 15 State Street, Suite 1100, Boston, MA 02109. Before including your address, telephone 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 may 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.

The Council was appointed by the Director of the National Park Service pursuant to 16 U.S.C. 460kkk(g). The purpose of the Council is to advise and make recommendations to the Boston Harbor Islands Partnership with respect to the implementation of a management plan and park operations. Efforts have been made locally to ensure that the interested public is aware of the meeting dates.

Alma Ripps,

Chief, Office of Policy.

[FR Doc. 2016–27178 Filed 11–9–16; 8:45 am]

BILLING CODE 4312–52–P

DEPARTMENT OF THE INTERIOR

National Park Service

[NPS–NCR–MAMC–22282; PPNCNACEN0, PPMPSAS1Z.Y00000]

Notice of December 16, 2016, Meeting of the Mary McLeod Bethune Council House National Historic Site Advisory Commission

AGENCY: National Park Service, Interior.

ACTION: Meeting notice.

SUMMARY: This notice sets forth the meeting date of the Mary McLeod Bethune National Council House National Historic Site Advisory Commission.

DATES: The public meeting of the Mary McLeod Bethune Council House National Historic Site Advisory Commission will be held on Friday, December 16, 2016, at 9:00 a.m. (EASTERN).

ADDRESSES: The Commission meeting will be held on Friday, December 16, 2016, at 9:00 a.m., in the Library at National Capital Parks-East Headquarters, 1900 Anacostia Drive, SE., Washington, DC 20020, to discuss the following:

1. Welcome and Introductions
2. History of the Mary McLeod Bethune Council House National Historic Site Advisory Commission
3. Review of Advisory Commission Charter
4. Review of Federal Advisory Committee Act (5 U.S.C. 1–16 Appendix)
5. Discussion of General Policies and Specific Matters Related to the Administration of the Site

FOR FURTHER INFORMATION CONTACT: Vicky Gammon, Management Assistant, Office of the Superintendent, or Tara Morrison, Superintendent and Designated Federal Officer, National Capital Parks-East, 1900 Anacostia Drive, SE., Washington, DC 20020, telephone (202) 690–5193, or email at *vicky_gammon@nps.gov* or *tara_morrison@nps.gov.*

SUPPLEMENTARY INFORMATION: The Commission is established by Section 4 of Act (54 U.S.C. 320101 formerly 16 U.S.C. 461 note), Public Law 102–211, and is regulated by the Federal Advisory Committee Act, as amended, 5 U.S.C. Appendix 1–16. The purpose of the Commission is to fully participate in an advisory capacity with the Secretary of the Interior in the development of a General Management Plan for the historic site. The Advisory Commission will also, as often as necessary, but at least semiannually, meet and consult with the Secretary on matters relating to the management and development of the historic site.

The meeting is open to the public. It is expected that 15 persons will be able to attend the meeting in addition to Commission members. Interested persons may make oral/written presentations to the Commission during the business meeting or file written statements. Such requests should be made to the park superintendent prior to the meeting. Before including your

address, telephone 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 may 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.

Alma Ripps,

Chief, Office of Policy.

[FR Doc. 2016–27177 Filed 11–9–16; 8:45 am]

BILLING CODE 4312–52–P

INTERNATIONAL TRADE COMMISSION

[USITC SE–16–036]

Government in the Sunshine Act Meeting Notice

AGENCY HOLDING THE MEETING: United States International Trade Commission.

TIME AND DATE: November 15, 2016 at 11:00 a.m.

PLACE: Room 101, 500 E Street SW., Washington, DC 20436, Telephone: (202) 205–2000.

STATUS: Open to the public.

MATTERS TO BE CONSIDERED:

1. Agendas for future meetings: none.

2. Minutes.

3. Ratification List.

4. Vote in Inv. Nos. 731–TA–1174 and 1175 (Review)(Seamless Refined Copper Pipe and Tube from China and Mexico). The Commission is currently scheduled to complete and file its determinations and views of the Commission on November 30, 2016.

5. Outstanding action jackets: None.

In accordance with Commission policy, subject matter listed above, not disposed of at the scheduled meeting, may be carried over to the agenda of the following meeting.

By order of the Commission.

Issued: November 8, 2016.

William R. Bishop,

Supervisory Hearings and Information Officer.

[FR Doc. 2016–27295 Filed 11–8–16; 4:15 pm]

BILLING CODE 7020–02–P

INTERNATIONAL TRADE COMMISSION

[Investigation Nos. 701–TA–564 and 731–TA–1338–1340 (Preliminary)]

Steel Concrete Reinforcing Bar From Japan, Taiwan, and Turkey

Determinations

On the basis of the record [1] developed in the subject investigations, the United States International Trade Commission (''Commission'') determines, pursuant to the Tariff Act of 1930 (''the Act''), that there is a reasonable indication that an industry in the United States is materially injured by reason of imports of steel concrete reinforcing bar (''rebar'') from Japan, Taiwan, and Turkey, provided for in subheadings 7213.10.00, 7214.20.00, and 7228.30.80 of the Harmonized Tariff Schedule of the United States, that are alleged to be sold in the United States at less than fair value (''LTFV''), and that are allegedly subsidized by the government of Turkey.

Commencement of Final Phase Investigations

Pursuant to section 207.18 of the Commission's rules, the Commission also gives notice of the commencement of the final phase of its investigations. The Commission will issue a final phase notice of scheduling, which will be published in the **Federal Register** as provided in section 207.21 of the Commission's rules, upon notice from the Department of Commerce (''Commerce'') of affirmative preliminary determinations in the investigations under sections 703(b) or 733(b) of the Act, or, if the preliminary determinations are negative, upon notice of affirmative final determinations in those investigations under sections 705(a) or 735(a) of the Act. Parties that filed entries of appearance in the preliminary phase of the investigations need not enter a separate appearance for the final phase of the investigations. Industrial users, and, if the merchandise under investigation is sold at the retail level, representative consumer organizations have the right to appear as parties in Commission antidumping and countervailing duty investigations. The Secretary will prepare a public service list containing the names and addresses of all persons, or their representatives, who are parties to the investigations.

[1] The record is defined in sec. 207.2(f) of the Commission's Rules of Practice and Procedure (19 CFR 207.2(f)).

Background

On September 20, 2016, the Rebar Trade Action Coalition and its individual members [2] filed petitions with the Commission and Commerce, alleging that an industry in the United States is materially injured or threatened with material injury by reason of subsidized imports of rebar from Turkey and LTFV imports of rebar from Japan, Taiwan, and Turkey. Accordingly, effective September 20, 2016, the Commission, pursuant to sections 703(a) and 733(a) of the Act (19 U.S.C. 1671b(a) and 1673b(a)), instituted countervailing duty investigation No. 701–TA–564 and antidumping duty investigation Nos. 731–TA–1338–1340 (Preliminary).

Notice of the institution of the Commission's investigations and of a public conference to be held in connection therewith was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notice in the **Federal Register** of September 27, 2016 (81 FR 66294). The conference was held in Washington, DC, on October 11, 2016, and all persons who requested the opportunity were permitted to appear in person or by counsel.

The Commission made these determinations pursuant to sections 703(a) and 733(a) of the Act (19 U.S.C. 1671b(a) and 1673b(a)). It completed and filed its determinations in these investigations on November 4, 2016. The views of the Commission are contained in USITC Publication 4648 (November 2016), entitled *Steel Concrete Reinforcing Bar from Japan, Taiwan, and Turkey: Investigation Nos. 701–TA–564 and 731–TA–1338–1340 (Preliminary).*

By order of the Commission.

Issued: November 4, 2016.

Katherine M. Hiner,

Acting Supervisory Attorney.

[FR Doc. 2016–27146 Filed 11–9–16; 8:45 am]

BILLING CODE 7020–02–P

[2] Bayou Steel Group, LaPlace, Louisiana; Byer Steel Group, Inc., Cincinnati, Ohio; Commercial Metals Company, Irving, Texas; Gerdau Ameristeel U.S. Inc., Tampa, Florida; Nucor Corporation, Charlotte, North Carolina; and Steel Dynamics, Inc., Pittsboro, Indiana.

DEPARTMENT OF JUSTICE

Drug Enforcement Administration

[Docket No. 16–26]

Thomas Horiagon, M.D.; Decision and Order

On June 9, 2016, the Deputy Assistant Administrator, of the then Office of Diversion Control, issued an Order to Show Cause to Thomas Horiagon, M.D. (Respondent), of Highlands Ranch, Colorado. The Show Cause Order proposed the revocation of Respondent's DEA Certificate of Registration No. BH2378025, pursuant to which he is authorized to dispense controlled substances in schedules II through V as a practitioner, on the ground that he does ''not have authority to handle controlled substances in . . . Colorado, the [S]tate in which [he is] registered with the DEA.'' Show Cause Order, at 1 (citing 21 U.S.C. 824(a)(3)). As the specific factual basis for the action, the Order alleged that effective March 10, 2016, the Colorado Medical Board revoked Respondent's ''authority to practice medicine.'' *Id.*

The Show Cause Order notified Respondent of his right to request a hearing on the allegations or to submit a written statement of position in lieu of a hearing, the procedure for electing either option, and the consequence for failing to elect either option. *Id.* at 2 (citing 21 CFR 1301.43). In addition, the Show Cause Order notified Respondent of his right under 21 U.S.C. 824(c)(2)(C) to submit a corrective action plan (hereinafter, CAP) to the Deputy Assistant Administrator and the procedure for doing so. *Id.* at 2–3.

On July 15, 2016, Respondent filed a letter with the Office of Administrative Law Judges pursuant to which he requested a hearing on the allegations of the Show Cause Order and submitted his CAP. Letter from Respondent to Hearing Clerk (July 11, 2016). In his letter, Respondent did not dispute that his Colorado medical license ''was revoked on March 10, 2016.'' *Id.* at 1. He maintained, however, that ''this revocation was arbitrary and capricious, an abuse of discretion, and otherwise contrary to law'' and advised ''[t]he matter is now before the Colorado Court of Appeals.'' *Id.* Respondent also advised that he is a defendant in two criminal cases and requested ''the services of a federal public defender in this hearing.'' *Id.*

As for his CAP, Respondent explained:

> My corrective action plan is quite simple. I hold a Wyoming medical license . . . and that license establishes my continued eligibility to hold DEA [Registration] #BH2378025. It is a simple matter for me to establish a business address in the State of Wyoming and I will do this as an alternative to proceeding with the administrative hearing process. However, by making this contingent offer, I am not waiving my right to a hearing at this time.

Id.

Upon receipt of Respondent's letter, the matter was placed on the docket of the Office of Administrative Law Judges and was assigned to ALJ Charles Wm. Dorman (hereinafter, ALJ). In an order issued the same day, the ALJ denied Respondent's request for a public defender, noting that there is ''no constitutional right to appointed counsel in these proceedings.'' Order for Evidence of Service and Briefing Schedule for Lack of State Authority Allegations, at 1 (citing *Calvin Ramsey,* 76 FR 20034, 20035 (2011) (citing *Goldberg* v. *Kelly,* 397 U.S. 254, 270 (1970))). The ALJ did, however, advise Respondent that he had the ''right to be represented by an attorney at his own expense.'' *Id.* (citing 21 CFR 1316.50).

The ALJ also ordered the Government to file evidence to support the allegation that Respondent lacks state authority to handle controlled substances and an accompanying motion for summary disposition no later than 2 p.m. on August 5, 2016. *Id.* And in the event the Government filed a motion for summary disposition, the ALJ ordered Respondent to file his reply by 2 p.m. on August 12, 2016.[1] *Id.* at 1–2.

On July 18, 2016, Government Counsel forwarded Respondent's CAP to the Deputy Assistant Administrator. However, on July 20, 2016, before the Deputy Assistant Administrator had ruled on Respondent's CAP (and more than two weeks before its motion for summary disposition was due), the Government moved for summary disposition. The Government supported its motion by providing a copy of the Colorado Medical Board's Final Board Order.[2] Mot. for Summ. Disp., at Appendix B. The Board's Final Order establishes that Respondent's medical license was revoked effective March 10, 2016. *Id.* at 2.

The next day, Respondent filed a brief opposing the Government's motion. Br. in Opp. to Gov. Mot. for Summ. Disp., at 1. Therein, Respondent did not dispute that his Colorado medical license has been revoked but reiterated that the ''revocation was arbitrary and capricious, an abuse of discretion, and otherwise contrary to law'' and the matter ''is now before the Colorado Court of Appeals.'' *Id.* Respondent argued, however, that because the Colorado Court of Appeals has not ruled on his claims, the DEA proceeding is not ripe for adjudication. *Id.* at 1–2. He also argued that ''[i]f the DEA is seeking to increase the collateral consequences of improper and illegal actions by a Colorado state agency when the underlying questions of fact and law have not been heard by a court of competent jurisdiction at the state level, then [DEA's] actions can also be claimed to be arbitrary and capricious, an abuse of discretion, and otherwise contrary to law.'' [3] *Id.* at 2.

Respondent also asserted that he ''holds a medical license'' in Wyoming and that he ''has submitted a . . . corrective action plan consisting in part of a change in the [S]tate of DEA registration to Wyoming.'' *Id.* at 1. Respondent argued that ''[t]his issue should be remanded to the DEA for consideration of [his] corrective action plan.'' *Id.* at 2. He further argued that if a remand was not granted, he was entitled to a full hearing ''on the questions of fact and law in this case.'' *Id.* at 2.

On July 25, 2016, the ALJ granted the Government's motion, finding it undisputed that ''Respondent does not currently have a Colorado medical license,'' and that Respondent conceded as much. Order Granting Summary Judgment and Recommended Rulings, Findings of Fact, Conclusions of Law, and Decision, at 3–4. The ALJ thus

[1] In the Order, the ALJ also directed the Government to file evidence establishing the date on which Respondent was served with the Show Cause Order and a motion to terminate the proceeding in the event Respondent's request was out of time. Order, at 1. In response, the Government provided an affidavit which establishes that the Show Cause Order was not delivered to Respondent until July 8, 2016. Gov. Resp. to Order, at 1; *id.* at Appendix, at 1. Thus, Respondent's hearing request was not untimely.

[2] The Government also submitted a copy of the Initial Decision issued by the state ALJ. Mot. for Summ. Disp., at Appendix B.

[3] Respondent also argued that the reasoning of *FTC* v. *Phoebe Putney Health System, Inc.,* 113 S.Ct. 1003 (2013), applies to this case because his case challenging the Colorado Board's revocation of his license ''concerns a claim of improper state actions to restrict the activities of a licensed professional.'' Opp. at 1. Respondent then argues that ''[t]he applicability of the reasoning in *Phoebe Putney* to this case [the DEA case] is claimed by [him] and judicial review is requested.'' *Id.*

At issue in *Phoebe Putney Health System* was whether the acquisition of a hospital by a city-county hospital authority was exempt from being enjoined under section 5 of the Federal Trade Commission Action (15 U.S.C. 45) and section 7 of the Clayton Act (15 U.S.C. 18) because it would ''substantially reduce competition in the market for acute-care hospital services'' or whether the acquisition was immune from anti-trust liability under the state-action immunity. *See Parker* v. *Brown,* 317 U.S. 341 (1943). In short, *Phoebe Putney Health System* has nothing to do with whether Respondent's registration should be revoked.

found that ''it is undisputed that the Respondent lacks state authorization to handle controlled substances in Colorado,'' where he is registered. *Id.* at 3.

The ALJ further rejected Respondent's contention that the case is not ripe because he is the subject of two pending criminal cases in Colorado. *Id.* As the ALJ explained, because Respondent's medical license has been revoked, the case was not dependent ''on future events that may not occur'' and ''present[s] a concrete case or controversy.'' *Id.* at 3–4 (citing *Thomas* v. *Union Carbide Agric. Prod. Co.,* 473 U.S. 568, 579 (1985); *Texas* v. *United States,* 523 U.S. 296, 300 (1998)). The ALJ further noted that ''these proceedings are independent from Colorado's criminal proceedings and any factual findings made therein'' and that '' '[i]t is not DEA's policy to stay proceedings . . . while registrants litigate in other forums.' '' *Id.* at 4 (quoting *Newcare Home Health Servs.,* 72 FR 42126, 42127 n.2 (2007)) (other citations omitted). Finally, the ALJ rejected Respondent's argument that the Board's action in revoking his license ''was arbitrary [and] capricious, an abuse of discretion and contrary to law,'' as being a collateral attack on the state proceedings. *Id.* As the ALJ explained, ''a registrant's challenges to the validity of a state action must be litigated in the forums provided by the state.'' *Id.* (citing *Zhiwei Lin,* 77 FR 18862, 18864 (2012); also citing *Kristen Lee Raines,* 81 FR 14890, 14891–92 (2016)).

The ALJ also declined to consider Respondent's CAP, reasoning that he ''does not have the statutory authority to evaluate it.'' *Id.* The ALJ further explained that ''[t]he Administrator will consider the Respondent's corrective action plan.'' *Id.* (citing 21 U.S.C. 824(a)(3)).

On August 3, 2016, the Deputy Assistant Administrator rejected Respondent's CAP. Letter from Deputy Assistant Administrator Louis J. Milione to Respondent. The Deputy Assistant Administrator further explained that he had ''determined [that] there is no potential modification of [it] that could or would alter [his] decision.'' *Id.*

Neither party filed exceptions to the ALJ's decision. Thereafter, on August 23, 2016, the ALJ forwarded the recorded to me for Final Agency Action.

Having considered the record in its entirety, I adopt the ALJ's factual finding that Respondent's medical license has been revoked and his legal conclusion that he does not hold authority under Colorado law to dispense controlled substances and is therefore not entitled to maintain his registration.[4] I also adopt the ALJ's ruling that Respondent was not entitled to appointed counsel, his ruling rejecting Respondent's claim that this proceeding is not ripe for adjudication and his ruling rejecting Respondent's challenge to the lawfulness of the State Board proceedings.

As the ALJ explained, the Controlled Substances Act requires that a practitioner possess state authority to dispense controlled substances in order to maintain his registration. R.D. at 3; *see also* 21 U.S.C. 802(21) (defining ''the term 'practitioner' [to] mean[ ] a . . . physician . . . or other person licensed, registered or otherwise permitted, by . . . the jurisdiction in which he practices . . . to distribute, dispense, [or] administer . . . a controlled substance in the course of professional practice''); *id.* § 823(f) (''The Attorney General shall register practitioners . . . if the applicant is authorized to dispense . . . controlled substances under the laws of the State in which he practices.'').

Because Congress has clearly mandated that a physician possess state authority in order to be deemed a practitioner under the Act, DEA has long held that revocation of a practitioner's registration is the appropriate sanction whenever he is no longer authorized to dispense controlled substances under the laws of the State in which he practices medicine. *See Frederick Marsh Blanton, M.D.,* 43 FR 27616, 27617 (1978); *see also Hooper* v. *Holder,* 481 Fed. Appx. 826, 828 (4th Cir. 2012); *Calvin Ramsey,* 76 FR 20034, 20036 (2011); *Sheran Arden Yeates, M.D.,* 71 FR 39130, 39131 (2006); *Dominick A. Ricci,* 58 FR 51104, 51105 (1993); *Bobby Watts,* 53 FR 11919, 11920 (1988); *see also* 21 U.S.C. 824(a)(3). Thus, it is of no consequence that Respondent has sought judicial review of the Board's action. *See Fiaz Afsal,* 79 FR 61651, 61655 (2014) (citing *Calvin Ramsey,* 76 FR 20034, 20036 (2011) (citing *Michael G. Dolin,* 65 FR 5661, 5662 (2000))). Rather, ''[u]nder the CSA, all that matters is that Respondent is no longer currently authorized to dispense controlled substances in'' Colorado, the State in which he is registered. *Afsal,* 79 FR at 61655.

As for Respondent's CAP, I conclude that there are adequate grounds for denying it. Specifically, while Respondent maintains that he holds a Wyoming medical license and this ''license establishes [his] continued eligibility to hold'' his registration, the online records of the Wyoming Board (of which I take official notice) show that this license has been suspended.[5] Accordingly, Respondent is not eligible to be registered in Wyoming and I therefore reject his CAP. 21 U.S.C. 802(21), 823(f).

Order

Pursuant to the authority vested in me by 21 U.S.C. 824(a)(3) and 28 CFR 0.100(b), I order that DEA Certificate of Registration No. BH2378025 issued to Thomas Horiagon, M.D., be, and it hereby is, revoked. I further order that any pending application of Thomas Horiagon, M.D., to renew or modify this registration, be, and it hereby is, denied. This Order is effective December 12, 2016.

Dated: November 2, 2016.

Chuck Rosenberg,

Acting Administrator.

[FR Doc. 2016–27116 Filed 11–9–16; 8:45 am]

BILLING CODE 4410–09–P

[4] I further find that Respondent's registration does not expire until October 31, 2017. *See* Mot. for Summ. Disp., at Appendix A.

[5] Respondent may refute this finding by filing a properly supported motion with my Office no later than fifteen (15) calendar days from the date of this Order. *See* 5 U.S.C. 556(e).

DEPARTMENT OF JUSTICE

Drug Enforcement Administration

[Docket No. 16–23]

Waleed Khan, M.D.; Decision and Order

On April 12, 2016, the Deputy Assistant Administrator, of the then Office of Diversion Control, Drug Enforcement Administration, issued an Order to Show Cause to Waleed Khan, M.D. (hereinafter, Respondent). The Show Cause Order proposed the revocation of Respondent's DEA Certificate of Registration FK3499058, pursuant to which he is authorized to dispense controlled substances in schedules II through V as a practitioner, on the ground that he does not have authority to dispense controlled substances in Texas, the State in which he is registered with the Agency. Show Cause Order, at 1. *See also* 21 U.S.C. 824(a)(3).

The Show Cause Order specifically alleged that Respondent is registered as a practitioner, with authority to dispense schedule II through V controlled substances, at the registered address of 5101 Avenue H, Suite 23, Rosenberg, Texas, and that his registration does not expire until December 31, 2018. Show Cause Order, at 1. The Show Cause Order then

alleged that ''[t]he Texas Medical Board issued an order, effective March 11, 2016, which suspended [Respondent's] authority to practice Medicine'' and that he is ''without authority to handle controlled substances in Texas, the [S]tate in which [he is] registered with the'' Agency. *Id.* Based on Respondent's lack of state authority, the Order asserted that Respondent's registration is subject to revocation. *Id.* The Order further advised Respondent of his right to request a hearing on the allegations or to submit a written statement of position on the matters of fact and law at issue, the procedure for electing either option, and the consequence of failing to elect either option. *Id.* at 2.

On May 12, 2016, Respondent, through his counsel, timely requested a hearing. The matter was placed on the docket of the Office of Administrative Law Judges and assigned to Administrative Law Judge Charles Wm. Dorman (hereinafter, ALJ). Thereafter, the ALJ ordered the Government to submit evidence to support the allegation as well as an accompanying motion for summary disposition by May 20, 2016; in the event the Government filed such a motion, the ALJ ordered Respondent to file his reply no later than May 27, 2016. Briefing Schedule for Lack of State Authority Allegations, at 1.

On May 17, 2016, the Government filed its motion; as support for the motion, the Government attached a copy of the Texas Medical Board's (hereinafter, Board or TMB) Order of Temporary Suspension (Without Notice of Hearing), pursuant to which the Board's Disciplinary Panel found that ''Respondent's continued practice of medicine would constitute a continuing threat to the public welfare.'' Appendix B to Mot. for Summ. Disp., Order of Temporary Suspension, at 6 (Tex. Med. Bd. Mar. 11, 2016). The Board thus ordered the temporary suspension of Respondent's medical license, effective on the date of the Order. *Id.* at 6–7. Based on the Agency's longstanding interpretation that under the Controlled Substances Act, the possession of authority to dispense controlled substances under the laws of the State in which a practitioner engages in professional practice is a fundamental condition for both obtaining and maintaining a practitioner's registration, the Government argued that revocation of Respondent's registration is warranted. Mot. for Summ. Disp., at 3–4. The Government also argued that under Agency precedent, revocation is warranted even where a State Board has summarily suspended a practitioner's state authority and the State has yet to provide the practitioner with a hearing to challenge the State's action. *Id.* at 4.

Respondent opposed the Government's motion. While Respondent did not dispute that the Board has temporarily suspended his medical license, he argues that ''it is clear that the action of the Texas Medical Board . . . was based on an investigation conducted by DEA'' and that his ''registration should not be revoked by summary disposition where the underlying state action was triggered solely by the DEA, and [he] has been afforded no opportunity to be heard 'at a meaningful time and in a meaningful manner.' '' Resp. Opp., at 5 (quoting *Mathews* v. *Eldridge,* 424 U.S. 319, 333 (1976)).[1] Respondent also noted that the Texas Department of Public Safety had not revoked his state controlled substance registration. *Id.* at 2.

The ALJ granted the Government's motion. Order Granting Summary Judgment and Recommended Rulings, Findings of Fact, Conclusions of Law, and Decision, at 4 (hereinafter, R.D.). The ALJ noted that ''[t]o maintain a DEA registration, a practitioner must be currently authorized to handle controlled substances in the jurisdiction in which [he] is registered.'' *Id.* at 3 (citing 21 U.S.C. 802(21) and 823(f)). Reasoning that ''the disposition of the Government's Motion depends only on whether the Respondent possesses state authority to handle controlled substances'' and finding it ''undisputed that [he] lacks state authorization to handle controlled substances in Texas,'' the State in which he holds his registration, the ALJ held that Respondent was not entitled to maintain his registration. *Id.* at 3–4. The ALJ thus recommended that Respondent's registration be revoked. *Id.* at 4.

I adopt the ALJ's recommended order. While in his Opposition, Respondent asserted that the Texas Department of Public Safety had not revoked his state controlled substances registration, Opp. at 2, and the Government presented no evidence as to the status of his state registration, Respondent subsequently acknowledged that he ''does not possess valid authority to handle controlled substances in the jurisdiction in which he is registered.'' *Id.* at 7–8. However, based on the Board's resort to post-deprivation process in suspending his registration, Respondent raises two challenges to the revocation of his registration.

First, Respondent argues that because the Board's suspension of his license was based on the DEA investigation and he has not had has ''an opportunity to be heard 'at a meaningful time and in a meaningful manner' under the Texas statutory scheme,'' the Agency's use of ''summary disposition in this instance would be a mistake.'' *Id.* at 6–7. Second, in discussing factor one of the public interest standard, Respondent offers an argument which is, in essence, a fleshing-out of his due process claim. Specifically, he argues that because the ''TMB relied almost exclusively on the DEA to suspend his state authority,'' and the TMB's Order ''offers little insight with regard to its own factual findings'' and he ''was given no notice of the proceeding out of which the Order issued[] and . . . has not . . . had an opportunity to address findings or their underlying allegations in a contest case hearing,'' the Board's findings and actions ''do not significantly weigh for or against [him] with regard to the temporary suspension.'' *Id.* at 8.

While it is true that Respondent's state license was suspended prior to the TMB's providing him with a hearing, as the ALJ explained, the Controlled Substances Act requires that a practitioner possess state authority to dispense controlled substances in order to maintain his registration. R.D. at 3; *see also* 21 U.S.C. 802(21) (defining ''the term 'practitioner' [to] mean[] a . . . physician . . . or other person licensed, registered or otherwise permitted, by . . . the jurisdiction in which he

[1] As support for his contention that the Medical Board's action was based on the DEA's investigation, Respondent cites to the transcript of the proceeding conducted by the Disciplinary Panel when it issued the Temporary Suspension Order. Specifically, Respondent asserts that the transcript shows that ''TMB employees first met with Houston DEA before entering the premises,'' that ''the DEA secured the premises,'' and ''the affidavits for the Search . . . and Arrest Warrant[s] were made out by . . . a police officer assigned to the DEA Houston . . . Tactical Diversion Squad.'' Resp. Opp. at 5–6.

In his Opposition, Respondent also argued that his registration is consistent with the public interest. *Id.* at 7–9. However, the sole ground on which the Government seeks revocation is Respondent's lack of state authority. Because the loss of state authority provides an independent and adequate ground for revoking Respondent's registration, I do not address whether Respondent's registration is consistent with the public interest.

Respondent also challenges the Government's motion arguing that the latter is attempting to moot his case. Respondent bases his argument on the Government's purported statement that '''when no question of fact is involved, or when the material facts are agreed upon, an adversarial proceeding is not required.''' Opp. at 6 (citing Mot. for Summ. Disp., at 2). The actual rule is that a plenary hearing (*i.e.,* a trial type hearing) is not required when the material facts are not in dispute. *See NLRB* v. *International Ass'n of Bridge Structural and Ornamental Ironworkers,* 549 F.2d 634, 639 (9th Cir. 1977); *see also Rezik A. Saqer,* 81 FR 22122, 22124 (citing cases). Putting aside that Respondent was allowed to file an opposition to the Government's motion (thus rendering this an adversarial proceeding), the proposition recited by the Government is not an argument for mootness, but rather, for the resolvability of this matter on summary disposition.

practices . . . to distribute, dispense, [or] administer . . . a controlled substance in the course of professional practice''); *id.* § 823(f) (''The Attorney General shall register practitioners . . . if the applicant is authorized to dispense . . . controlled substances under the laws of the State in which he practices.''). Because Congress has clearly mandated that a physician possess state authority in order to be deemed a practitioner under the Act, DEA has long held that revocation of a practitioner's registration is the appropriate sanction whenever he is no longer authorized to dispense controlled substances under the laws of the State in which he practices medicine. *See Frederick Marsh Blanton, M.D.,* 43 FR 27616, 27617 (1978); *see also Hooper* v. *Holder,* 481 Fed. Appx. 826, 828 (4th Cir. 2012); *Calvin Ramsey,* 76 FR 20034, 20036 (2011); *Sheran Arden Yeates, M.D.,* 71 FR 39130, 39131 (2006); *Dominick A. Ricci,* 58 FR 51104, 51105 (1993); *Bobby Watts,* 53 FR 11919, 11920 (1988). And because the CSA makes clear that a practitioner must possess state authority to maintain his registration, ''revocation is warranted even where a practitioner's state authority has been summarily suspended and the State has yet to provide the practitioner with a hearing to challenge the State's action at which he may ultimately prevail.'' *Kamal Tiwari,* 76 FR 71604, 71606 (2011); *see also Bourne Pharmacy, Inc.,* 72 FR 18273, 18274 (2007); *Anne Lazar Thorn,* 62 FR 12847 (1997).

As for Respondent's due process challenge based on the Board's use of an *ex parte* procedure in issuing the Order of Temporary Suspension, the Order specifically provided that ''[a] hearing on the Application for Temporary suspension (WITH NOTICE) will hereby be scheduled before a Disciplinary Panel of the Board at a date to be determined as soon as practicable . . . unless such hearing is specifically waived by Respondent.'' Order of Temporary Suspension, at 7. Whether Respondent availed himself of his right to a hearing to challenge the Suspension Order is not disclosed by the record. DEA, however, presumes that the Board's procedures provide Respondent with a constitutionally adequate means of challenging the Suspension Order. *Cf. Gonzales* v. *Oregon,* 546 U.S. 243, 270 (2006) (''The structure and operation of the CSA presume and rely upon a functioning medical profession regulated under the States' police powers.''); *see also Gary Alfred Shearer,* 78 FR 19009 (2013). Because in this proceeding, Respondent was provided with the opportunity to challenge the only fact which is material for the disposition of this proceeding—whether he currently holds authority under Texas law to dispense controlled substances [2]—the Agency's procedures provided him with due process.[3]

Accordingly, because Respondent is without authority under Texas law to dispense controlled substances, I will adopt the ALJ's recommendation that I revoke his registration.[4] *See* 21 U.S.C. 824(a)(3).

Order

Pursuant to the authority vested in me by 21 U.S.C. 824(a)(3) and 28 CFR 0.100(b), I order that DEA Certificate of Registration No. FK3499058 issued to Waleed Khan, M.D., be, and it hereby is, revoked. I further order that any application of Waleed Khan, M.D., to renew or modify said registration be, and it hereby is, denied. This Order is effective immediately.[5]

Dated: October 28, 2016.

Chuck Rosenberg,

Acting Administrator.

[FR Doc. 2016–27117 Filed 11–9–16; 8:45 am]

BILLING CODE 4410–09–P

[2] Since the ALJ's ruling, Respondent has not submitted any evidence to the Agency showing that the Board's suspension is no longer in effect.

[3] As for Respondent's contention that his lack of state authority should not be given weight under the public interest standard, the Government did not seek revocation based upon a finding that he committed acts which render his registration inconsistent with the public interest. Show Cause Order, at 1. Rather, the Government sought revocation solely based upon a finding that Respondent's state license had been suspended and he is no longer authorized to dispense controlled substances. *Id.* (citing 21 U.S.C. 824(a)(3)). The latter is an independent and adequate ground for revocation. *See* 21 U.S.C. 824(a).

[4] Respondent's registration does not expire until December 31, 2018. Mot. for Summ. Disp., at Appendix A.

[5] For the same reasons that led the Medical Board to order the emergency suspension of Respondent's medical license, I concluded that the public interest necessitates that this Order be effective immediately. 21 CFR 1316.67.

NATIONAL FOUNDATION ON THE ARTS AND THE HUMANITIES

National Endowment for the Arts

Arts Advisory Panel Meetings

AGENCY: National Endowment for the Arts, National Foundation on the Arts and Humanities.

ACTION: Notice of meetings.

SUMMARY: Pursuant to the Federal Advisory Committee Act, as amended, notice is hereby given that 27 meetings of the Arts Advisory Panel to the National Council on the Arts will be held by teleconference.

DATES: All meetings are Eastern time and ending times are approximate:

Arts Education (review of applications): This meeting will be closed.

Date and time: December 1, 2016; 1:30 p.m. to 3:30 p.m.

Arts Education (review of applications): This meeting will be closed.

Date and time: December 6, 2016; 1:30 p.m. to 3:30 p.m.

Dance (review of applications): This meeting will be closed.

Date and time: December 6, 2016; 12:00 p.m. to 2:00 p.m.

Dance (review of applications): This meeting will be closed.

Date and time: December 6, 2016; 3:00 p.m. to 5:00 p.m.

Museums (review of applications): This meeting will be closed.

Date and time: December 6, 2016; 11:30 a.m. to 1:30 p.m.

Museums (review of applications): This meeting will be closed.

Date and time: December 6, 2016; 2:30 p.m. to 4:30 p.m.

Presenting and Multidisciplinary Works (review of applications): This meeting will be closed.

Date and time: December 6, 2016; 2:00 p.m. to 4:00 p.m.

Dance (review of applications): This meeting will be closed.

Date and time: December 7, 2016; 12:00 p.m. to 2:00 p.m.

Literature (review of applications): This meeting will be closed.

Date and time: December 7, 2016; 3:00 p.m. to 5:00 p.m.

Museums (review of applications): This meeting will be closed.

Date and time: December 7, 2016; 11:30 a.m. to 1:30 p.m.

Museums (review of applications): This meeting will be closed.

Date and time: December 7, 2016; 2:30 p.m. to 4:30 p.m.

Presenting and Multidisciplinary Works (review of applications): This meeting will be closed.

Date and time: December 7, 2016; 2:00 p.m. to 4:00 p.m.

Arts Education (review of applications): This meeting will be closed.

Date and time: December 8, 2016; 11:00 a.m. to 1:00 p.m.

Literature (review of applications): This meeting will be closed.

Date and time: December 8, 2016; 3:00 p.m. to 5:00 p.m.

Media Arts (review of applications): This meeting will be closed.

Date and time: December 8, 2016; 11:30 a.m. to 1:30 p.m.

Media Arts (review of applications): This meeting will be closed.

Date and time: December 8, 2016; 2:30 p.m. to 4:30 p.m.

Music (review of applications): This meeting will be closed.

Date and time: December 8, 2016; 1:00 p.m. to 3:00 p.m.

Presenting and Multidisciplinary Works (review of applications): This meeting will be closed.

Date and time: December 8, 2016; 2:00 p.m. to 4:00 p.m.

Media Arts (review of applications): This meeting will be closed.

Date and time: December 9, 2016; 11:30 a.m. to 1:30 p.m.

Presenting and Multidisciplinary Works (review of applications): This meeting will be closed.

Date and time: December 9, 2016; 2:00 p.m. to 4:00 p.m.

Folk and Traditional Arts (review of applications): This meeting will be closed.

Date and time: December 13, 2016; 1:00 p.m. to 3:00 p.m.

Media Arts (review of applications): This meeting will be closed.

Date and time: December 13, 2016; 11:30 a.m. to 1:30 p.m.

Media Arts (review of applications): This meeting will be closed.

Date and time: December 14, 2016; 11:30 a.m. to 1:30 p.m.

Media Arts (review of applications): This meeting will be closed.

Date and time: December 14, 2016; 2:30 p.m. to 4:30 p.m.

Folk and Traditional Arts (review of applications): This meeting will be closed.

Date and time: December 15, 2016; 1:00 p.m. to 3:00 p.m.

Local Arts Agencies (review of applications): This meeting will be closed.

Date and time: December 15, 2016; 1:00 p.m. to 3:00 p.m.

Local Arts Agencies (review of applications): This meeting will be closed.

Date and time: December 15, 2016; 3:30 p.m. to 5:30 p.m.

ADDRESSES: National Endowment for the Arts, Constitution Center, 400 7th St. SW., Washington, DC 20506.

FOR FURTHER INFORMATION CONTACT: Further information with reference to these meetings can be obtained from Ms. Kathy Plowitz-Worden, Office of Guidelines & Panel Operations, National Endowment for the Arts, Washington, DC, 20506; *plowitzk@arts.gov,* or call 202/682–5691.

SUPPLEMENTARY INFORMATION: The closed portions of meetings are for the purpose of Panel review, discussion, evaluation, and recommendations on financial assistance under the National Foundation on the Arts and the Humanities Act of 1965, as amended, including information given in confidence to the agency. In accordance with the determination of the Chairman of July 5, 2016, these sessions will be closed to the public pursuant to subsection (c)(6) of section 552b of title 5, United States Code.

Dated: November 7, 2016.

Kathy Plowitz-Worden,

Panel Coordinator, National Endowment for the Arts.

[FR Doc. 2016–27170 Filed 11–9–16; 8:45 am]

BILLING CODE 7537–01–P

NATIONAL SCIENCE FOUNDATION

Notice of Permit Modification Issued Under the Antarctic Conservation Act of 1978

AGENCY: National Science Foundation.

ACTION: Notice of permit modification issued under the Antarctic Conservation of 1978, Public Law 95–541.

SUMMARY: The National Science Foundation (NSF) is required to publish notice of permits issued under the Antarctic Conservation Act of 1978. This is the required notice.

FOR FURTHER INFORMATION CONTACT: Nature McGinn, ACA Permit Officer, Division of Polar Programs, Rm. 755, National Science Foundation, 4201 Wilson Boulevard, Arlington, VA 22230. Or by email: *ACApermits@nsf.gov.*

SUPPLEMENTARY INFORMATION: On October 4, 2016 the National Science Foundation published a notice in the **Federal Register** of a permit modification request received. The permit modification was issued on November 7, 2016 to: Jerry McDonald, Program Director, Antarctic Support Contract, Principal in Charge, Leidos Innovations Group, Permit No. 2015–010.

Nadene G. Kennedy,

Polar Coordination Specialist, Division of Polar Programs.

[FR Doc. 2016–27216 Filed 11–9–16; 8:45 am]

BILLING CODE 7555–01–P

NATIONAL TRANSPORTATION SAFETY BOARD

Sunshine Act Meeting

AGENCY: National Transportation Safety Board (NTSB).

FEDERAL REGISTER CITATION OF PREVIOUS ANNOUNCEMENT: 81 FR 75858.

PREVIOUSLY ANNOUNCED TIME AND DATE OF MEETING: 9:30 a.m., Tuesday, November 15, 2016.

PLACE: NTSB Conference Center, 429 L'Enfant Plaza SW., Washington, DC 20594.

CHANGES IN THE MEETING: The first item will not be a Sunshine Meeting, it will be a Staff *Presentation.*

8791 ADMS Briefs on Two Midair Collisions—July 7, 2015, accident involving a Cessna 150M and a Lockheed Martin F–16CM near Moncks Corner, South Carolina (ERA15MA259A/B); and August 16, 2015, accident involving a Cessna 172M and a North American Rockwell NA265–60SC Sabreliner near San Diego, California (WPR15MA243A/B); and Safety Alert—Preventing Midair Collisions: Don't Depend on Vision Alone

FOR FURTHER INFORMATION CONTACT: Candi R. Bing, **Federal Register** Liaison National Transportation Safety Board, 490 L'Enfant Plaza SW., Washington, DC 20594–0001, (202)314–6403.

Candi R. Bing,

Federal Register Liaison.

[FR Doc. 2016–27352 Filed 11–8–16; 4:15 pm]

BILLING CODE 7533–01–P

NUCLEAR REGULATORY COMMISSION

[NRC–2015–0283]

Information Collection: NRC Forms 541 and 541A, Uniform Low-Level Radioactive Waste Manifest, Container and Waste Description, and Continuation Page

AGENCY: Nuclear Regulatory Commission.

ACTION: Notice of submission to the Office of Management and Budget; request for comment.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) has recently submitted a request for renewal of an existing collection of information to the Office of Management and Budget (OMB) for review. The information collection is entitled, ''NRC Forms 541 and 541A, 'Uniform Low-Level Radioactive Waste Manifest, Container and Waste Description, and Continuation Page.' ''

DATES: Submit comments by December 12, 2016.

ADDRESSES: Submit comments directly to the OMB reviewer at: Vlad Dorjets, Desk Officer, Office of Information and Regulatory Affairs (3150–0166), NEOB–

10202, Office of Management and Budget, Washington, DC 20503; telephone: 202–395–7315, email: *oira_submission@omb.eop.gov*.

FOR FURTHER INFORMATION CONTACT: David Cullison, NRC Clearance Officer, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001; telephone: 301–415–2084; email: *INFOCOLLECTS.Resource@nrc.gov*.

SUPPLEMENTARY INFORMATION:

I. Obtaining Information and Submitting Comments

A. Obtaining Information

Please refer to Docket ID NRC–2015–0283 when contacting the NRC about the availability of information for this action. You may obtain publicly-available information related to this action by any of the following methods:

• *Federal Rulemaking Web site:* Go to *http://www.regulations.gov* and search for Docket ID NRC–2015–0283. A copy of the collection of information and related instructions may be obtained without charge by accessing Docket ID NRC–2015–0283 on this Web site.

• *NRC's Agencywide Documents Access and Management System (ADAMS):* You may obtain publicly-available documents online in the ADAMS Public Documents collection at *http://www.nrc.gov/reading-rm/adams.html.* To begin the search, select ''*ADAMS Public Documents*'' and then select ''*Begin Web-based ADAMS Search.*'' For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1–800–397–4209, 301–415–4737, or by email to *pdr.resource@nrc.gov.* A copy of the collection of information and related instructions may be obtained without charge by accessing ADAMS Accession No. ML16245A845. The supporting statement is available in ADAMS under Accession No. ML16245A863.

• *NRC's PDR:* You may examine and purchase copies of public documents at the NRC's PDR, Room O1–F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

• *NRC's Clearance Officer:* A copy of the collection of information and related instructions may be obtained without charge by contacting the NRC's Clearance Officer, David Cullison, Office of the Chief Information Officer, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001; telephone: 301–415–2084; email: *INFOCOLLECTS.Resource@nrc.gov.*

B. Submitting Comments

The NRC cautions you not to include identifying or contact information in comment submissions that you do not want to be publicly disclosed in your comment submission. All comment submissions are posted at *http://www.regulations.gov* and entered into ADAMS. Comment submissions are not routinely edited to remove identifying or contact information.

If you are requesting or aggregating comments from other persons for submission to the OMB, then you should inform those persons not to include identifying or contact information that they do not want to be publicly disclosed in their comment submission. Your request should state that comment submissions are not routinely edited to remove such information before making the comment submissions available to the public or entering the comment into ADAMS.

II. Background

Under the provisions of the Paperwork Reduction Act of 1995 (44 U.S.C. Chapter 35), the NRC recently submitted a request for renewal of an existing collection of information to OMB for review entitled: ''NRC Forms 541 and 541A, 'Uniform Low-Level Radioactive Waste Manifest, Container and Waste Description, and Continuation Page.' '' The NRC hereby informs potential respondents that an agency may not conduct or sponsor, and that a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

The NRC published a **Federal Register** notice with a 60-day comment period on this information collection on June 22, 2016 (81 FR 40727).

1. *The title of the information collection:* ''NRC Forms 541 and 541A, 'Uniform Low-Level Radioactive Waste Manifest, Container and Waste Description, and Continuation Page.' ''

2. *OMB approval number:* 3150–0166.

3. *Type of submission:* Extension.

4. *The form number, if applicable:* NRC Forms 541 and 541A.

5. *How often the collection is required or requested:* Forms are used by shippers whenever radioactive waste is shipped. Quarterly or less frequent reporting is made to Agreement States depending on specific license conditions. No reporting is made to the NRC.

6. *Who will be required or asked to respond:* All NRC or Agreement State low-level waste facilities licensed pursuant to part 61 of title 10 of the *Code of Federal Regulations* (10 CFR) or equivalent Agreement State regulations. All generators, collectors, and processors of low-level waste intended for disposal at a low-level waste facility must complete the appropriate forms.

7. *The estimated number of annual responses:* 5,600.

8. *The estimated number of annual respondents:* 220.

9. *The estimated number of hours needed annually to comply with the information collection requirement or request:* 18,480.

10. *Abstract:* NRC Forms 541 and 541A provide a set of standardized forms to meet U.S. Department of Transportation (DOT), NRC, and State requirements. The forms were developed by NRC at the request of low-level waste industry groups. The forms provide uniformity and efficiency in the collection of information contained in manifests which are required to control transfers of low-level radioactive waste intended for disposal at a land disposal facility. The NRC Form 541 contains information needed by disposal site facilities to safely dispose of low-level waste and information to meet NRC and State requirements regulating these activities.

Dated at Rockville, Maryland, this 2nd day of November, 2016.

For the Nuclear Regulatory Commission.

David Cullison,

NRC Clearance Officer, Office of the Chief Information Officer.

[FR Doc. 2016–27124 Filed 11–9–16; 8:45 am]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

[NRC–2012–0068]

Mitigation Strategies for Beyond-Design-Basis External Events

AGENCY: Nuclear Regulatory Commission.

ACTION: Draft interim staff guidance; request for comment.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is soliciting public comment on its draft Japan Lessons-Learned Division Interim Staff Guidance (JLD–ISG), JLD–ISG–2012–01, Draft Revision 2, ''Compliance with Order EA–12–049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events.'' This draft JLD–ISG revision provides further guidance and clarification to assist nuclear power reactor applicants and licensees with the identification of measures needed to comply with requirements to mitigate challenges to key safety functions.

DATES: Submit comments by December 12, 2016. Comments received after this

date will be considered if it is practical to do so, but the Commission is able to ensure consideration only for comments received before this date.

ADDRESSES: You may submit comments by any of the following methods (unless this document describes a different method for submitting comments on a specific subject):

• *Federal Rulemaking Web site:* Go to *http://www.regulations.gov* and search for Docket ID NRC–2012–0068. Address questions about NRC dockets to Carol Gallagher; telephone: 301–415–3463; email: *Carol.Gallagher@nrc.gov.* For technical questions, contact the individual listed in the **FOR FURTHER INFORMATION CONTACT** section of this document.

• *Mail comments to:* Cindy Bladey, Office of Administration, Mail Stop: OWFN–12–H08, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001.

For additional direction on obtaining information and submitting comments, see ''Obtaining Information and Submitting Comments'' in the **SUPPLEMENTARY INFORMATION** section of this document.

FOR FURTHER INFORMATION CONTACT: Eric Bowman, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001; telephone: 301–415–2963; email: *Eric.Bowman@nrc.gov.*

SUPPLEMENTARY INFORMATION:

I. Obtaining Information and Submitting Comments

A. Obtaining Information

Please refer to Docket ID NRC–2012–0068 when contacting the NRC about the availability of information for this action. You may obtain publicly-available information related to this action by any of the following methods:

• *Federal Rulemaking Web site:* Go to *http://www.regulations.gov* and search for Docket ID NRC–2012–0068.

• *NRC's Agencywide Documents Access and Management System (ADAMS):* You may obtain publicly-available documents online in the ADAMS Public Documents collection at *http://www.nrc.gov/reading-rm/adams.html.* To begin the search, select ''*ADAMS Public Documents*'' and then select ''*Begin Web-based ADAMS Search.*'' For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1–800–397–4209, 301–415–4737, or by email to *pdr.resource@nrc.gov.* In addition, for the convenience of the reader, the ADAMS accession numbers are provided in a table in Section IV of this notice entitled, Availability of Documents.

• *NRC's PDR:* You may examine and purchase copies of public documents at the NRC's PDR, Room O1–F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

B. Submitting Comments

Please include Docket ID NRC–2012–0068 in your comment submission.

The NRC cautions you not to include identifying or contact information that you do not want to be publicly disclosed in your comment submission. The NRC posts all comment submissions at *http://www.regulations.gov* as well as entering the comment submissions into ADAMS. The NRC does not routinely edit comment submissions to remove identifying or contact information.

If you are requesting or aggregating comments from other persons for submission to the NRC, then you should inform those persons not to include identifying or contact information that they do not want to be publicly disclosed in their comment submission. Your request should state that the NRC does not routinely edit comment submissions to remove such information before making the comment submissions available to the public or entering the comment submissions into ADAMS.

II. Background

The NRC staff issued JLD–ISG–2012–01 Revision 0 on August 29, 2012 and JLD–ISG–2012–01 Revision 1 on January 22, 2016. The NRC staff developed JLD–ISG–2012–01 Draft Revision 2 to provide further guidance and clarification primarily to assist nuclear power reactor applicants and licensees when assessing the results of seismic hazard reevaluations with respect to the guidance and strategies required by Order EA–12–049. JLD–ISG–2012–01 provides guidance and clarification to assist nuclear power reactor applicants and licensees with the identification of measures needed to comply with requirements to mitigate challenges to key safety functions. These requirements are contained in Order EA–12–049. In addition, these requirements are included in the following license conditions: Virgil C. Summer Nuclear Station, Unit 2, License No. NPF–93, Condition 2.D.(13), V.C. Summer Nuclear Station, Unit 3, License No. NPF–94, Condition 2.D.(13), and Enrico Fermi Nuclear Plant, Unit 3, License No. NPF–95, Condition 2.D.(12)(g). The draft ISG is not a substitute for the requirements in Order EA–12–049, and compliance with the ISG is not required. This ISG revision is being issued in draft form for public comment to involve the public in development of the implementation guidance.

Following the March 11, 2011, accident at the Fukushima Dai-ichi nuclear power plant, the NRC established a senior-level agency task force referred to as the Near-Term Task Force (NTTF). The NTTF conducted a systematic and methodical review of the NRC regulations and processes to determine whether the agency should make additional improvements in NRC regulations or processes in light of the events at Fukushima Dai-ichi. As a result of this review, the NTTF developed a comprehensive set of recommendations, documented in SECY–11–0093, dated July 12, 2011. These recommendations were enhanced by the NRC staff following interactions with stakeholders. Documentation of the staff's efforts is contained in SECY–11–0124, dated September 9, 2011, and SECY–11–0137, dated October 3, 2011.

As directed by the Commission's staff requirements memorandum (SRM) for SECY–11–0093, the NRC staff reviewed the NTTF recommendations within the context of the NRC's existing regulatory framework and considered the various regulatory vehicles available to the NRC to implement the recommendations. SECY–11–0124 and SECY–11–0137 established the staff's prioritization of the recommendations.

After receiving the Commission's direction in SRM–SECY–11–0124 and SRM–SECY–11–0137, the NRC staff conducted public meetings to discuss enhanced mitigation strategies intended to maintain or restore core cooling, containment, and spent fuel pool (SFP) cooling capabilities following beyond-design-basis external events. At these meetings, the industry described its proposal for a Diverse and Flexible Mitigation Capability (FLEX), as documented in the Nuclear Energy Institute's (NEI) letter, dated December 16, 2011. The FLEX is proposed as a strategy to fulfill the key safety functions of core cooling, containment integrity, and spent fuel cooling. Stakeholder input led the staff to pursue a more performance-based approach to improve the safety of operating power reactors than was originally envisioned in NTTF Recommendation 4.2, SECY–11–0124, and SECY–11–0137.

On February 17, 2012, the NRC staff provided SECY–12–0025 to the Commission, including the proposed order to implement the enhanced mitigation strategies. As directed by SRM–SECY–12–0025, the NRC staff issued Order EA–12–049 and, in

parallel, issued as a Request for Information under Title 10 of the *Code of Federal Regulations* (10 CFR) 50.54(f) for a reevaluation of licensees' flooding and seismic hazards.

Guidance and strategies required by the order would be available if the loss of power, motive force and normal access to the ultimate heat sink to prevent fuel damage in the reactor, and SFP affected all units at a site simultaneously. The order requires a three-phase approach for mitigating beyond-design-basis external events. The initial phase requires the use of installed equipment and resources to maintain or restore core cooling, containment, and SFP cooling. The transition phase requires providing sufficient, portable, onsite equipment and consumables to maintain or restore these functions until they can be accomplished with resources brought from off site. The final phase requires obtaining sufficient offsite resources to sustain those functions indefinitely.

On May 4, 2012, NEI submitted document NEI 12–06, Revision B, and on May 13, 2012, Revision B1, to provide specifications for an industry-developed methodology for the development, implementation, and maintenance of guidance and strategies in response to Order EA–12–049. The strategies and guidance described in NEI 12–06 expand on the strategies the industry developed and implemented to address the limited set of beyond-design-basis external events that involve the loss of a large area of the plant due to explosions and fire required pursuant to paragraph (hh)(2) of 10 CFR 50.54(f), ''Conditions of licenses.''

On May 31, 2012, the NRC staff issued a draft version of JLD–ISG–2012–01, Revision 0, and published a notice of its availability for public comment in the **Federal Register** (FR) on June 7, 2012 (77 FR 33779), with the comment period running through July 7, 2012, 30 days after its publication. The staff received seven comments during this time, addressing the comments, as documented in ''NRC Response to Public Comments, JLD–ISG–2012–01 (Docket ID NRC–2012–0068).''

On July 3, 2012, NEI submitted Revision C to NEI 12–06, incorporating many of the exceptions and clarifications included in the draft version of JLD–ISG–2012–01, Revision 0. On August 3, 2012, NEI submitted NEI 12–06, Draft Revision 0, incorporating many of the remaining exceptions and clarifications. On August 21, 2012, NEI submitted NEI 12–06, Revision 0, making various editorial corrections. The NRC reviewed the August 21, 2012, submittal of Revision 0 of NEI 12–06 and endorsed it as a process the NRC considers acceptable for meeting the regulatory requirements with noted clarifications in Revision 0 of JLD–ISG–2012–01.

By February 2013, licensees of operating power reactors submitted their overall integrated plans (OIPs) under Order EA–12–049 describing the guidance and strategies to be developed and implemented. Because this development and implementation was to be accomplished in parallel with the reevaluation of the seismic and flooding hazards under the 10 CFR 50.54(f) letter issued subsequent to SECY–12–0025, these included in their key assumptions a statement that typically read, ''[f]lood and seismic re-evaluations pursuant to the 10 CFR 50.54(f) letter of March 12, 2012, are not completed and therefore not assumed in this submittal. As the reevaluations are completed, appropriate issues will be entered into the corrective action system and addressed on a schedule commensurate with other licensing bases changes.'' (See, *e.g.,* Vermont Yankee Nuclear Power Station's OIP)

In order to clarify the relationship between Order EA–12–049 and the hazard reevaluation, the NRC staff provided COMSECY–14–0037 to the Commission on November 21, 2014, requesting that the Commission affirm that ''[l]icensees for operating nuclear power plants need to address the reevaluated flooding hazards within their mitigating strategies for beyond-design-basis external events (Order EA–12–049 and related [Mitigation of Beyond-Design-Basis Events] MBDBE rulemaking).'' COMSECY–14–0037 further requested affirmation that ''[l]icensees for operating nuclear power plants may need to address some specific flooding scenarios that could significantly damage the power plant site by developing targeted or scenario-specific mitigating strategies, possibly including unconventional measures, to prevent fuel damage in reactor cores or spent fuel pools.'' In SRM–COMSECY–14–0037, the Commission affirmed these two items and noted that ''it is within the staff's authority, and is the staff's responsibility, to determine, on a plant-specific basis, whether targeted or scenario-specific mitigating strategies, possibly including unconventional measures, are acceptable.''

On August 25, 2015, NEI submitted Revision 1 to NEI 12–06, incorporating lessons learned in the implementation of Order EA–12–049 and alternative approaches taken by licensees for compliance to that order. Following a public webinar discussion of potential exceptions and clarifications that took place on September 21, 2015, NEI submitted Revision 1A to NEI 12–06 on October 5, 2015.

On October 30, 2015, the NRC staff issued a draft version of JLD–ISG–2012–01, Revision 1, and published a notice of its availability for public comment in the FR on November 10, 2015 (80 FR 69702), with the comment period running through December 10, 2015, 30 days from its publication. The staff received four comments during this time, addressing the comments, as documented in ''NRC Response to Public Comments, JLD–ISG–2012–01 (Docket ID NRC–2012–0068).''

On December 10, 2015, NEI submitted Revision 2 to NEI 12–06, incorporating many of the exceptions and clarifications included in the draft version of JLD–ISG–2012–01, Revision 1. The NRC reviewed Revision 2 to NEI 12–06 and endorsed it as a process the NRC considers acceptable for meeting the regulatory requirements with noted clarifications in JLD–ISG–2012–01, Revision 1.

On September 7, 2016, NEI submitted a draft revision of Appendix H to NEI 12–06 to support a public meeting held on September 8, 2016, incorporating additional guidance for licensees when addressing the reevaluated seismic hazards for compliance with Order EA–12–049. Specifically, Section H.4.5 (''Path 5'') is intended to address Mitigation Strategies Assessments for plants with reevaluated seismic hazard information that includes a ground motion response spectrum that has spectral ordinates more than 2 times the Safe Shutdown Earthquake anywhere in the 1 to 10 hertz frequency range. Such guidance includes deterministic and risk-informed approaches that can be used to assess the impact of the reevaluated hazard information on mitigation strategies. Following the public meeting held on September 8, 2016, NEI submitted Revision 3 to NEI 12–06 on September 22, 2016. NEI 12–06, Revision 3 also addresses certain lessons learned in the implementation of Order EA–12–049.

III. Specific Request for Comment

The NRC is seeking advice and recommendations from the public on the revision to this interim staff guidance document. We are particularly interested in comments and supporting rationale from the public on the following:

1. In NEI 12–06, Revision 3, Section 11.5.4.f, NEI proposes to modify the time limits for initiation of actions to restore a site's capability to mitigate a beyond-design-basis external event and implementation of compensatory

measures. Section 11.5.4.f of NEI 12–06, Revision 0 and Revision 2, states these time limits as 24 hours to initiate actions and 72 hours to implement compensatory measures. In NEI 12–06, Revision 3, Section 11.5.4.f, these time limits are extended to 72 hours for initiation of actions and 7 days for implementation of compensatory measures. The former time limits were previously endorsed as an element of an acceptable method of meeting the Order EA–12–049 requirements for maintaining the strategies and guidelines to mitigate a beyond-design-basis external event in JLD–ISG–2012–01, Revision 0 and Revision 1. The NRC staff seeks input on potential justifications for this extension of the allowable outage times for a licensee's capability to mitigate a beyond-design-basis external event. Input is specifically requested on the potential benefits of extending these time limits, operating experience on time frames actually necessary to implement compensatory measures for the unavailability of similar equipment, and any potential unintended consequences of extending these time limits.

2. In JLD–ISG–2012–01, Revision 1, the NRC staff endorsed the NEI 12–06, Revision 2, Section 11.5.4.b 45-day time limit for having an available but unprotected set of equipment as part of the site's capability to mitigate a beyond-design-basis external event. The 45-day time limit aligned with the standard 6-week short work cycle period and allowed sufficient time for the pre-staging of one set of equipment in a location that is not entirely protected from all external hazards for the purpose of shutdown risk management during outages, which typically have durations less than 45 days. In NEI 12–06, Revision 3, Section 11.5.4.g, this time period is reduced to 14 days, which could conflict with the pre-staging of equipment for risk management during outages. The NRC staff seeks input on appropriate methods of control of pre-staging of equipment for shutdown risk management.

3. In NEI 12–06, Revision 3, Sections H.4.5.3, H.4.5.4, and H.4.5.5, NEI proposes to allow the use of risk insights from the seismic probabilistic risk assessments (SPRAs), being completed by some licensees in response to the NRC's March 12, 2012, 10 CFR 50.54(f) letter, to assess the mitigating strategies developed in response to Order EA–12–049 against the reevaluated seismic hazard information. The purpose of these mitigating strategies assessments is to determine if changes to the mitigating strategies are needed to account for the reevaluated seismic hazard. The NRC staff seeks input on specific aspects of NEI's proposals in light of issues discussed in NCP–2016–014, a non-concurrence submitted by two NRC staff members regarding certain aspects of NEI 12–06, Revision 3. First, NCP–2016–014 raised concerns associated with NEI's proposed use of risk screening criteria. For example, in Section H.4.5.3, NEI proposes to establish screening criteria based on the overall seismic core damage frequency and seismic large early release frequency identified through the SPRA. If these screening criteria are met, licensees' FLEX mitigating strategies or alternate mitigating strategies would be considered sufficient to address the effects of the reevaluated seismic hazard information without the need for modification. The NRC staff seeks input on the appropriateness of the approach proposed by NEI in light of the concerns raised by NCP–2016–014. Second, in Sections H.4.5.4 and H.4.5.5, NEI describes proposed iterative processes that evaluate the benefit of enhancing the seismic capacity of certain mitigating strategies structures, systems, and components (SSCs). As part of these processes, licensees would enhance such SSCs until the risk benefit of further enhancements is sufficiently small based on criteria established in each section. In Section H.4.5.4 the approach focuses on the benefit in terms of reduction in overall seismic core damage frequency and seismic large early release frequency. The approach described in Section H.4.5.5 focuses on the benefit in terms of reduction in risk from sequences in the SPRAs involving mitigating strategies SSCs. The NRC staff seeks input on these approaches in light of the concerns raised by NCP–2016–014 regarding the use of risk-based screening values and risk partitioning. Finally, NCP–2016–014 identified two alternate approaches that could be used to conduct seismic mitigating strategies assessments. The NRC staff seeks input on these approaches and whether they represent more appropriate alternatives to the approaches described in NEI 12–06, Revision 3.

IV. Backfitting and Issue Finality

This draft ISG would provide guidance on an acceptable method for implementing the requirements contained in Order EA–12–049. Licensees would be able to voluntarily use the guidance in JLD–ISG–2012–01, Draft Revision 2 to demonstrate compliance with Order EA–12–049. If this draft ISG is issued, methods or solutions that differ from those described in this draft ISG may be deemed acceptable if they provide sufficient basis and information for the NRC to verify that the proposed alternative demonstrates compliance with Order EA–12–049. Issuance of this ISG would not constitute backfitting as defined in 10 CFR 50.109, ''Backfitting'' (the Backfit Rule), and would not otherwise be inconsistent with the issue finality provisions in 10 CFR part 52, ''Licenses, Certifications, and Approvals for Nuclear Power Plants.''

V. Availability of Documents

The documents identified in the following table are available to interested persons through one or more of the following methods, as indicated.

Document title	Abbreviated title	Adams Accession No.
JLD–ISG–2012–01, ''Compliance with Order EA–12–049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events,'' Draft Revision 2.	JLD–ISG–2012–01, Draft Revision 2	ML16277A617
JLD–ISG–2012–01, Revision 1 (See Previous Entry for JLD–ISG–2012–01).	JLD–ISG–2012–01, Revision 1	ML15357A163
JLD–ISG–2012–01, Revision 0 (See Previous Entry for JLD–ISG–2012–01).	JLD–ISG–2012–01, Revision 0	ML12229A174
Order EA–12–049, ''Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events''.	Order EA–12–049	ML12054A736
V.C. Summer Nuclear Station, Unit 2 License, License No. NPF–93.	n/a	ML14100A092

Document title	Abbreviated title	Adams Accession No.
V.C. Summer Nuclear Station, Unit 3 License, License No. NPF–94.	n/a	ML14100A101
Enrico Fermi Nuclear Plant, Unit 3 License, License No. NPF–95	n/a	ML15084A170
SECY–11–0093, ''Near–Term Report and Recommendations for Agency Actions Following the Events in Japan''.	SECY–11–0093	ML11186A950
SECY–11–0124, ''Recommended Actions to be Taken without Delay from the Near-Term Task Force Report''.	SECY–11–0124	ML11245A158
SECY–11–0137, ''Prioritization of Recommended Actions to be Taken in Response to Fukushima Lessons Learned''.	SECY–11–0137	ML11272A111
Commission's staff requirements memorandum (SRM) for SECY-11-0093.	SRM–SECY–11–0093	ML112310021
SRM for SECY–11–0124 (see entry to SECY–11–0124 for full title).	SRM–SECY–11–0124	ML112911571
SRM for SECY–11–0137 (see entry to SECY–11–0124 for full title).	SRM–SECY–11–0137	ML113490055
NEI Letter Titled, ''An Integrated, Safety-Focused Approach to Expediting Implementation of Fukushima Daiichi Lessons Learned''.	n/a	ML11353A008
SECY–12–0025, ''Proposed Orders and Requests for Information in Response to Lessons Learned from Japan's March 11, 2011, Great Tohoku Earthquake and Tsunami''.	SECY–12–0025	ML12039A103
SRM for SECY–12–0025 (see entry for SECY–12–0025 for full title).	SRM–SECY–12–0025	ML120690347
Request for Information Pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3, of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident.	50.54(f) Letter	ML12053A340
NEI 12–06, ''Diverse and Flexible Coping Strategies (FLEX) Implementation Guide,'' Revision B.	NEI 12–06, Revision B	ML12144A419
NEI 12–06, Revision B1 (See Previous Entry for NEI 12–06)	NEI 12–06, Revision B1	ML12143A232
JLD–ISG–2012–01, Draft Revision 0 (See Previous Entry for JLD–ISG–2012–01).	JLD–ISG–2012–01, Draft Revision 0	ML12146A014
''NRC Response to Public Comments, JLD–ISG–2012–01 (Docket ID NRC–2012–0068)''.	n/a	ML12229A253
NEI 12–06, Revision C (See Previous Entry for NEI 12–06)	NEI 12–06, Revision C	ML121910390
NEI 12–06, Draft Revision 0 (See Previous Entry for NEI 12–06)	NEI 12–06, Draft Revision 0	ML12221A204
NEI 12–06, Revision 0 (See Previous Entry for NEI 12–06)	NEI 12–06, Revision 0	ML12242A378
Vermont Yankee Nuclear Power Station's Overall Integrate Plan	n/a	ML13064A300
COMSECY–14–0037, ''Integration of Mitigating Strategies for Beyond-Design-Basis External Events and the Reevaluation (sic) of Flooding Hazards''.	COMSECY–14–0037	ML14238A616
SRM–COMSECY–14–0037	SRM–COMSECY–14–0037	ML15089A236
NEI 12–06, Revision 1 (See Previous Entry for NEI 12–06)	NEI 12–06, Revision 1	ML15244B006
NEI 12–06, Revision 1A (See Previous Entry for NEI 12–06)	NEI 12–06, Revision 1A	ML15279A426
JLD–ISG–2012–01, Draft Revision 1 (See Previous Entry for JLD–ISG–2012–01).	JLD–ISG–2012–01, Draft Revision 1	ML15294A078
NRC Responses to Public Comments: Revision to Japan Lessons-Learned Division Interim Staff Guidance JLD–ISG–2012–01.	n/a	ML15357A147
NEI 12–06, Revision 2 (See Previous Entry for NEI 12–06)	NEI 12–06, Revision 2	ML16005A625
Appendix H to NEI 12–06, Draft to Support Public Meeting on September 8, 2016.	n/a	ML16251A251
NEI 12–06, Revision 3 (See Previous Entry for NEI 12–06)	NEI 12–06, Revision 3	ML16267A274
NRC Non-Concurrence Process document NCP–2016–014	NCP–2016–014	ML16295A104

The NRC may post materials related to this document, including public comments, on the Federal Rulemaking Web site at *http://www.regulations.gov* under Docket ID NRC–2012–0068. The Federal rulemaking Web site allows you to receive alerts when changes or additions occur in a docket folder. To subscribe: (1) Navigate to the docket folder (NRC–2012–0068); (2) click the ''Sign up for Email Alerts'' link; and (3) enter your email address and select how frequently you would like to receive emails (daily, weekly, or monthly).

Dated at Rockville, Maryland, this 4th day of November, 2016.

For the Nuclear Regulatory Commission.

Michael X. Franovich,

Acting Director, Japan Lessons-Learned Division, Office of Nuclear Reactor Regulation.

[FR Doc. 2016–27169 Filed 11–9–16; 8:45 am]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

[NRC–2015–0281]

Information Collection: NRC Forms 540 and 540A, Uniform Low-Level Radioactive Waste Manifest (Shipping Paper) and Continuation Page

AGENCY: Nuclear Regulatory Commission.

ACTION: Notice of submission to the Office of Management and Budget; request for comment.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) has recently submitted a request for renewal of an existing collection of information to the Office of Management and Budget (OMB) for review. The information collection is entitled, ''NRC Forms 540 and 540A, 'Uniform Low-Level Radioactive Waste Manifest (Shipping Paper) and Continuation Page.'''

DATES: Submit comments by December 12, 2016.

ADDRESSES: Submit comments directly to the OMB reviewer at: Vlad Dorjets, Desk Officer, Office of Information and Regulatory Affairs (3150–0164), NEOB–10202, Office of Management and Budget, Washington, DC 20503; telephone: 202–395–7315, email: *oira_submission@omb.eop.gov.*

FOR FURTHER INFORMATION CONTACT: David Cullison, NRC Clearance Officer, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001; telephone: 301–415–2084; email: *INFOCOLLECTS.Resource@nrc.gov.*

SUPPLEMENTARY INFORMATION:

I. Obtaining Information and Submitting Comments

A. Obtaining Information

Please refer to Docket ID NRC–2015–0281 when contacting the NRC about the availability of information for this action. You may obtain publicly-available information related to this action by any of the following methods:

- *Federal Rulemaking Web site:* Go to *http://www.regulations.gov* and search for Docket ID NRC–2015–0281. A copy of the collection of information and related instructions may be obtained without charge by accessing Docket ID NRC–2015–0281 on this Web site.
- *NRC's Agencywide Documents Access and Management System (ADAMS):* You may obtain publicly-available documents online in the ADAMS Public Documents collection at *http://www.nrc.gov/reading-rm/adams.html.* To begin the search, select ''*ADAMS Public Documents*'' and then select ''*Begin Web-based ADAMS Search.*'' For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1–800–397–4209, 301–415–4737, or by email to *pdr.resource@nrc.gov.* A copy of the collection of information and related instructions may be obtained without charge by accessing ADAMS Accession No. ML16243A190. The supporting statement is available in ADAMS under Accession No. ML16243A194.
- *NRC's PDR:* You may examine and purchase copies of public documents at the NRC's PDR, Room O1–F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.
- *NRC's Clearance Officer:* A copy of the collection of information and related instructions may be obtained without charge by contacting the NRC's Clearance Officer, David Cullison, Office of the Chief Information Officer, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001; telephone: 301–415–2084; email: *INFOCOLLECTS.Resource@nrc.gov.*

B. Submitting Comments

The NRC cautions you not to include identifying or contact information in comment submissions that you do not want to be publicly disclosed in your comment submission. All comment submissions are posted at *http://www.regulations.gov* and entered into ADAMS. Comment submissions are not routinely edited to remove identifying or contact information.

If you are requesting or aggregating comments from other persons for submission to the OMB, then you should inform those persons not to include identifying or contact information that they do not want to be publicly disclosed in their comment submission. Your request should state that comment submissions are not routinely edited to remove such information before making the comment submissions available to the public or entering the comment into ADAMS.

II. Background

Under the provisions of the Paperwork Reduction Act of 1995 (44 U.S.C. Chapter 35), the NRC recently submitted a request for renewal of an existing collection of information to OMB for review entitled: ''NRC Forms 540 and 540A, 'Uniform Low-Level Radioactive Waste Manifest (Shipping Paper) and Continuation Page.' '' The NRC hereby informs potential respondents that an agency may not conduct or sponsor, and that a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

The NRC published a **Federal Register** notice with a 60-day comment period on this information collection on June 22, 2016 (81 FR 40728).

1. *The title of the information collection:* ''NRC Forms 540 and 540A, 'Uniform Low-Level Radioactive Waste Manifest (Shipping Paper) and Continuation Page.' ''

2. *OMB approval number:* 3150–0164.

3. *Type of submission:* Extension.

4. *The form number, if applicable:* NRC Forms 540 and 540A.

5. *How often the collection is required or requested:* Forms are used by shippers whenever radioactive waste is shipped. Quarterly or less frequent reporting is made to Agreement States depending on specific license conditions. No reporting is made to the NRC.

6. *Who will be required or asked to respond:* All NRC or Agreement State low-level waste facilities licensed pursuant to part 61 of title 10 of the *Code of Federal Regulations* (10 CFR) or equivalent Agreement State regulations. All generators, collectors, and processors of low-level waste intended for disposal at a low-level waste facility must complete the appropriate forms.

7. *The estimated number of annual responses:* 5,740.

8. *The estimated number of annual respondents:* 220.

9. *The estimated number of hours needed annually to comply with the information collection requirement or request:* 4,305.

10. *Abstract:* NRC Forms 540 and 540A provide a set of standardized forms to meet Department of Transportation (DOT), NRC, and State requirements. The forms were developed by NRC at the request of low-level waste industry groups. The forms provide uniformity and efficiency in the collection of information contained in manifests which are required to control transfers of low-level radioactive waste intended for disposal at a land disposal facility. The NRC Form 540 contains information needed to satisfy DOT shipping paper requirements in 49 CFR part 172, and the waste tracking requirements of the NRC in 10 CFR part 20.

Dated at Rockville, Maryland, this 2nd day of November, 2016.

For the Nuclear Regulatory Commission.

David Cullison,

NRC Clearance Officer, Office of the Chief Information Officer.

[FR Doc. 2016–27123 Filed 11–9–16; 8:45 am]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

[NRC–2015–0282]

Information Collection: NRC Forms 542 and 542A, Uniform Low-Level Radioactive Waste Manifest Index and Regional Compact Tabulation, and Continuation Page

AGENCY: Nuclear Regulatory Commission.

ACTION: Notice of submission to the Office of Management and Budget; request for comment.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) has recently submitted a request for renewal of an existing collection of information to the Office of Management and Budget (OMB) for review. The information collection is entitled, ''NRC Forms 542 and 542A, 'Uniform Low-Level Radioactive Waste Manifest Index and Regional Compact Tabulation, and Continuation Page.' ''

DATES: Submit comments by December 12, 2016.

ADDRESSES: Submit comments directly to the OMB reviewer at: Vlad Dorjets, Desk Officer, Office of Information and Regulatory Affairs (3150–0165), NEOB–10202, Office of Management and Budget, Washington, DC 20503; telephone: 202–395–7315, email: *oira_submission@omb.eop.gov.*

FOR FURTHER INFORMATION CONTACT: David Cullison, NRC Clearance Officer, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001; telephone: 301–415–2084; email: *INFOCOLLECTS.Resource@nrc.gov.*

SUPPLEMENTARY INFORMATION:

I. Obtaining Information and Submitting Comments

A. Obtaining Information

Please refer to Docket ID NRC–2015–0282 when contacting the NRC about the availability of information for this action. You may obtain publicly-available information related to this action by any of the following methods:

- *Federal Rulemaking Web site:* Go to *http://www.regulations.gov* and search for Docket ID NRC–2015–0282. A copy of the collection of information and related instructions may be obtained without charge by accessing Docket ID NRC–2015–0282 on this Web site.
- *NRC's Agencywide Documents Access and Management System (ADAMS):* You may obtain publicly-available documents online in the ADAMS Public Documents collection at *http://www.nrc.gov/reading-rm/adams.html.* To begin the search, select ''*ADAMS Public Documents*'' and then select ''*Begin Web-based ADAMS Search.*'' For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1–800–397–4209, 301–415–4737, or by email to *pdr.resource@nrc.gov.* A copy of the collection of information and related instructions may be obtained without charge by accessing ADAMS Accession No. ML16245A843. The supporting statement is available in ADAMS under Accession No. ML16245A851.
- *NRC's PDR:* You may examine and purchase copies of public documents at the NRC's PDR, Room O1–F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.
- *NRC's Clearance Officer:* A copy of the collection of information and related instructions may be obtained without charge by contacting the NRC's Clearance Officer, David Cullison, Office of the Chief Information Officer, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001; telephone: 301–415–2084; email: *INFOCOLLECTS.Resource@nrc.gov.*

B. Submitting Comments

The NRC cautions you not to include identifying or contact information in comment submissions that you do not want to be publicly disclosed in your comment submission. All comment submissions are posted at *http://www.regulations.gov* and entered into ADAMS. Comment submissions are not routinely edited to remove identifying or contact information.

If you are requesting or aggregating comments from other persons for submission to the OMB, then you should inform those persons not to include identifying or contact information that they do not want to be publicly disclosed in their comment submission. Your request should state that comment submissions are not routinely edited to remove such information before making the comment submissions available to the public or entering the comment into ADAMS.

II. Background

Under the provisions of the Paperwork Reduction Act of 1995 (44 U.S.C. Chapter 35), the NRC recently submitted a request for renewal of an existing collection of information to OMB for review entitled: ''NRC Forms 542 and 542A, 'Uniform Low-Level Radioactive Waste Manifest Index and Regional Compact Tabulation, and Continuation Page.' '' The NRC hereby informs potential respondents that an agency may not conduct or sponsor, and that a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

The NRC published a **Federal Register** notice with a 60-day comment period on this information collection on June 22, 2016 (81 FR 40725).

1. *The title of the information collection:* ''NRC Forms 542 and 542A, 'Uniform Low-Level Radioactive Waste Manifest, Index and Regional Compact Tabulation, and Continuation Page.' ''

2. *OMB approval number:* 3150–0165.

3. *Type of submission:* Extension.

4. *The form number, if applicable:* NRC Forms 542 and 542A.

5. *How often the collection is required or requested:* Forms are used by shippers whenever radioactive waste is shipped. Quarterly or less frequent reporting is made to Agreement States depending on specific license conditions. No reporting is made to the NRC.

6. *Who will be required or asked to respond:* All NRC or Agreement State low-level waste facilities licensed pursuant to part 61 of title 10 of the *Code of Federal Regulations* (10 CFR) or equivalent Agreement State regulations. All generators, collectors, and processors of low-level waste intended for disposal at a low-level waste facility must complete the appropriate forms.

7. *The estimated number of annual responses:* 756.

8. *The estimated number of annual respondents:* 22.

9. *The estimated number of hours needed annually to comply with the information collection requirement or request:* 567.

10. *Abstract:* NRC Forms 542 and 542A, provide a set of standardized forms to meet Department of Transportation (DOT), NRC, and State requirements. The forms were developed by NRC at the request of low-level waste industry groups. The forms provide uniformity and efficiency in the collection of information contained in manifests which are required to control transfers of low-level radioactive waste intended for disposal at a land disposal facility. The NRC Form 542, completed by waste collectors or processors, contains information which facilitates tracking the identity of the waste generator. That tracking becomes more complicated when the waste forms, dimensions, or packaging are changed by the waste processor. Each container of waste shipped from a waste processor may contain waste from several different generators. The information provided on the NRC Form 542 permits the States and Compacts to know the original generators of low-level waste, as authorized by the Low-Level Radioactive Waste Policy Amendments Act of 1985, so they can ensure that waste is disposed of in the appropriate Compact.

Dated at Rockville, Maryland, this 2nd day of November, 2016.

For the Nuclear Regulatory Commission.

David Cullison,

NRC Clearance Officer, Office of the Chief Information Officer.

[FR Doc. 2016–27125 Filed 11–9–16; 8:45 am]

BILLING CODE 7590–01–P

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–79244; File No. SR–CBOE–2016–053]

Self-Regulatory Organizations; Chicago Board Options Exchange, Incorporated; Notice of Filing of Amendment No. 1 and Order Granting Accelerated Approval of a Proposed Rule Change, as Modified by Amendment No. 1, Relating to Price Protection Mechanisms and Risk Controls

November 4, 2016.

I. Introduction

On September 1, 2016, Chicago Board Options Exchange, Incorporated (''CBOE'' or ''Exchange'') filed with the Securities and Exchange Commission (''Commission''), pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (''Act'') [1] and Rule 19b–4 thereunder,[2] a proposed rule change to amend current and adopt new price protection mechanisms and risk controls for orders and quotes. The Commission published the proposed rule change for comment in the **Federal Register** on September 20, 2016.[3] On September 21, 2016, the Exchange filed Amendment No. 1 to the proposed rule change.[4] The Commission received no comments on the proposal. This order provides notice of filing of Amendment No. 1 and approves the proposed rule change, as modified by Amendment No. 1, on an accelerated basis.

II. Description of the Proposed Rule Change [5]

The Exchange currently has in place various price check mechanisms and risk controls that are designed to prevent incoming orders and quotes from automatically executing at potentially erroneous prices or to assist TPHs with managing their risk.[6] The Exchange proposed to amend CBOE Rules 6.12(a)(3), 6.13(b)(v), 6.14 and 8.18 to add new, as well as amend current, price protection mechanisms and risk controls to further assist brokers in their efforts to prevent errors and avoid trading activity that could potentially be unwanted or even disruptive to the market.[7]

A. Limit Order Price Parameter for Simple Orders

The Exchange proposed to amend the limit order price parameter for simple orders in Rule 6.12(a)(3). Currently, a simple limit order is routed directly from an order entry firm to an order management terminal (''OMT'') designated by the order entry firm if a limit order to buy (sell) is more than an acceptable tick distance (''ATD'') [8] above (below): (i) The Exchange's previous day's closing price prior to the opening of a series, or (ii) the disseminated Exchange offer (bid) once a series has opened.[9]

The Exchange has now proposed to amend CBOE Rule 6.12(a)(3) to reject a simple limit order to buy (sell) generally when it is more than an ATD above (below) the last disseminated national best offer (''NBO'') (national best bid (''NBB'')).[10] According to the Exchange, using the NBBO or NBO (NBB), if available, will more accurately reflect the then current market, rather than the previous day's closing price or Exchange BBO.[11] The Exchange, however, will continue to use the previous day's closing price or Exchange BBO in certain instances, such as when the NBBO is locked or crossed, or when there is no NBO (NBB) and the closing price does not cross the disseminated NBB (NBO).[12]

CBOE also proposed to apply the limit order price parameter to immediate-or-cancel orders. According to the Exchange, such orders also are at risk of execution at extreme and potentially erroneous prices and thus will benefit from applicability of these checks.[13] However, the limit order price parameter will not apply to orders routed from a PAR workstation or OMT. According to the Exchange, orders routed from a PAR workstation or OMT are subject to manual handling, and therefore, the Exchange believes the PAR or OMT operator will have evaluated the price of an order based on then-existing market conditions prior to submitting the order for electronic execution.[14] Thus, there is minimal risk of execution at an erroneous price. The limit order price parameter also will not apply to orders with a stop contingency.[15] According to the Exchange, buy orders with a stop contingency are generally submitted at a triggering price that is above the NBO, and sell orders with a stop contingency are generally submitted at a triggering price that is below the NBB.[16] As a result, the Exchange believes these orders are expected to be priced outside the NBBO.[17]

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[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] *See* Securities Exchange Act Release No. 78839 (September 14, 2016), 81 FR 64521 (September 20, 2016) (''Notice'').

[4] In Amendment No. 1, the Exchange conformed the text of proposed Rule 6.13(b)(v)(B) to CBOE's description in the Notice of the drill through price check parameter. Specifically, the amendment added detail into the rule to reflect that, pursuant to the drill through price check parameter, CBOE will expose the unexecuted portion of an order via HAL at the better of the NBBO and the drill through price. In addition, CBOE also proposed to amend its discussion of existing quote risk monitor functionality to accurately match the existing rule text (which involved background discussion of functionality that CBOE did not propose to amend in the current proposal). To promote transparency of its proposed amendment, when CBOE filed Amendment No. 1 with the Commission, it also submitted Amendment No. 1 as a comment letter to the file, which the Commission posted on its Web site and placed in the public comment file for SR–CBOE–2016–053 (available at *https://www.sec.gov/comments/sr-cboe-2016-053/cboe2016053-1.pdf*). The Exchange also posted a copy of its Amendment No. 1 on its Web site (*http://www.cboe.com/aboutcboe/legal/submittedsecfilings.aspx*) when it filed the amendment with the Commission.

[5] A more detailed description of the proposed rule change appears in the Notice. *See supra* note 3.

[6] *See, e.g.,* CBOE Rules 6.12(a)(3) through (5) (limit order price parameters), 6.13(b)(v) (market-width and drill through price check parameters), 6.14 (price protections), 6.53C, Interpretation and Policy .08 (price check parameters for complex orders), and 8.18 (QRM Mechanism).

[7] The proposed rule change also made conforming changes to CBOE Rules 6.2B, 6.13A, and 6.14A. A full discussion of those changes may be found in the Notice. *See supra* note 3.

[8] Currently, the Exchange determines the ATD, which may be no less than 5 minimum increment ticks, on a series-by-series and premium basis. Under the proposed rule change, the ATD, which may be no less than two minimum increment ticks, will be determined on a class-by-class and premium basis. In addition, different ATDs may be applied to orders entered during the pre-opening, a trading rotation, a trading halt, or Extended Trading Hours. *See* proposed CBOE Rule 6.12(a)(3) and Notice, *supra* note 3, at 64523 n. 8

[9] *See* CBOE Rule 6.12(a)(3).

[10] Specifically, CBOE will reject the order if it is more than the ATD above (below): (i) prior to the opening of a series, (A) the last disseminated national best offer (''NBO'') (national best bid (''NBB'')), if a series is open on another exchange, or (B) the Exchange's previous day's closing price, if a series is not yet open on any other exchange; if the NBBO is locked, crossed, or unavailable; or if there is no NBO (NBB) and the previous day's closing price is greater (less) than or equal to the NBB (NBO); (ii) intraday, the last disseminated NBO (NBB), or the Exchange's best offer (bid) if the NBBO is locked, crossed or unavailable; or (iii) during a trading halt, the last disseminated NBO (NBB).

[11] *See* Notice, *supra* note 3 at 64522.

[12] *See id.*

[13] *See id.* at 64523.

[14] *See id.*

[15] *See* CBOE Rule 6.53. A stop contingency is triggered for a buy order if there is a last sale or bid at or above the stop price and for a sell order if there is a last sale or offer at or below the stop price.

[16] *See* Notice, *supra* note 3 at 64523.

[17] *See id.*

B. Drill Through Price Check Parameter

The Exchange proposed to amend the drill through price check parameter in CBOE Rule 6.13(b)(v). Currently, the Exchange's trading system (''System'') will not automatically execute a market or marketable limit order[18] if the execution would follow an initial partial execution on the Exchange at a price not within an ATD[19] from the initial execution. Instead, the remaining unexecuted portion of a HAL-eligible order will be exposed pursuant to the HAL process in CBOE Rule 6.14A using the ATD as the exposure price and any remainder will route via the order handling system pursuant to CBOE Rule 6.12.[20]

The Exchange now has proposed to amend CBOE Rule 6.13(b)(v) to add detail to the rule describing how the System will handle orders that were not exposed prior to trading up to the drill through price and orders that traded up to the drill through price following exposure. In particular, orders not previously exposed would be exposed via HAL and orders previously exposed via HAL or SAL would rest in the book for a period of time and thereafter be cancelled if they do not execute.[21]

Buy (sell) orders (or any unexecuted portion) that are not eligible for HAL or SAL and do not otherwise cancel by their terms will route via the order handling system pursuant to Rule 6.12. In addition, the drill through price check parameter at the open will be handled pursuant to the separate process set forth in Rule 6.2B, Interpretation and Policy .03.[22]

C. TPH-Designated Risk Settings

The Exchange proposed to amend CBOE Rule 6.14 to authorize it to share TPH-designated risk settings with a TPH's Clearing TPH. The risk settings that the Exchange may share with Clearing TPHs include, but are not limited to, settings under Rule 8.18 (related to QRM) and proposed CBOE Rule 6.14(d) (related to order entry and execution rate checks) and (e) (related to maximum contract size). The Exchange represented that other options exchanges have similar rules permitting them to share member-designated risk settings with other members that clear transactions on the member's behalf.[23]

D. Put Strike Price/Call Underlying Value Checks

The Exchange proposed to amend the put strike price and call underlying value checks in CBOE Rule 6.14(a). Currently, the System rejects back to the TPH a quote or buy limit order for (i) a put if the price of the quote bid or order is greater than or equal to the strike price of the option, or (ii) a call if the price of the quote bid or order is greater than or equal to the consolidated last sale price of the underlying security, with respect to equity and exchange-traded fund options, or the last disseminated value of the underlying index, with respect to index options. The Exchange proposed to extend this check to apply to market orders (and any remaining size after a partial execution).[24]

E. Quote Inverting NBBO Check

The Exchange proposed to amend Rule CBOE 6.14(b) regarding the quote inverting NBBO check. Currently, if the Exchange is at the NBO (NBB), the System rejects a quote back to a Market-Maker if the quote bid (offer) crosses the NBO (NBB) by more than a number of ticks specified by the Exchange. If CBOE is not at the NBO (NBB), the System rejects a quote back to a Market-Maker if the quote bid (offer) locks or crosses the NBO (NBB). If the NBBO is unavailable, locked, or crossed, then this check compares the quote to the BBO (if available). The rule is currently silent on what happens if the BBO is unavailable.

The Exchange has now proposed to amend Rule 6.14(b) to not apply this check to incoming quotes when the BBO is unavailable. The Exchange also proposed to amend the rule to state that it will not apply the check to incoming quotes prior to the opening of a series if the series is not open on another exchange, as well as during a trading halt.[25]

F. Execution of Quotes That Lock or Cross NBBO

The Exchange further proposed to amend the provision concerning the execution of quotes that lock or cross the NBBO.[26] The rule currently states that if the System accepts a quote that locks or crosses the NBBO, it executes the quote and either (i) cancels any remainder or (ii) books any remainder if the price of the quote does not lock or cross the price of an away exchange.[27] Further, CBOE currently will not disseminate an internally crossed market, and if a Market-Maker submits a quote that would invert an existing quote, the System will change the

[18] Currently, the Exchange applies the market-width check to market orders and the drill through check to market and marketable limit orders. The Exchange proposed to codify this current practice into the rules. *See* Notice, *supra* note 3, at 64523 n. 12.

[19] Currently, the ATD is determined by the Exchange on a series-by-series and premium basis for market orders and/or marketable limit orders and may be no less than two minimum increment ticks. Under the proposed rule change, the Exchange will determine the ATD on a class and premium basis (which may be no less than two minimum increment ticks), which the Exchange will announce via Regulatory Circular. *See* proposed CBOE Rule 6.13(b)(v)(B)(I).

[20] *See* CBOE Rule 6.13(b)(v).

[21] Specifically, if a buy (sell) order not yet exposed via HAL partially executes, and the System determines the unexecuted portion would execute at a price higher (lower) than the price that is an ATD above (below) the NBO (NBB) (''drill through price''), the System will not automatically execute the remaining portion but will instead expose it via HAL at the better of the NBBO and the drill through price (if eligible for HAL). If a buy (sell) order exposed via HAL (other than pursuant to the previous sentence) or the Solicitation Auction Mechanism (''SAL'') would, following the exposure period, execute at a price higher (lower) than the drill through price, the System will not automatically execute the order (or unexecuted portion). These orders (or unexecuted portions) will rest in the book (based on the time at which they enter the book for priority purposes) for a time period in milliseconds (which the Exchange will determine and announce via Regulatory Circular and will not exceed three seconds—the Exchange will initially set the time at two seconds) with a price equal to the drill through price. If the order (or any unexecuted portion) does not execute during that time period, the System cancels it. In classes in which SAL is activated, an order eligible for SAL will be exposed immediately and would not partially execute prior to being exposed via SAL. For this reason, SAL is not included in proposed CBOE Rule 6.13(v)(B)(I). *See* Notice, *supra* note 3, at 64523 n. 15. Any order (or unexecuted portion) that by its terms cancels if it does not execute immediately (including immediate-or-cancel, fill-or-kill, intermarket sweep, and market-maker trade prevention orders) will be cancelled rather than rest in the book for this time period in accordance with the definition of those order types. *See* proposed CBOE Rule 6.13(b)(v)(B)(III).

[22] The proposed rule change also amended the market width price check parameter in CBOE Rule 6.13(b)(v) (proposed CBOE Rule 6.13(b)(v)(A)) to be determined on a class-by-class basis rather than series-by-series, as well as made additional non-substantive changes to Rule 6.13(b)(v), such as separating the provisions regarding the market-width price check parameter from those regarding the drill through price check parameter.

[23] *See* Notice, *supra* note 3 at 64525. *See also, e.g.,* Miami International Securities Exchange, LLC (''MIAX'') Rule 500; NASDAQ OMX BX, Inc. (''BX'') Chapter VI, Section 20; NYSE Arca, Inc. (''Arca'') Rule 6.2A(a); NYSE MKT LLC (''MKT'') Rule 902.1NY(a); and NASDAQ OMX PHLX LLC (''PHLX'') Rule 1016.

[24] The Exchange will not apply these checks to market orders that execute during the opening process, however, in order to avoid impacting the determination of the opening price. According to the Exchange, separate price protections apply during the opening process, including the drill through protection in CBOE Rule 6.2B. *See* Notice, *supra* note 3, at 64525. The Exchange also proposed to amend CBOE Rule 6.14(a) to eliminate discretion afforded to the Exchange to determine to apply the call check to a class during Extended Trading Hours. The Exchange represented that it currently does not apply the check during Extended Trading Hours and is eliminating its ability to do so in the future. *See id.*

[25] *See* proposed CBOE Rule 6.14(ii) and (iii).

[26] The Exchange proposed to move this provision from current CBOE Rule 6.14(b)(iii) to proposed CBOE Rule 6.14(c).

[27] If a quote inverts another quote, it is subject to CBOE Rules 6.45A(d)(ii) or 6.45B(d)(ii).

incoming quote so it locks the existing quote.[28] The Exchange then disseminates the locked market, and both quotes will be deemed firm. When the market locks, a counting period will begin during which Market-Makers may update those quotes (provided a Market-Maker will be obligated to execute orders eligible for automatic execution at its disseminated quote). If at the end of the counting period the quotes remain locked, the locked quotes will automatically execute against each other.

Under current CBOE Rule 6.14(b)(iii), any counting period under the quote lock rule may cause the Exchange to disseminate a quote that locks that of an away exchange. The Exchange has now proposed to amend the rule to no longer disseminate a lock, and instead will reject an incoming Market-Maker quote (or unexecuted portion thereof) that locks or crosses a resting Market-Maker quote at the NBBO.[29]

G. Order Entry, Execution, and Price Parameter Checks

The Exchange proposed to adopt the following four mandatory activity-based risk protections under proposed CBOE Rule 6.14(d):[30]

(i) the total number of orders (of all order types) and auction responses entered and accepted by the System (''orders entered'');

(ii) the total number of contracts (from orders and auction responses) executed on the System, which does not count executed contracts from orders submitted from a PAR workstation or an OMT or stock contracts executed as part of stock-option orders (''contracts executed'');

(iii) the total number of orders the System books or routes via the order handling system [31] pursuant to the drill through price check parameter (as amended by this proposed rule change) in proposed Rule 6.13(b)(v)(B) (''drill through events''); and

(iv) the total number of orders the System cancels or routes via the order handling system pursuant to the limit order price parameter in Rule 6.12(a)(3) through (5) (''price reasonability events'').

When a TPH exceeds a parameter within one of the time intervals set by CBOE, the System will (i) reject all subsequent incoming orders and quotes, (ii) cancel all resting quotes, and (iii) for the orders entered and contracts executed checks, if the TPH requests, cancel resting orders in the manner specified by the TPH (either all orders, orders with time-in-force of day, or orders entered on that trading day).[32]

The System will not accept new orders or quotes from a restricted acronym or login until the Exchange receives the TPH's manual notification to reactivate its ability to send orders and quotes. While an acronym or login is restricted, a TPH may continue to interact with any resting orders (*i.e.,* orders not cancelled pursuant to this protection) entered prior to its acronym or login becoming restricted, including receiving trade execution reports and canceling resting orders.

H. Maximum Contract Size

The Exchange proposed to adopt a maximum contact size risk control pursuant to which the System will reject a TPH's incoming order or quote (including both sides of a two-sided quote) if its size exceeds the TPH's designated maximum contract size parameter.[33] Each TPH must provide a maximum contract size for each of simple orders, complex orders, and quotes applicable to an acronym or, if the TPH requests, a login.[34]

I. Kill Switch

The Exchange further proposed to adopt a kill switch, which will be on optional tool allowing a TPH to send a message to the System to, or contact the Exchange Help Desk to request that, the Exchange cancel all its resting quotes, resting orders (either all orders, orders with time-in-force of day, or orders entered on that trading day), or both, and thereafter reject all subsequent incoming quotes and/or orders.[35] The System will send a TPH an automated message when it has processed a kill switch request and thereafter will not accept new orders or quotes from a restricted acronym or login until the Exchange receives the TPH's manual notification to reactivate its ability to send orders and quotes.

According to the Exchange, the kill switch message will be accepted by the System in the order of receipt in the queue and will be processed in that order so that interest already in the System will be processed prior to the kill switch message.[36] Moreover, a Market-Maker's utilization of the kill switch, and subsequent removal of its quotes, will not diminish or relieve the Market-Maker of its obligation to provide continuous two-sided quotes. Market-Makers will continue to be required to provide continuous two-sided quotes on a daily basis, and a Market-Maker's utilization of the kill switch will not prohibit the Exchange from taking disciplinary action against the Market-Maker for failing to meet the continuing quoting obligation each trading day.[37]

J. Quote Risk Monitor Mechanism

Lastly, the Exchange proposed to amend the QRM Mechanism in CBOE Rule 8.18. Pursuant to the QRM mechanism, a Market-Maker may establish a (i) maximum number of contracts, (ii) a maximum cumulative percentage of the original quoted size of

[28] *See* CBOE Rules 6.45A(d)(ii) and 6.45B(d)(ii).

[29] The Exchange also proposed to amend the rule to not apply the check when the NBBO is locked, crossed, or unavailable. In addition, the Exchange proposed to authorize a senior official at the Exchange's Help Desk to determine not to apply this check in the interest of maintaining a fair and orderly market. For example, the Exchange believes it is appropriate to disable this check in response to a market event or market volatility to avoid inadvertently cancelling quotes not erroneously priced but rather priced to reflect potentially rapidly changing prices. *See* Notice, *supra* note 3, at 64526. The Exchange represented that, pursuant to Exchange procedures, any decision to not apply the check and the reason for such decision will be documented, retained, and periodically reviewed. *See id.*

[30] Other exchanges maintain similar activity-based risk protections. *See, e.g.,* International Securities Exchange, LLC (''ISE'') Rule 714(d) and MIAX Rule 519A.

[31] As discussed above, orders (or unexecuted portions) that by their terms cancel if they do not execute immediately will be cancelled rather than rest in the book for a period of time (as proposed in this filing) pursuant to the drill through price check parameter if triggered. According to the Exchange, because these orders will not book or route pursuant to the drill through price check parameter, these orders will not be included in the count for the drill through event check. *See* Notice, *supra* note 3, at 64527 n. 33.

[32] The Exchange expects the initial time intervals for all these checks to be set at one and five minutes. The time intervals set by the Exchange will apply to all TPHs, who will not be able to change these time intervals. *See* Notice, *supra* note 3, at 64527 n. 34.

[33] *See* proposed CBOE Rule 6.14(e). The Exchange represented that other options exchanges have adopted similar functionality. *See* Notice, *supra* note 3, at 64528 n. 40; MIAX Rule 519(b).

[34] For purposes of determining the contract size of an incoming order or quote, the proposed rule states the contract size of a complex order will equal the contract size of the largest option leg of the order (*i.e.,* if the order is a stock-option order, this check will not apply to the stock leg of the order). *See* proposed CBOE Rule 6.14(e). If a TPH enters an order or quote to replace a resting order or update a resting quote, and the System rejects the incoming order or quote because it exceeds the applicable maximum contract size, the System also will cancel the resting order or any resting quote in the same series. In addition, the Exchange proposed to apply this check to paired orders submitted to AIM, SAM or as a QCC order. Further, the Exchange proposed that for an A:AIR order, if the System rejects the agency order, then the System rejects the contra-side order; however, if the System rejects the contra-side order, the System still accepts the agency order. *See* proposed CBOE Rule 6.14(e)(ii).

[35] *See* proposed CBOE Rule 6.14(f). The Exchange represented that other options exchanges have adopted similar kill switches. *See* Notice, *supra* note 3, at 64529; BOX Options Exchange LLC (''BOX'') Rule 7280 and PHLX Rule 1019(b).

[36] *See* Notice, *supra* note 3 at 64532.

[37] *See id.*

each side of each series, and (iii) the maximum number of series for which either side of its quote is fully traded, that may trade within a rolling time period in milliseconds also established by the Market-Maker. When these parameters are exceeded within the time interval, the System cancels the Market-Maker's quotes in the class and other classes with the same underlying on the same trading platform. In addition, CBOE Rule 8.18 allows Market-Makers or TPH organizations to specify a maximum number of QRM incidents across all classes on an Exchange-wide basis. When the Exchange determines that a Market-Maker or TPH organization has reached its QRM incident limit during the rolling time interval, the System will cancel all of the Market-Maker's electronic quotes and Market-Maker orders resting in the book in all option classes on the Exchange and prevent the Market-Maker or TPH organization from sending additional quotes or orders to the Exchange until the Market-Maker reactivates its ability to send quotes or orders.

Currently, use of the QRM is optional. The Exchange proposed to amend CBOE Rule 8.18 to make it mandatory for Market-Makers to enter values for each parameter for all classes in which they quote.[38]

III. Discussion and Commission Findings

After careful review, the Commission finds that the proposed rule change is consistent with the requirements of Section 6 of the Act [39] and the rules and regulations thereunder applicable to the Exchange.[40] Specifically, the Commission finds that the proposed rule change is consistent with the Section 6(b)(5) [41] requirements that the rules of an exchange 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 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 Commission believes that the proposed rule change is designed to mitigate the likelihood of orders trading at potentially erroneous prices, clarify when certain price/risk controls will apply, avoid locking an away market, and assist TPHs in managing their risk exposure to avoid potentially harmful and disruptive trading.

As discussed above, CBOE is proposing to amend its limit order price parameter for simple orders to use the NBBO when available in lieu of the Exchange's previous day's closing price or BBO. To the extent that the use of the NBBO, when available, rather than the Exchange's previous day's closing price or BBO, may better reflect the then current market, it should provide a suitable measure for purposes of determining the reasonability of the prices of orders. Moreover, the Commission believes that it is reasonable for CBOE to exclude orders with a stop contingency or orders routed from a PAR workstation or OMT from the limit order price check parameter. In particular, application of the limit order price check parameter to stop contingency orders may interfere with the application of the stop contingency, and orders routed from a PAR workstation or OMT may be less likely to execute at an erroneous price since they are manually reviewed and processed.

The Commission believes that the proposed rule change to expand the applicability of the put strike price and call underlying value checks to market orders [42] may help TPHs mitigate risks associated with orders trading at prices that exceed a corresponding benchmark, which may indicate an execution at a price that is potentially erroneous. Furthermore, the Commission believes the proposed rule change to eliminate the flexibility to not apply this check to orders entered during Extended Trading Hours will provide market participants with increased certainty regarding the inapplicability of this check.

The proposed changes to the drill through price checks provide additional detail to the rule regarding how the System handles certain orders that were not exposed prior to trading up to the drill through price and orders that traded up to the drill through price following exposure. In addition, allowing the remainder of orders to rest in the book for a brief time period at the drill through price may benefit investors by providing an additional opportunity for execution of their orders. Furthermore, clarifying that an order exposed via HAL pursuant to the drill through price check will not be exposed at a price worse than the NBBO is consistent with the current treatment of other orders exposed via HAL at the NBBO.[43]

The Commission also believes that the proposed amendments to the quote inverting NBBO check will provide market participants with greater clarity that CBOE will not apply the check in the absence of an NBBO and BBO. In addition, the proposed rule change eliminates the Exchange's flexibility to apply the check prior to the opening of a series as well as during a trading halt. Removing this flexibility and clearly stating when CBOE will not apply the check considerably enhances the transparency of the functionality.

With respect to CBOE's proposed changes regarding the execution of quotes that lock or cross the NBBO (Proposed Rule 6.14(c)), the Commission believes that the proposed rule change is consistent with the Act as it is reasonably designed to prevent the dissemination of a quote that locks or crosses an away market. Moreover, to the extent the Exchange determines to temporarily deactivate the check in the interest of maintaining a fair and orderly market, CBOE has represented that all such decisions by CBOE will be adequately justified, documented, retained, and periodically reviewed.[44]

Further, the Commission believes that the Exchange's proposed risk protection parameters and mechanisms for orders and quotes are reasonably designed to provide TPHs with additional tools to assist them in managing their risk exposure. Specifically, the order entry, execution, and price parameter rate checks, maximum contract size risk control, and mandatory use of the QRM may help TPHs to mitigate the potential risks associated with entering too many orders or quotes, executing too many contracts, having too many orders rejected because of price protection parameters, and entering orders or quotes with size that may be potentially erroneous that may result from, for example, technology issues with the broker's electronic trading system. To this extent, these TPH-customizable settings may help act as a backstop to the TPH's own controls and provide an additional layer of protection customized to the TPH's self-selected parameters. Moreover, the Commission notes that other exchanges have

[38] The Exchange represented that other options exchanges have made similar functionality mandatory for all Market-Makers. *See* Notice, *supra* note 3, at 64529; ISE Rule 804(g).

[39] 15 U.S.C. 78f(b).

[40] In approving these proposed rule changes, the Commission has considered the proposed rules' impact on efficiency, competition, and capital formation. *See* 15 U.S.C. 78c(f).

[41] 15 U.S.C. 78f(b)(5).

[42] The checks will not apply to market orders during an opening rotation since separate price protections will apply during the opening process. *See* Notice, *supra* note 3, at 64525.

[43] *See* current and proposed CBOE Rule 6.14A(b).

[44] *See supra* note 29 and accompanying text.

established similar risk protection mechanisms.[45] The Commission notes that the proposed functionality, including the cancellation of any resting interest, must be processed in sequence with other interest in the System and comply with the firm quote obligations in Rule 602 of Regulation NMS.

CBOE will require TPHs and Market-Makers to utilize these risk protection parameters and mechanisms. However, TPHs and Market-Makers will have discretion to customize the parameters in accordance with their respective risk management needs. In light of this flexibility, the Commission reminds TPHs to be mindful of their obligations, to among others, seek best execution of orders they handle on an agency basis and consider their best execution obligations when establishing parameters for the order entry, execution, price parameter rate checks, maximum contract size risk control, and QRM.[46] For example, an abnormally low order entry parameter should be carefully scrutinized, particularly if a TPH's order flow to the Exchange contains agency orders. To the extent that a TPH chooses sensitive parameters and those parameters apply to connections over which it transmits customer orders to the Exchange, a TPH should consider the effect of its chosen settings on its ability to receive a timely execution on marketable agency orders that it sends to the Exchange in various market conditions. The Commission cautions brokers considering their best execution obligations to be aware that an agency order they represent may be rejected as a result of these risk protections.

In addition, in light of the Exchange's decision not to set maximum or minimum values, or default values, the Commission expects CBOE to periodically assess whether these risk protection measures are operating in a manner that is consistent with the promotion of fair and orderly markets, including whether not utilizing maximum and minimum parameters or default values continues to be appropriate and in accordance with the Act and the rules thereunder.

Further, the Commission believes that Proposed Rule 6.14(f), which creates an optional kill switch mechanism, is consistent with the Act as it may further enhance risk management capabilities of TPHs by providing them with the ability to manage their risk exposure if they experience a significant system failure. To the extent that the kill switch mechanism provides TPHs with an appropriate backstop in this manner, it may encourage firms to provide liquidity on CBOE and thus contribute to fair and orderly markets in a manner that protects investors and the public interest. The Commission notes that the Exchange represented in its proposal that the kill switch will operate consistently with a broker-dealer's firm quote obligations pursuant to Rule 602 of Regulation NMS,[47] and that the kill switch does not diminish or relieve a Market-Maker of its obligation to provide continuous two-sided quotes.[48] The Exchange also represented that the kill switch message will be accepted by the System in the order of receipt in the queue and will be processed in such order. As such, the System will process interest already in the System prior to receipt of the kill switch message prior to processing the kill switch message.[49] Based on these representations, the Commission believes that the kill switch is reasonably designed to promote just and equitable principles of trade and perfect the mechanism of a free and open market. Lastly, the Commission notes that other exchanges have established kill switches that operate in a manner similar to that proposed by CBOE.[50]

Finally, the Commission believes that the proposal to authorize CBOE to share with Clearing TPHs the risk mitigation settings selected by a TPH for whom the Clearing TPH clears may assist Clearing TPHs manage their clearing risk exposure. The Commission notes that other exchanges have adopted similar rules authorizing the sharing of similar risk settings with clearing members.[51]

IV. Solicitation of Comments on Amendment No. 1 to the Proposed Rule Change

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether Amendment No. 1 to 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–CBOE–2016–053 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549–1090.

All submissions should refer to File Number SR–CBOE–2016–053. 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 10:00 a.m. and 3:00 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–CBOE–2016–053, and should be submitted on or before December 1, 2016.

V. Accelerated Approval of Proposed Rule Change, as Modified by Amendment No. 1

The Commission finds good cause to approve the proposed rule change, as modified by Amendment No. 1, prior to the thirtieth day after the date of publication of notice of the amended proposal in the **Federal Register**. In Amendment No. 1,[52] CBOE clarified in its drill through rule text the exposure price of an order via HAL as CBOE had described it in the Notice. Amendment

[45] *See* ISE Rules 714(d) & 804(g); MIAX Rules 519(b) & 519A.

[46] *See, e.g.,* Securities Exchange Act Release Nos. 37619A (September 6, 1996), 61 FR 48290 (September 12, 1996) (Order Handling Rules adopting release); 51808 (June 9, 2005), 70 FR 37496, 37537–8 (June 29, 2005) (Regulation NMS adopting release).

[47] *See* Notice, *supra* note 3, at 64532.

[48] *See id.*

[49] *See id.*

[50] *See, e.g.,* BOX Rule 7280(b) and PHLX Rule 1019(b).

[51] *See, e.g.,* MIAX Rule 500; BX Chapter VI, Section 20; NYSE Arca Rule 6.2A(a); NYSE MKT Rule 902.1NY(a); and PHLX Rule 1016.

[52] *See* Amendment No. 1, *supra* note 4.

No. 1 further clarified CBOE's background discussion of how quotes and orders are cancelled pursuant to the QRM Mechanism in order to harmonize the description of the existing rule with the text of Rule 8.18. Both of these changes are consistent with the proposal as initially filed, and simply add detail to the filing to resolve internal inconsistencies. The changes do not introduce material, new, or novel concepts. Accordingly, the Commission finds good cause, pursuant to Section 19(b)(2) of the Act,[53] to approve the proposed rule change, as modified by Amendment No. 1, on an accelerated basis.

VI. Conclusion

It is therefore ordered, pursuant to Section 19(b)(2) of the Act,[54] that the proposed rule change (SR–CBOE–2016–053), as modified by Amendment No. 1, be, and hereby is, approved on an accelerated basis.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[55]

Brent J. Fields,

Secretary.

[FR Doc. 2016–27153 Filed 11–9–16; 8:45 am]

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SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–79240; File No. SR–NASDAQ–2016–146]

Self-Regulatory Organizations; The NASDAQ Stock Market LLC; Notice of Filing and Immediate Effectiveness of Proposed Rule Change To Amend Rule 9400 To Include a Cross-Reference

November 4, 2016.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (''Act'')[1], and Rule 19b-4 [2] thereunder, notice is hereby given that, on October 25, 2016, The NASDAQ Stock Market LLC (''Nasdaq'' or ''Exchange'') filed with the Securities and Exchange Commission (''SEC'' or ''Commission'') the proposed rule change as described in Items I and II below, which Items have been prepared by the Exchange. 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 Rule 9400, entitled ''Expedited Client Suspension Proceeding'' to include a cross-reference for clarification.

The text of the proposed rule change is available on the Exchange's Web site at *http://nasdaq.cchwallstreet.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 Exchange 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 Exchange is filing this proposal to amend Rule 9400, entitled ''Expedited Client Suspension Proceeding'' to include a cross-reference Chapter III, Section 16, entitled ''Disruptive Quoting and Trading Activity Prohibited'' within Rule 9400. The Exchange filed a rule change to adopt an options rule, identical to equities Rule 2170, which relates to disruptive quoting and trading activity.[3] In that rule change, it stated that ''[t]he Exchange will initiate disciplinary action for violations of Chapter III, Section 16, pursuant to Rule 9400.'' [4] At that time, the Exchange inadvertently did not include the cross-references to Chapter III, Section 16 within Rule 9400. The Exchange proposes to add references to Chapter III, Section 16 within Rule 9400 for clarity. This rule change is non-controversial.

Background

The Exchange filed a rule change to adopt an options rule to clearly prohibit disruptive quoting and trading activity on the Exchange and to permit the Exchange to take prompt action to suspend members or their clients that violate such rule pursuant to Rule 9400.[5] The Exchange had previously adopted Rule 9400 to set forth procedures for issuing suspension orders, immediately prohibiting a member from conducting continued disruptive quoting and trading activity on the Exchange.[6] Rule 9400 provides the Exchange the authority to order a member to cease and desist from providing access to the Exchange to a client of the member that is conducting disruptive quoting and trading activity in violation of Rule 2170. The Exchange also previously adopted Rule 2400 to specifically define and prohibit disruptive equities quoting and trading activity on the Exchange.[7] Chapter III, Section 16 is identical to Rule 2400, however applicable to options. Similarly, Chapter III, Section 16 prohibits members from engaging in or facilitating disruptive options quoting and trading activity on the Exchange.

The Exchange proposes to simply add the cross-references for the options rules alongside the equity rule for clarity. This rule change is consistent with the intent of the rule proposal which adopted Chapter III, Section 16.[8]

2. Statutory Basis

The Exchange believes that its proposal is consistent with Section 6(b) of the Act,[9] in general, and furthers the objectives of Section 6(b)(5) of the Act,[10] in particular, in that the rules of the Exchange are designed to prevent fraudulent and manipulative acts and practices, it [sic] is designed to promote just and equitable principles of trade, 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 by making clear within Rule 9400 that violations of Chapter III, Section 16 are subject to disciplinary action pursuant to Rule 9400 as stated in the Exchange's rule filing.[11] This cross-reference will provide clarity to members and ease of reference to the

[53] 15 U.S.C. 78s(b)(2).

[54] *See id.*

[55] 17 CFR 200.30–3(a)(12).

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] *See* Securities and Exchange Release No. 78208 (June 30, 2016), 81 FR 44366 (July 7, 2016) (SR–NASDAQ–2016–092).

[4] *See* Securities and Exchange Release No. 78208 (June 30, 2016), 81 FR 44366, 44370 (July 7, 2016) (SR–NASDAQ–2016–092). Rule 9400 is located within the Code of Procedure rules which apply to both equities and options violations.

[5] *See* note 3.

[6] *See* Securities and Exchange Release No. 77913 (May 25, 2016), 81 FR 35081 (June 1, 2016) (SR–NASDAQ–2016–074).

[7] *See* note 3.

[8] *See* note 3.

[9] 15 U.S.C. 78f(b).

[10] 15 U.S.C. 78f(b)(5).

[11] *See* note 4.

corresponding options rule. The proposed rule change is non-controversial. The addition of the cross-reference is for clarity.

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 not necessary or appropriate in furtherance of the purposes of the Act. This non-controversial rule change will merely add the reference to the options rule next to the current reference for the equity rule to make clear, as noted in the rule changes, that violations of either rule relating to disruptive quoting and trading activity, will be disciplined pursuant to Rule 9400.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

No written comments were either solicited or received.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Because the foregoing proposed rule change does not: (i) significantly affect the protection of investors or the public interest; (ii) impose any significant burden on competition; and (iii) 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 [12] and Rule 19b–4(f)(6) thereunder.[13]

A proposed rule change filed pursuant to Rule 19b–4(f)(6) under the Act [14] normally does not become operative for 30 days after the date of its filing. However, Rule 19b–4(f)(6) [15] permits the Commission to designate a shorter time if such action is consistent with the protection of investors and the public interest. The Exchange believes that waiving the 30-day operative delay is consistent with the protection of investors and the public interest because it would allow the Exchange to immediately add the cross-reference within Rule 9400 which would provide clarity to members. The Exchange notes that a rule change to permit Rule 9400 to apply to violations of Chapter III, Section 16 was previously filed with the Commission. However, that filing failed to amend the rule text of Rule 9400 and only discussed the intended application of Rule 9400 to violations of Chapter III, Section 16 in the purpose section of the Form 19b–4.

The text of the rule governs what actions the Exchange can take.[16] However, because the description in the original filing sets forth what the Exchange intended the rule to cover, and this proposed rule change corrects an oversight by the Exchange in the previous filing, the Commission believes that waiving the 30-day operative delay [17] is consistent with the protection of investors and the public interest and designates the proposal operative on filing.

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. If the Commission takes such action, the Commission will institute proceedings to determine whether the proposed rule change should be approved or 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–NASDAQ–2016–146 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street, NE., Washington, DC 20549–1090.

All submissions should refer to File Number *SR–NASDAQ–2016–146.* 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 10:00 a.m. and 3:00 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–NASDAQ–2016–146 and should be submitted on or before December 1, 2016.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[18]

Brent J. Fields,

Secretary.

[FR Doc. 2016–27150 Filed 11–9–16; 8:45 am]

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[12] 15 U.S.C. 78s(b)(3)(A).

[13] 17 CFR 240.19b–4(f)(6).

[14] 17 CFR 240.19b–4(f)(6).

[15] 17 CFR 240.19b–4(f)(6).

[16] *See* Section 6(b)(1) of the Act. 15 U.S.C. 78f(b)(1).

[17] 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).

[18] 17 CFR 200.30–3(a)(12).

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–79239; File No. SR–MSRB–2016–14]

Self-Regulatory Organizations; Municipal Securities Rulemaking Board; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change To Establish Fees Related to the MSRB Academic Historical Transaction Data Product

November 4, 2016.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (the ''Act'' or ''Exchange Act'') [1] and Rule 19b–4 thereunder,[2] notice is hereby given that on October 25, 2016 the Municipal Securities Rulemaking Board (the ''MSRB'' or ''Board'') 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 by the MSRB. The

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

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 filed with the Commission a proposed amendment to the MSRB's facility for the Real-Time Transaction Reporting System (''RTRS'') to establish fees related to the MSRB Academic Historical Transaction Data Product (''RTRS Academic Data Product'') (''proposed rule change'').[3] The MSRB has designated the proposed rule change as establishing or changing a fee or charge of the MSRB, which renders the proposed rule change effective upon receipt of this filing by the Commission. The effective date of the fees will coincide with the effective date of the RTRS Academic Data Product, which the MSRB will announce in a regulatory notice to be published no later than December 12, 2016, and which will be no later than June 9, 2017.[4] The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

The text of the proposed rule change is available on the MSRB's Web site at *www.msrb.org/Rules-and-Interpretations/SEC-Filings/2016-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

Under the Exchange Act, the MSRB is charged with adopting rules with respect to transactions in municipal securities effected by brokers, dealers and municipal securities dealers (''dealers'') and the municipal advisory activities of municipal advisors. In addition, the MSRB has undertaken to create various market transparency products in furtherance of its statutory duties and its mission, which is, in part, to promote a fair and efficient municipal securities market through the collection and dissemination of market information.

Historically, the MSRB has operated information systems to collect key disclosure documents and transaction data to create a central warehouse of information that in turn made most of these documents and data available to the market—the Electronic Municipal Market Access (EMMA®) [5] Web site. The MSRB makes post-trade transaction data available to the general public through the EMMA Web site at no cost, and to data vendors, industry utilities and others on a subscription basis through a real-time data feed and on a delayed basis.

MSRB Rule G–14, on transaction reporting, requires dealers to report all executed transactions in municipal securities to RTRS within 15 minutes of the time of trade, with limited exceptions.[6] The information facility for RTRS serves to outline the high-level parameters by which the MSRB operates the system. The new RTRS Academic Data Product will include the same transactions included in the current RTRS historical transaction data sets, with the inclusion of anonymized dealer identifiers but the exclusion of list offering price and takedown transactions, which are defined such that they generally encompass primary market transactions; will be made available only to academic institutions; and will be highly useful in connection with research activities by allowing academic institutions to attribute transactions to the dealers that facilitated them.

The purpose of the proposed rule change is to establish fees related to the RTRS Academic Data Product. Specifically, the proposed rule change would make the RTRS Academic Data Product available to academic institutions for a fee of $500 per one-year data set (with a one-time initial set-up fee of $500).[7] The MSRB customarily waives all fees associated with an MSRB subscription service or historical data product purchase for non-profit organizations (including academic institutions). However, due to the additional legal and operational effort required for the MSRB to offer the RTRS Academic Data Product, the MSRB believes that the $500 fee per one-year data set and $500 one-time initial set-up fee is appropriate to help defray these costs, while not overly burdening academic institutions.

2. Statutory Basis

Section 15B(b)(3)(B)(ii) of the Exchange Act [8] provides that the MSRB:

> shall not be prohibited from charging commercially reasonable fees for automated subscription-based feeds or similar services, or for charging for other data or document-based services customized upon request of any person, made available to commercial enterprises, municipal securities market professionals, or the general public, whether delivered through the Internet or any other means, that contain all or part of the documents or information, subject to approval of the fees by the Commission under section 19(b).

The MSRB believes that the proposed rule change is consistent with Section 15B(b)(3)(B)(ii) of the Exchange Act [9] in that it would charge a fee of $500 per one-year data set (with a one-time initial set-up fee of $500) for the RTRS Academic Data Product. The MSRB believes these fees are commercially reasonably as a means to help defray the additional legal and operational effort required for the MSRB to offer the RTRS Academic Data Product, while not overly burdening academic institutions.

B. Self-Regulatory Organization's Statement on Burden on Competition

Section 15B(b)(2)(C) of the Exchange Act [10] requires that MSRB rules not be designed to impose any burden on competition not necessary or appropriate in furtherance of the purposes of the Act. In determining whether these standards have been met, the MSRB was guided by the Board's Policy on the Use of Economic Analysis

[3] *See* Exchange Act Release No. 78826 (Sept. 13, 2016), 81 FR 64215 (Sept. 19, 2016) (SR–MSRB–2016–09) (''Approval Order'').

[4] *See id.* at 64216 (noting that the effective date of the RTRS Academic Data Product will be announced in a regulatory notice to be published no later than 90 days from the date of the Approval Order, and such effective date will be no later than 270 days following publication of the regulatory notice announcing Commission approval of the proposed rule change); MSRB Notice 2016–22 (Sept. 14, 2016).

[5] EMMA® is a registered trademark of the MSRB.

[6] Transactions in securities without CUSIP numbers, transactions in municipal fund securities and certain inter-dealer securities movements not eligible for comparison through a clearing agency are the only transactions exempt from the reporting requirements of Rule G–14.

[7] Academic institutions would be able to request the one-year data sets on a rolling basis, and any request that is not in a 12-month increment would be charged the full fee for an additional year.

[8] 15 U.S.C. 78*o*–4(b)(3)(B)(ii).

[9] *Id.*

[10] 15 U.S.C. 78*o*–4(b)(2)(C).

in MSRB Rulemaking. In accordance with this policy, the Board has evaluated the potential impacts on competition of the proposed rule change, including in comparison to reasonable alternative regulatory approaches, relative to the baseline. The MSRB also considered other economic impacts of the proposed rule change and has addressed comments relevant to these impacts in other sections of this document. The MSRB does not believe that the proposed rule change will impose any additional burdens on competition, relative to the baseline, that are not necessary or appropriate in furtherance of the purposes of the Act. The MSRB notes that the proposed rule change will apply equally to all academic institutions who choose to purchase the RTRS Academic Data Product.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

The MSRB received 13 comment letters in response to the request for comment that originally proposed the RTRS Academic Data Product.[11] As was proposed in the Request for Comment, the RTRS Academic Data Product would have been made available for a fee of $500 per calendar-year data set (with a one-time initial set-up fee of $500).[12] Only two of the commenters addressed the proposed fees.[13] Specifically, Harris commented that academics should either pay a reduced rate, when compared to the fee charged to industry participants and their various organizations and consultants, or be given access for free because, in his opinion, academics are often not paid to conduct their research while the public obtains a benefit from the research being conducted. ABFM stated that it believes the fee is reasonable. The MSRB notes that there is no occasion to provide the RTRS Academic Data Product at a discount, as it is available only to academic institutions. Further, the MSRB believes that the proposed fees, which are substantially less than the analogous fees for the historical transaction data sets,[14] are fair and reasonable given the expenses incurred to create and facilitate the product, and that the fees would not overly burden academic institutions.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

The foregoing proposed rule change has become effective pursuant to Section 19(b)(3)(A) of the Act[15] and paragraph (f) of Rule 19b–4 thereunder.[16] 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–MSRB–2016–14 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549.

All submissions should refer to File Number SR–MSRB–2016–14. 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 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the MSRB. 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–2016–14 and should be submitted on or before December 1, 2016.

For the Commission, pursuant to delegated authority.[17]

Brent J. Fields,

Secretary.

[FR Doc. 2016–27149 Filed 11–9–16; 8:45 am]

BILLING CODE 8011–01–P

[11] *See* MSRB Notice 2015–10 (July 16, 2015) (''Request for Comment'').

[12] The MSRB notes that the Request for Comment proposed the availability of the RTRS Academic Data Product in calendar-year data sets, but, as it does with other data products and as described above, the MSRB would make the RTRS Academic Data Product available on a rolling basis in one-year data sets.

[13] *See* letters from: Robert Kravchuk, *et al.,* Association for Budgeting and Financial Management (''ABFM''), dated September 13, 2015; and Lawrence Harris (''Harris''), Professor of Finance and Business Economics, University of Southern California, Marshall School of Business, dated September 6, 2015.

[14] The MSRB provides historical transaction data in one-year data sets for $2,500 per year and charges a one-time set-up fee of $2,000.

[15] 15 U.S.C. 78s(b)(3)(A).

[16] 17 CFR 240.19b–4(f).

[17] 17 CFR 200.30–3(a)(12).

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–79245; File No. SR–NSCC–2016–005)

Self-Regulatory Organizations; National Securities Clearing Corporation; Notice of Filing of Proposed Rule Change To Accelerate Its Trade Guaranty, Add New Clearing Fund Components, Enhance Its Intraday Risk Management, Provide for Loss Allocation of ''Off-the-Market Transactions,'' and Make Other Changes

November 4, 2016

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 October 25, 2016, National Securities Clearing Corporation (''NSCC'' or the ''Corporation'') 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 the clearing agency.[3] The

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] On October 25, 2016, NSCC filed this proposed rule change as an advance notice (SR–NSCC–2016–803) with the Commission pursuant to Section 806(e)(1) of the Dodd-Frank Wall Street Reform and Consumer Protection Act entitled the Payment, Clearing, and Settlement Supervision Act of 2010, 12 U.S.C. 5465(e)(1), and Rule 19b–4(n)(1)(i) of the

Continued

Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Clearing Agency's Statement of the Terms of Substance of the Proposed Rule Change

The proposed rule change consists of amendments to NSCC's Rules & Procedures (''Rules'')[4] in order to (i) accelerate NSCC's trade guaranty from midnight of one day after trade date (''T+1'') to the point of trade comparison and validation for bilateral submissions or to the point of trade validation for locked-in submissions, (ii) add three new components to the Clearing Fund formula and eliminate the current Specified Activity charge from the Clearing Fund formula, (iii) amend Procedure II to remove language that permits NSCC to delay processing and reporting for certain index receipt transactions, (iv) enhance NSCC's current intraday mark-to-market margin process and clarify the circumstances and criteria for its intraday risk management monitoring and intraday collections of mark-to-market margin, (v) introduce a new loss allocation provision for any trades that fall within the proposed definition of ''Off-the-Market Transactions'' and (vi) make a technical change to Procedure XV to remove the reference to ID Net Subscribers, as described below.

II. Clearing Agency's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the clearing agency 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 clearing agency has prepared summaries, set forth in sections A, B, and C below, of the most significant aspects of such statements.

(A) Clearing Agency's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

(i) Accelerate the NSCC Trade Guaranty

Pursuant to Addendum K of the Rules, NSCC currently guarantees the completion of trades that are cleared and settled through NSCC's Continuous Net Settlement (''CNS'')[5] system (''CNS trades'') and through its Balance Order Accounting Operation[6] (''Balance Order trades'') that have reached the later of midnight of T+1 or midnight of the day they are reported to Members.[7] NSCC proposes to amend its Rules in order to guarantee the completion of CNS trades and Balance Order trades upon comparison and validation for bilateral submissions to NSCC or upon validation for locked-in submissions to NSCC. Validation refers to the process whereby NSCC validates a locked-in trade, or compares and validates a bilateral trade, to confirm such trade has sufficient and correct information for clearance and settlement processing. For purposes of this description in the proposed rule change, the process of comparing and validating bilateral submissions and the process for validating locked-in submissions are collectively referred to as ''trade validation.''

NSCC has previously shortened the time at which its trade guaranty applied to trades in response to processing developments and risk management considerations and to follow industry settlement cycles.[8] Since implementation of the current trade guaranty policy, the marketplace has experienced significant change. The proposed accelerated trade guaranty and related proposed changes described herein would benefit the industry by mitigating counterparty risk and enhancing counterparties' ability to assess that risk by having NSCC become the central counterparty to CNS trades and by applying the trade guaranty to Balance Order trades at an earlier point in the settlement cycle.

The transfer of counterparty credit risk from Members to NSCC at an earlier point in the settlement cycle facilitates a shortened holding period of bilateral credit risk for counterparties by transferring the obligation onto NSCC, which is better equipped to manage that counterparty credit risk, including potential systemic impact, compared to the counterparties themselves.

In order to implement this proposed change, NSCC would amend Addendum K of its Rules[9] to provide that CNS trades and Balance Order trades would be guaranteed by NSCC at the point of trade validation.[10]

NSCC also proposes to clarify in Addendum K[11] that the guaranty of obligations arising out of the exercise or assignment of options that are settled at NSCC is not governed by Addendum K[12] but by a separate arrangement between NSCC and The Options Clearing Corporation, as referred to in Procedure III of the Rules.[13]

(ii) Proposed Enhancements to NSCC's Clearing Fund Formula

In conjunction with accelerating the trade guaranty, NSCC would enhance its Clearing Fund formula to address the risks posed by the expanded trade guaranty. Specifically, NSCC proposes to amend Procedure XV[14] (Clearing Fund Formula and Other Matters) to include three new components: The Margin Requirement Differential (''MRD''), the Coverage Component and the Intraday Backtesting Charge.

NSCC also proposes to add to Procedure XV[15] a description of the enhanced intraday mark-to-market component of the Clearing Fund formula that clarifies the circumstances and criteria for the assessment of an intraday mark-to-market call. In addition, NSCC proposes to delete the Specified Activity charge, a component of the Clearing Fund formula that mitigates shortened cycle risk (that is, the risk of the trade guaranty attaching prior to collection of daily Clearing Fund). This charge would no longer be necessary because the MRD would mitigate those same risks.

A more detailed description of the foregoing changes follows:

A. The Required Deposit and the Accelerated Trade Guaranty

NSCC collects Required Deposits from all Members as margin to protect NSCC against losses in the event of a Member's default. The objective of the Required Deposit is to mitigate potential losses to NSCC associated with liquidation of the Member's portfolio if NSCC ceases to act for a Member (hereinafter referred to as

Act, 17 CFR 240.19b–4(n)(1)(i). A copy of the advance notice is *available at http://www.dtcc.com/legal/sec-rule-filings.aspx.*

[4] Capitalized terms not defined herein are defined in the Rules, *available at http://dtcc.com/~/media/Files/Downloads/legal/rules/nscc_rules.pdf.*

[5] CNS and its operation are described in Rule 11 and Procedure VII.

[6] The Balance Order Accounting Operation is described in Rule 5 and Procedure V. NSCC does not become a counterparty to Balance Order trades, but it does provide a trade guaranty to the receive and deliver parties that remains effective through close of business on the originally scheduled settlement date.

[7] Today, shortened process trades, such as same-day and next-day settling trades, are already guaranteed upon comparison or trade recording processing.

[8] *See* Securities Exchange Act Release Nos. 44648 (August 2, 2001), 66 FR 42245 (August 10, 2001) (SR–NSCC–2001–11); 35442 (March 3, 1995), 60 FR 13197 (March 10, 1995) (SR–NSCC–95–02); 35807 (June 5, 1995), 60 FR 31177 (June 13, 1995) (SR–NSCC–95–03); and 27192 (August 29, 1989), 54 FR 37010 (approving SR–NSCC–87–04, SR–MCC–87–03, and SR–SCCP–87–03 until December 31, 1990).

[9] *Supra* note 4.

[10] The proposed accelerated trade guaranty would not apply to items not currently guaranteed today.

[11] *Supra* note 4.

[12] *Id.*

[13] *Id.*

[14] *Id.*

[15] *Id.*

a ''default''). NSCC determines Required Deposit amounts using a risk-based margin methodology that is intended to capture market price risk. The methodology uses historical market moves to project or forecast the potential gains or losses on the liquidation of a defaulting Member's portfolio, assuming that a portfolio would take three days to liquidate or hedge in normal market conditions. The projected liquidation gains or losses are used to determine the Member's Required Deposit, which is calculated to cover projected liquidation losses to be at or above a 99 percent confidence level (the ''Coverage Target''). The aggregate of all Members' Required Deposits constitutes NSCC's Clearing Fund, which NSCC would be able to access if a defaulting Member's own Required Deposit is insufficient to satisfy losses to NSCC caused by the liquidation of the Member's portfolio.

NSCC calculates and collects Required Deposits from Members daily. Each Member's daily Required Deposit is calculated based on the end-of-day positions from the prior day and is generally collected by 10:00 a.m. ET. NSCC's current trade guaranty does not generally attach to trades until midnight of T+1, after Required Deposits reflecting these trades have been collected. Therefore, Members' Required Deposits are generally sufficient to cover projected liquidation losses for guaranteed trades. However, under the accelerated trade guaranty proposal, NSCC's trade guaranty would attach to current-day trades immediately upon trade validation, before Required Deposits reflecting these trades have been collected (which NSCC refers to herein as the ''coverage gap'').[16] Therefore, Members' Required Deposits may not be sufficient to cover the projected liquidation losses of trades guaranteed by NSCC upon trade validation, and NSCC, absent the proposed Clearing Fund formula enhancements, could incur a loss associated with those trades if it ceases to act for a Member.

B. Addition of the MRD to the Clearing Fund Formula

The MRD is designed to help mitigate the risks posed to the Corporation by day-over-day fluctuations in a Member's portfolio by forecasting future changes in a Member's portfolio based on a historical look-back at each Member's portfolio over a given time period. A Member's portfolio may fluctuate significantly from one trading day to the next as the Member executes trades throughout the day. Currently, daily fluctuations in a Member's portfolio resulting from such trades do not pose any additional or different risk to NSCC because those trades are not guaranteed by NSCC until a Required Deposit reflecting such trades is collected by NSCC. However, under the accelerated trade guaranty proposal, trades would be guaranteed by NSCC upon trade validation and therefore may result in large un-margined intraday portfolio fluctuations during the coverage gap. The MRD would increase Members' Required Deposits by an amount calculated to cover forecasted fluctuations in Members' portfolios, based upon historical activity.

The MRD would be calculated and charged on a daily basis as a part of each Member's Required Deposit and consists of two components: The ''MRD VaR'' and the ''MRD MTM.'' The MRD VaR looks at historical day-over-day positive changes in the start of day (''SOD'') volatility component of a Member's Required Deposit[17] (''Volatility Charge'') over a 100-day look-back period and would be calculated to equal the exponentially weighted moving average (''EWMA'') of such changes to the Member's Volatility Charge during the look-back period. The MRD MTM looks at historical day-over-day increases to the SOD mark-to-market component of a Member's Required Deposit[18] over a 100-day look-back period and would be calculated to equal the EWMA of such changes to the Member's SOD mark-to-market component during the look-back period. The MRD is calculated to equal the sum of MRD VaR and MRD MTM times a multiplier calibrated based on backtesting results. NSCC has determined that a 100-day look-back period would provide it with a sufficient time series to reflect current market conditions.

By addressing the day-over-day changes to each Member's SOD Volatility Charge and SOD mark-to-market component, the MRD would help mitigate the risks posed to the Corporation by un-margined day-over-day fluctuations to a Member's portfolio resulting from intraday trading activity that would be guaranteed during the coverage gap.

C. Addition of the Coverage Component to the Clearing Fund Formula

The ''Coverage Component'' is designed to mitigate the risks associated with a Member's Required Deposit being insufficient to cover projected liquidation losses to the Coverage Target by adjusting a Member's Required Deposit towards the Coverage Target. The Corporation would face increased exposure to a Member's un-margined portfolio as a result of the proposed accelerated trade guaranty and would have an increased need to have each Member's Required Deposit meet the Coverage Target. The Coverage Component would supplement the MRD by preemptively increasing a Member's Required Deposit in an amount calculated to forecast potential deficiencies in the margin coverage of a Member's guaranteed portfolio. The preemptive nature of the Coverage Component differentiates it from the Regular Backtesting Charge and the Intraday Backtesting Charge, both of which are reactive measures to increase the Member's Required Deposit to above the Coverage Target.

The Coverage Component would be calculated and charged on a daily basis as a part of each Member's Required Deposit. To calculate the Coverage Component, NSCC would compare the simulated liquidation profit and loss of a Member's portfolio, using the actual positions in the Member's portfolio and the actual historical returns on the security positions in the portfolio, against the sum of each of the following components of the Clearing Fund formula: The Volatility Charge, the MRD, the Illiquid Charge and the Market Maker domination charge (collectively, the ''Market Risk Components''), to determine if there were any deficiencies between the amounts collected by these components and the simulated profit and loss of the Member's portfolio that would have been realized had it been liquidated during a 100-day look-back period. NSCC would then determine a daily ''peak deficiency'' amount for each Member equal to the maximum deficiency over a rolling 10 business day period for the preceding 100 days. The Coverage Component would be calculated to equal the EWMA of the peak deficiencies over the 100-day look-back period.

In working to bring each Member's Required Deposit towards the Coverage Target by preemptively collecting an

[16] The coverage gap is the period between the time that NSCC would guarantee a trade and the time that NSCC would collect additional margin to cover such trade.

[17] The volatility component of the Clearing Fund formula for CNS trades and Balance Order trades is described in Procedure XV, Sections I.(A)(1)(a) and I.(A)(2)(a), respectively.

[18] The SOD mark-to-market component of the Clearing Fund formula for CNS trades consists of Regular Mark-to-Market and ID Net Mark-to-Market, which are described in Procedure XV, Sections I.(A)(1)(b) and I.(A)(1)(c), respectively. The SOD mark-to-market component of the Clearing Fund formula for Balance Order trades is described in Procedure XV, Section I.(A)(2)(b).

amount designed to cover projected liquidation profit and loss of a Member's portfolio, including the trades guaranteed during the coverage gap, NSCC would further mitigate the risks posed to it by the proposed accelerated trade guaranty.

D. Addition of the Intraday Backtesting Charge to the Clearing Fund Formula

NSCC employs daily backtesting to determine the adequacy of each Member's Required Deposit. NSCC compares the Required Deposit [19] for each Member with the simulated liquidation profit and loss using the actual positions in the Member's portfolio and the actual historical returns on the security positions in the portfolio. NSCC investigates the cause(s) of any backtesting deficiencies. As a part of this investigation, NSCC pays particular attention to Members with backtesting deficiencies that bring the results for that Member below the Coverage Target to determine if there is an identifiable cause of repeat backtesting deficiencies. NSCC also evaluates whether multiple Members experience backtesting deficiencies for the same underlying reason. Upon implementation of the accelerated trade guaranty, NSCC would employ a similar backtesting process on an intraday basis to determine the adequacy of each Member's Required Deposit. However, instead of backtesting a Member's Required Deposit against the Member's SOD portfolio, NSCC would use portfolios from two intraday time slices.[20]

1. Calculation of the Intraday Backtesting Charge

The objective of the Intraday Backtesting Charge is to increase Required Deposits for Members that are likely to experience intraday backtesting deficiencies on the basis described above by an amount sufficient to maintain such Member's intraday backtesting coverage above the Coverage Target. Members that maintain consistent end of day positions but have a high level of intraday trading activity pose risk to NSCC if they were to default intraday.

Because the intraday trading activity and size of the intraday backtesting deficiencies vary among impacted Members, NSCC must assess an Intraday Backtesting Charge that is specific to each impacted Member. To do so, NSCC examines each impacted Member's historical intraday backtesting deficiencies observed over the prior 12-month period to identify the five largest intraday backtesting deficiencies that have occurred during that time. The presumptive Intraday Backtesting Charge amount would equal that Member's fifth largest historical intraday backtesting deficiency, subject to adjustment as further described below. NSCC believes that applying an additional margin charge equal to the fifth largest historical intraday backtesting deficiency to a Member's Required Deposit would have brought the Member's historically observed intraday backtesting coverage above the Coverage Target.[21]

The Intraday Backtesting Charge would only be applicable to those Members whose overall 12-month trailing intraday backtesting coverage falls below the Coverage Target.

Although the fifth largest historical backtesting deficiency for a Member would be used as the Intraday Backtesting Charge in most cases, NSCC would retain discretion to adjust the charge amount based on other circumstances that might be relevant for assessing whether an impacted Member is likely to experience future backtesting deficiencies and the estimated size of such deficiencies. Examples of relevant circumstances that could be considered by NSCC in calculating the final, applicable Intraday Backtesting Charge amount include material differences among the Member's five largest intraday backtesting deficiencies observed over the prior 12-month period, variability in the net settlement activity after the collection of the Member's Required Deposit and observed market price volatility in excess of the Member's historical Volatility Charge. Based on NSCC's assessment of the impact of these circumstances on the likelihood, and estimated size, of future intraday backtesting deficiencies for a Member, NSCC may, in its discretion, adjust the Intraday Backtesting Charge for such Member in an amount that NSCC determines to be more appropriate for maintaining such Member's intraday backtesting results above the Coverage Target.

The resulting Intraday Backtesting Charge would be added to the Required Deposit for such Member and would be imposed on a daily basis for a one-month period.

In order to differentiate the Backtesting Charge assessed on the start of the day portfolio from the Backtesting Charge assessed on an intraday basis, NSCC would amend the Rules by adding a defined term ''Regular Backtesting Charge'' to Procedure XV, Section I.(B)(3).[22]

2. Communication With Members and Imposition of the Intraday Backtesting Charge

If NSCC determines that an Intraday Backtesting Charge should apply to a Member who was not assessed an Intraday Backtesting Charge during the immediately preceding month or that the Intraday Backtesting Charge applied to a Member during the previous month should be increased, NSCC would notify the Member on or around the 25th calendar day of the month prior to the assessment of the Intraday Backtesting Charge or prior to the increase to the Intraday Backtesting Charge, as applicable, if not earlier.

NSCC would impose the Intraday Backtesting Charge as an additional charge applied to each impacted Member's Required Deposit on a daily basis for a one-month period and would review each applied Intraday Backtesting Charge each month. If an impacted Member's trailing 12-month intraday backtesting coverage exceeds the Coverage Target (without taking into account historically imposed Intraday Backtesting Charges), the Intraday Backtesting Charge would be removed.

E. Removal of the Specified Activity Charge From the Clearing Fund Formula

Currently, NSCC collects a Specified Activity charge, which is designed to cover the risk posed to NSCC by transactions that settle on a shortened cycle.[23] Such transactions pose an increased risk to NSCC because these trades settle on a shortened settlement cycle and may be guaranteed by NSCC prior to the collection of margin on them. The Specified Activity charge currently mitigates this risk by increasing the Required Deposit for a Member in relation to the number of Specified Activity trades submitted by the Member to NSCC over a 100-day look-back period. However, the risk posed to NSCC by Specified Activity

[19] For backtesting comparisons, NSCC uses the Required Deposit amount without regard to the actual collateral posted by the Member.

[20] Intraday time slices are subject to change based upon market conditions and would include the positions from SOD plus any additional positions up to that time.

[21] Intraday backtesting would include 500 observations per year (twice per day over 250 observation days). Each occurrence of a backtesting deficiency would reduce a Member's overall backtesting coverage by 0.2 percent (1 exception/500 observations). Accordingly, an Intraday Backtesting Charge equal to the fifth largest backtesting deficiency would have brought backtesting coverage up to 99.2 percent.

[22] *Supra* note 4.

[23] Examples of these trades can include next day settling trades, same day settling trades, cash trades or sellers' options.

would no longer be unique to such trade activity—the proposed accelerated trade guaranty would result in a similar risk to NSCC. The addition of the MRD and Coverage Components to the Clearing Fund formula would mitigate the risks posed by trades guaranteed by NSCC prior to the collection of margin on those trades. As a result, NSCC proposes to eliminate the Specified Activity charge because imposing a separate Specified Activity charge would no longer be necessary once the MRD and Coverage Components are added to the Clearing Fund formula.

F. Enhanced Intraday Mark-to-Market Margining

NSCC proposes to enhance its current intraday margining to further mitigate the intraday coverage gap risk that may be introduced to the Corporation as a result of the proposed accelerated trade guaranty. By way of background, NSCC currently collects a SOD mark-to-market margin, which is designed to mitigate the risk arising out of the value change between the contract/settlement value of a Member's open positions and the current market value, as part of its Clearing Fund formula. A Member's SOD mark-to-market margin is calculated and collected as part of a Member's daily Required Deposit based on the Member's prior end-of-day positions. The SOD mark-to-market component of the daily Required Deposit is calculated to cover a Member's exposure due to market moves and/or trading and settlement activity by bringing the portfolio of open positions up to the current market value. However, because the SOD mark-to-market component is calculated only once daily using the prior end-of-day positions and prices, it will not cover a Member's exposure arising out of any intraday changes to position and market value in a Member's portfolio. Accordingly, NSCC currently collects intraday mark-to-market margin from Members to cover additional risk exposure arising out of intraday position and market value changes to the Member's portfolio if the additional risks are sufficiently large to warrant the collection of an intraday margin.

NSCC has determined that it is not necessary to collect intraday margin from every Member that experiences an intraday mark-to-market change because the Volatility Charge already collected as part of Members' daily Required Deposits is calculated to cover projected changes in the contract/settlement value of a Member's portfolio and likely cover intraday changes to a Member's portfolio. However, in certain instances, Members may have intraday mark-to-market changes that are significant enough that NSCC is exposed to an increased risk of loss as a result of such Member's intraday activities. In particular, NSCC measures each Member's intraday mark-to-market exposure against the Volatility Charge. NSCC collects an intraday mark-to-market amount from any Member that has an intraday mark-to-market exposure that meets or exceeds a threshold percentage as compared to the Member's Volatility Charge. NSCC believes that such Members pose an increased risk of loss to the Corporation because the coverage provided by the Volatility Charge, which is designed to cover estimated losses to a portfolio over a specified time period, would be exhausted by an intraday mark-to-market exposure so large that the Member's Required Deposit would potentially be unable to absorb further intraday losses to the Member's portfolio.

In order to further mitigate the risk posed to NSCC by the proposed accelerated trade guaranty, NSCC is proposing to enhance its collection of intraday mark-to-market margin. NSCC would impose the intraday mark-to-market margin amount at a lower threshold. Currently, NSCC makes an intraday mark-to-market margin call if a Member's intraday mark-to-market exposure meets or exceeds 100 percent of such Member's Volatility Charge; however, such threshold may be reduced by NSCC during volatile market conditions. With this proposal, NSCC would make an intraday margin call if a Member's intraday mark-to-market exposure meets or exceeds 80 percent of such Member's Volatility Charge, where such threshold may still be reduced by NSCC during volatile market conditions. This proposed change would serve to collect intraday margin earlier and more proactively preserve the coverage provided by a Member's Volatility Charge and Required Deposit.

In addition, NSCC would monitor intraday changes to Member's mark-to-market exposure at regular intervals to further mitigate the risk posed to NSCC by the accelerated trade guaranty. By doing so, NSCC would be able to make intraday margin calls more frequently to those Members whose intraday mark-to-market exposures exceed the Volatility Charge threshold. Enhancing the collection of the intraday mark-to-market amount so that it occurs earlier and more frequently would allow NSCC to reduce the amount of uncovered risk during the coverage gap and would therefore further mitigate the risk posed to the Corporation by the accelerated trade guaranty.

NSCC proposes to amend Procedure XV to include a description of the enhanced intraday mark-to-market margin charge that clarifies the circumstances and criteria for the assessment of an intraday mark-to-market call. This would ensure that Members are aware that the Corporation regularly monitors and considers intraday mark-to-market as part of its regular Clearing Fund formula.

G. Adjustments to the Calculation of the Excess Capital Premium Component

The Excess Capital Premium [24] is designed to address spikes in a Member's Required Deposit based upon any one day of activity. It is not designed to provide additional Required Deposits over an extended period of time. Currently, the Excess Capital Premium for a Member is calculated based upon the Member's Clearing Fund Required Deposit and the Member's excess net capital. With the addition of the MRD and the Coverage Component, NSCC proposes to exclude these charges from the calculation of the Excess Capital Premium. The MRD and the Coverage Component all utilize a historical look-back period, which accounts for the risk of such activity well after the relevant trades have settled. Risks related to such trades would be reflected in increased amounts assessed for these components over the subsequent time periods. If these components are included in the calculation of the Excess Capital Premium, especially during periods following an increase in activity, then the increased MRD and Coverage Component could lead to more frequent Excess Capital Premium charges over an extended period of time. This is not the intended purpose of the Excess Capital Premium and could place an unnecessary burden on Members.

(iii) Proposed Changes to Procedure II (Trade Comparison and Recording Service)

Next day settling index receipts may be guaranteed prior to the collection of margin reflecting such trades and thus carry a very similar risk as Specified Activity trades described above. More specifically, because these trades are settled on the day after they are received and validated by NSCC, NSCC currently attaches its guaranty to them at the time of validation, prior to the collection of a Required Deposit that reflects such trades. Unlike the risk from Specified

[24] The Excess Capital Premium is a charge imposed on a Member when the Member's Required Deposit exceeds its excess net capital, as described in Procedure XV.

Activity trades, which is mitigated by the Specified Activity charge, the risk for next day settling index receipts is currently mitigated by permitting NSCC to delay the processing and reporting of these trades if a Member's Required Deposit is not paid on time. However, like the risk associated with Specified Activity, under the proposed rule change, this risk would generally be mitigated by the addition of the MRD and the Coverage Component. Therefore, NSCC proposes to amend Procedure II [25] (Trade Comparison and Recording Service) to remove the language that permits NSCC to delay the processing and reporting of next day settling index receipts until the applicable margin on these transactions is paid.

(iv) Loss Allocation Provision for Off-the-Market Transactions

NSCC proposes to introduce a new loss allocation provision for any trades that fall within the proposed definition of ''Off-the-Market Transactions'' in order to limit NSCC's exposure to certain trades that have a price that differs significantly from the prevailing market price for the underlying security at the time the trade is executed. This provision would apply in the event that NSCC ceases to act for a Member that engaged in Off-the-Market Transactions and only to the extent that NSCC incurs a net loss in the liquidation of such Transactions.[26]

NSCC would define ''Off-the-Market Transactions'' as either a single transaction or a series of transactions settled within the same cycle with greater than $1 million in gross proceeds and either higher or lower than the most recently observed market price by a percentage amount based on market conditions and factors that impact trading behavior of the underlying security, including volatility, liquidity and other characteristics of such security.

The proposed rule change would establish the loss allocation for Off-the-Market Transactions. NSCC would allocate any losses to NSCC resulting from the liquidation of any guaranteed, open Off-the-Market Transaction of a defaulted Member directly and entirely to the surviving counterparty to that transaction. Losses would be allocated to counterparties in proportion to their specific Off-the-Market Transaction gain and would be allocated only to the extent of NSCC's loss; however, no allocation shall be made if the defaulted Member has satisfied all requisite intraday mark-to-market margin assessed by NSCC with respect to the Off-the-Market Transaction.[27]

This proposed change would allow NSCC to mitigate the risk of loss associated with guaranteeing these Off-the-Market Transactions. The proposal recognizes that applying the accelerated trade guaranty to transactions whose price significantly differs from the most recently observed market price could inappropriately increase the loss that NSCC may incur if a Member that has engaged in Off-the-Market Transactions defaults and its open, guaranteed positions are liquidated. Members not involved in Off-the-Market Transactions, or not involved in Off-the-Market Transactions that result in losses to NSCC, would not be included in this process. This exclusion would apply only to losses that are attributable to Off-the-Market Transactions and would not exclude Members from other obligations that may result from any loss or liabilities incurred by NSCC from a Member default.

In order to implement this proposed change, NSCC would amend Rule 4 [28] (Clearing Fund) to provide that, if a loss or liability of NSCC is determined by NSCC to arise in connection with the liquidation of any Off-the-Market Transactions, such loss or liability would be allocated directly to the surviving counterparty to the Off-the-Market Transaction that submitted the transaction to NSCC for clearing. NSCC would also amend Rule 1 [29] (Definitions and Descriptions) to include a definition of Off-the-Market Transactions.

(v) Technical Proposed Rule Change

NSCC is proposing a change to Procedure XV [30] to clarify the calculation of the Regular Mark-to-Market component for CNS transactions. NSCC's historical and current policy for the calculation of any mark-to-market component of the Clearing Fund calculation for CNS trades and Balance Order trades is that where a credit is derived from a Member's mark-to-market calculation, the value of the calculation is adjusted to zero. When NSCC implemented the ID Net service,[31] a provision was added to Procedure XV [32] that explicitly stated this policy as it relates to CNS transactions of subscribers to the ID Net service. This change inadvertently created an implication that the calculation of Regular Mark-to-Market credit for Members who were not ID Net Subscribers would not be set to zero. NSCC is proposing to revise the applicable provision to remove the reference to ID Net Subscribers.

(vi) Member Outreach

Over the past several years, NSCC has conducted outreach with its Members with respect to impact on their Clearing Fund Required Deposits as a result of this proposal. This includes the publication of the 2013 whitepaper, ''Enhancing Risk Management: Important Upcoming Changes From NSCC'', as well as individual impact studies provided to each Member showing the anticipated impact on the Member's Clearing Fund Required Deposit based on their historical portfolios.

Implementation Timeframe

Pending Commission approval, Members would be advised of the implementation date of this proposal through issuance of an NSCC Important Notice. NSCC expects to run the proposed changes in a test environment for a parallel period of at least three months prior to implementation. Details and dates regarding such test period would be communicated to Members through an NSCC Important Notice.

2. Statutory Basis

Section 17A(b)(3)(F) of the Act requires, in part, that NSCC's Rules be designed to promote the prompt and accurate clearance and settlement of securities transactions, to assure the safeguarding of securities and funds which are in the custody and control of NSCC or for which it is responsible and to protect investors and the public interest.[33]

The proposal to accelerate the time that NSCC's trade guaranty attaches to trades submitted to it for clearing has been designed to promote the prompt and accurate clearance and settlement of

[25] *Supra* note 4.

[26] A net loss on liquidation of the Off-the-Market Transaction means that the loss on liquidation of the Member's portfolio exceeds the collected Required Deposit of the Member and such loss is attributed to the Off-the-Market Transaction. Such loss would be allocated directly and entirely to the Member that submitted the Off-the-Market Transaction, or on whose behalf the Off-the-Market Transaction was submitted, to NSCC; however, no allocation would be made if such Member has satisfied all applicable intraday mark-to-market margin charges assessed by NSCC with respect to the Off-the-Market Transaction.

[27] A Member's Off-the-Market Transaction that has been marked to market is, by definition, no longer an Off-the-Market Transaction when the mark-to-market component of the Member's Required Deposit is satisfied.

[28] *Supra* note 4.

[29] *Id.*

[30] *Id.*

[31] NSCC's ID Net service is defined further in Rule 65. Rules, *supra* note 4. *See* Securities Exchange Act Release No. 57901 (June 2, 2008), 73 FR 32373 (June 6, 2008) (SR–NSCC–2007–14).

[32] *Supra* note 4.

[33] 15 U.S.C. 78q–1(b)(3)(F).

securities transactions in furtherance of the Act. Specifically, NSCC would provide a trade guaranty to CNS trades and Balance Order trades at an earlier point in the settlement cycle. The proposed accelerated guaranty would mitigate counterparty risk and would enhance Members' ability to assess that risk by having NSCC become the central counterparty to CNS trades and by applying the trade guaranty to Balance Order trades at an earlier point in the settlement cycle. Therefore, NSCC believes the proposed accelerated guaranty promotes the prompt and accurate clearance and settlement of securities transactions, consistent with Section 17A(b)(3)(F) of the Act.[34]

The proposed rule changes to (i) add the new components to the Clearing Fund formula, (ii) enhance the intraday mark-to-market margin process and (iii) remove provisions regarding the Specified Activity charge and the provisions that permit NSCC to delay processing and reporting for certain index receipt transactions (all as described in detail above) have been designed to assure the safeguarding of securities and funds in the custody and control of NSCC or for which it is responsible in furtherance of the Act. Specifically, the proposals in (i) and (ii) would allow NSCC to appropriately collect additional margin to mitigate the exposure presented to NSCC by the accelerated trade guaranty, providing NSCC with the ability to safeguard the funds and securities for which it is responsible by enabling it to collect adequate collateral to cover its additional exposures. By enhancing the Clearing Fund formula, the proposals in (i) and (ii) would also reduce the risk of loss mutualization to Members because the enhanced margin collected from each Member would help NSCC limit its exposure to potential losses from defaults by its participants under normal market conditions and minimize potential losses to NSCC and its non-defaulting Members. The proposed rule changes in (iii) would eliminate provisions that would no longer be needed to mitigate risk because the risk they currently address would be addressed by the new components proposed to be introduced to the Clearing Fund formula, as discussed in detail above. Therefore, NSCC believes the proposed rule changes in (i), (ii) and (iii) assures the safeguarding of securities and funds which are in the custody and control of NSCC or for which it is responsible, consistent with Section 17A(b)(3)(F) of the Act.[35]

The proposed rule change to introduce a new loss allocation provision for any trades that fall within the proposed definition of Off-the-Market Transactions would help NSCC to limit its exposure to certain trades that have a price that differs significantly from the most recently observed market price for the underlying security. Therefore, the reduction of NSCC's exposure to Off-the-Market Transactions would assist NSCC in responding to a Member default and would minimize potential losses to NSCC and its non-defaulting Members. As such, this proposed rule change is designed to assure the safeguarding of securities and funds that are in the custody and control of NSCC or for which it is responsible, consistent with Section 17A(b)(3)(F) of the Act.[36]

Also, the proposed technical change to the calculation of the Regular Mark-to-Market component for CNS transactions would provide additional clarity to NSCC Members and would ensure the Rules accurately reflect that Regular Mark-to-Market credit for all NSCC Members would be set to zero. Therefore, NSCC believes the proposed technical change would protect investors and the public interest, consistent with the requirements of Section 17A(b)(3)(F) of the Act.[37]

NSCC believes that the proposal is also consistent with Rules 17Ad–22(b)(1) and (b)(2), promulgated under the Act. Rule 17Ad–22(b)(1) requires NSCC to establish, implement, maintain and enforce written policies and procedures reasonably designed to measure its credit exposures to its participants at least once a day and limit its exposures to potential losses from defaults by its participants under normal market conditions so that the operations of NSCC would not be disrupted and non-defaulting participants would not be exposed to losses that they cannot anticipate or control.[38] NSCC's proposal to expand its current intraday margin collection to include (a) the collection of intraday mark-to-market margin at a lower threshold and (b) the collection of the Intraday Backtesting Charge would further enhance its intraday monitoring and its ability to measure credit exposures at least once a day. The proposal to enhance the amount of margin collected from each Member would help NSCC to limit its exposure to potential losses from defaults by its participants under normal market conditions and reduce risk of loss mutualization to the NSCC membership. Similarly, the proposal to introduce a new loss allocation provision for Off-the-Market Transactions would also help NSCC to limit its exposure to potential losses from defaults by its participants under normal market conditions. Therefore, NSCC believes the proposals are consistent with the requirements of Rule 17Ad–22(b)(1), promulgated under the Act, cited above.

Rule 17Ad–22(b)(2) requires NSCC to establish, implement, maintain and enforce written policies and procedures reasonably designed to ''use margin requirements to limit its credit exposures to participants under normal market conditions and use risk-based models and parameters to set margin requirements.'' [39] The proposal to add the MRD, the Coverage Component and the Intraday Backtesting Charge to the Clearing Fund formula and to collect intraday mark-to-market margin at a lower threshold in order to mitigate the exposure presented to NSCC by the accelerated trade guaranty would enable NSCC to enhance its margin requirements to better limit its credit exposures to participants under normal market conditions. Therefore, NSCC believes the proposed changes are consistent with the requirements of Rule 17Ad–22(b)(2), promulgated under the Act, cited above.

The proposed changes to NSCC's Clearing Fund formula and the intraday margin process are also designed to be consistent with Rules 17Ad–22(e)(4) and (e)(6) of the Act, which were recently adopted by the Commission.[40] Rule 17Ad–22(e)(4) will require NSCC to establish, implement, maintain and enforce written policies and procedures reasonably designed to effectively identify, measure, monitor, and manage its credit exposures to participants and those exposures arising from its payment, clearing, and settlement processes.[41] NSCC's proposal to expand its current intraday margin collection to include (a) the collection of intraday mark-to-market margin at a lower threshold and (b) the collection of the Intraday Backtesting Charge would enhance its ability to identify, measure,

[34] *Id.*

[35] *Id.*

[36] *Id.*

[37] *Id.*

[38] 17 CFR 240.17Ad–22(b)(1).

[39] 17 CFR 240.17Ad–22(b)(2).

[40] The Commission adopted amendments to Rule 17Ad–22, including the addition of new section 17Ad–22(e), on September 28, 2016. *See* Securities Exchange Act Release No. 78961 (September 28, 2016), 81 FR 70786 (October 13, 2016) (S7–03–14). The amendments to Rule 17Ad–22 become effective on December 12, 2016. *Id.* NSCC is a ''covered clearing agency'' as defined in Rule 17Ad–22(a)(5) and must comply with new section (e) of Rule 17Ad–22 by April 11, 2017. *Id.*

[41] *See* Securities Exchange Act Release No. 78961 (September 28, 2016), 81 FR 70786 (October 13, 2016) (S7–03–14).

monitor and manage its credit exposures to participants. The proposal to enhance the amount of margin NSCC collected from each Member and to introduce a new loss allocation provision for Off-the-Market Transactions would further help NSCC to manage its credit exposures to participants and those exposures arising from its payment, clearing, and settlement processes. Therefore, NSCC believes these proposals are consistent with the requirements of Rule 17Ad–22(e)(4), promulgated under the Act, cited above.

Rule 17Ad–22(e)(6) will require NSCC to establish, implement, maintain and enforce written policies and procedures reasonably designed to cover its credit exposures to its participants by establishing a risk-based margin system that is monitored by management on an ongoing basis and regularly reviewed, tested, and verified.[42] The proposal to add the MRD, the Coverage Component and the Intraday Backtesting Charge to the Clearing Fund formula and to collect intraday mark-to-market margin at a lower threshold would help NSCC to cover its credit exposures to its participants by establishing a risk-based margin system that is monitored by management on an ongoing basis and regularly reviewed, tested, and verified. Therefore, NSCC believes this proposal is consistent with the requirements of Rule 17Ad–22(e)(6), promulgated under the Act, cited above.

(B) Clearing Agency's Statement on Burden on Competition

NSCC does not believe that the proposed rule changes associated with the acceleration of NSCC's guaranty would impose any burden on competition but, because these proposed changes would pose additional risks to NSCC, NSCC has also proposed to (i) add the new components to the NSCC Clearing Fund formula and (ii) enhance the intraday mark-to-market margin process; however, NSCC does not believe these proposed rule changes would impose any burden on competition that is not necessary and appropriate[43] because the additional margin charges assessed on Members are needed to limit the additional exposure to NSCC of potential losses from defaults by Members as a result of guaranteeing trades at an earlier point in the settlement cycle and are commensurate with the risk presented by the trades Members submitted to NSCC for clearing.

Additionally, NSCC has proposed to introduce a new loss allocation provision for any trades that fall within the proposed definition of Off-the-Market Transactions; however, NSCC also does not believe that this proposed change would impose any burden on competition that is not necessary or appropriate[44] because the new loss allocation provision would allow NSCC to mitigate the risk of loss associated with guaranteeing the Off-the-Market Transactions and would apply to Members in proportion to their specific Off-the-Market Transaction gain and only to the extent of NSCC's loss.

Based on the foregoing, NSCC does not believe the proposed rule changes would impose any burden on competition that is not necessary and appropriate.[45]

(C) Clearing Agency's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

NSCC has not received any written comments relating to this proposed rule change. NSCC will notify the Commission of any written comments it receives.

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 such proposed rule change, or

(B) institute proceedings to determine whether the proposed rule change should be disapproved.

The proposal shall not take effect until all regulatory actions required with respect to the proposal are completed.

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–NSCC–2016–005 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549.

All submissions should refer to File Number SR–NSCC–2016–005. 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 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of NSCC and on DTCC's Web site (*http://dtcc.com/legal/sec-rule-filings.aspx*). 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–NSCC–2016–005 and should be submitted on or before December 1, 2016.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[46]

Brent J. Fields,

Secretary.

[FR Doc. 2016–27154 Filed 11–9–16; 8:45 am]

BILLING CODE 8011–01–P

[42] *Id.*

[43] 15 U.S.C. 78q–1(b)(3)(I).

[44] *Id.*

[45] *Id.*

[46] 17 CFR 200.30–3(a)(12).

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–79246; File No. SR–MIAX–2016–41]

Self-Regulatory Organizations; Miami International Securities Exchange LLC; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change To Amend Its Fee Schedule

November 4, 2016.

Pursuant to the provisions of 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 October 27, 2016, Miami International Securities Exchange LLC (''MIAX'' or ''Exchange'') filed with the Securities and Exchange Commission (''Commission'') a proposed rule change as described in Items I, II, and III below, which Items have been prepared by the Exchange. 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 is filing a proposal to amend the MIAX Options Fee Schedule (the ''Fee Schedule'') to delete rule text concerning certain transaction fees of limited duration that expire on October 31, 2016.

The text of the proposed rule change is available on the Exchange's Web site at *http://www.miaxoptions.com/filter/wotitle/rule_filing,* at MIAX'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 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 Exchange has prepared summaries, set forth in sections A, B, and C below, of the most significant aspects of such statements.

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

The Exchange is proposing to delete rule text concerning certain transaction fees of limited duration that expire on October 31, 2016. Since the Exchange is not proposing to extend the duration of such fees, the fees automatically expire and the associated rule text becomes obsolete after October 31, 2016. There are three (3) limited duration transaction fees that are expiring on October 31, 2016. The first such fee is the $0.12 per contract Posted Liquidity Marketing Fee (described below) applicable to options overlying EEM, GLD, IWM, QQQ and SPY (the ''designated symbols''), as listed in the Fee Schedule. The second such fee is the $0.50 per contract transaction fee applicable to orders executed for the account of non-MIAX market makers in options overlying the designated symbols. The third such fee is the discounted $0.48 per contract transaction fee applicable to orders executed for the account of non-MIAX market makers in options overlying the designated symbols applicable to any Member or its Affiliate that qualifies for the Priority Customer Rebate Program (''PCRP'') Volume Tier 3 or Higher, as discussed below.

First, Marketing Fees are currently assessed on certain transactions of all MIAX Market Makers.[3] Currently, Section (1)(b) of the Fee Schedule provides that the Exchange will assess a Marketing Fee to all Market Makers for contracts, including mini options, they execute in their assigned classes in simple or complex order executions when the contra-party to the execution is a Priority Customer. The Marketing Fee in complex order executions will be assessed per contract (whether the transaction executes in a strategy match, complex auction, or by legging into the Book). MIAX does not assess a Marketing Fee to Market Makers for contracts executed as a PRIME Agency Order, Contra-side Order, Qualified Contingent Cross Order, PRIME Participating Quote or Order, or a PRIME AOC Response in the PRIME Auction, unless it executes against an unrelated order.

The Exchange also currently assesses, for a limited duration (for transactions that occur on or after September 1, 2016 and extending through October 31, 2016), in simple order executions, an additional $0.12 per contract Posted Liquidity Marketing Fee to all Market Makers for any standard options overlying the designated symbols that Market Makers execute in their assigned class when the contra-party to the execution is a Priority Customer and the Priority Customer order was posted on the MIAX Book at the time of the execution.[4] Since the Exchange is not proposing to extend the duration of the additional $0.12 per contract fee, such fee automatically expires and the associated rule text becomes obsolete after October 31, 2016. Accordingly, the Exchange is deleting the associated rule text regarding the Posted Liquidity Marketing Fee in Section (1)(b) and footnote 15. As a result of the deletion of footnote 15, all subsequent footnotes in Fee Schedule have been renumbered.

Second, the Exchange currently assesses transaction fees on Members for orders that are executed for the account of non-MIAX market makers.[5] Currently, Section (1)(a)(ii) of the Fee Schedule provides that the Exchange will assess a $0.47 per contract transaction fee for simple and complex order executions for the account of non-MIAX market makers in standard options that are in the Penny Pilot Program.[6] However, for a limited duration (for transactions that occur on or after September 1, 2016 and extending through October 31, 2016), for any standard options overlying the designated symbols, the Exchange assesses a $0.50 per contract transaction fee (in lieu of the $0.47 per contract transaction fee) for simple order executions for the account of non-MIAX market makers in standard options that are in the Penny Pilot Program. Since the Exchange is not proposing to extend the duration of the $0.50 per contract transaction fee, such fee automatically expires and the associated rule text becomes obsolete after October 31, 2016. Accordingly, the Exchange is deleting the associated rule text in footnote 8 to the Fee Schedule. If, however, a Member or its Affiliate qualifies for the PCRP Volume Tier 3 or Higher, such Member is currently assessed a

[3] *See* Fee Schedule, Section (1)(b), entitled ''Marketing Fee'' for more detail regarding the Marketing Fee.

[4] For a complete description of the Posted Liquidity Marketing Fee, *see* Securities Exchange Act Release No. 73848 (December 16, 2014), 79 FR 76421 (December 22, 2014) (SR–MIAX–2014–62); *see also* Securities Exchange Act Release No. 78781 (September 7, 2016), 81 FR 62942 (September 13, 2016) (SR–MIAX–2016–30).

[5] A non-MIAX market maker is a market maker registered as such on another options exchange. *See* the table under Section (1)(a)(ii) of the Fee Schedule.

[6] *See* Securities Exchange Act Release No. 72988 (September 4, 2014), 79 FR 53808 (September 10, 2014) (SR–MIAX–2014–46).

discounted transaction fee. Pursuant to footnote 8 of the Fee Schedule, for a Member in the PCRP, the Exchange will assess a $0.45 per contract transaction fee for simple and complex order executions for the account of non-MIAX market makers in standard options that are in the Penny Pilot Program. However, for a limited duration (for transactions that occur on or after September 1, 2016 and extending through October 31, 2016), for any standard options overlying the designated symbols, the Exchange assesses a $0.48 per contract transaction fee (in lieu of the $0.45 per contract transaction fee) for simple order executions for the account of non-MIAX market makers in standard options that are in the Penny Pilot Program. Since the Exchange is not proposing to extend the duration of the $0.48 per contract transaction fee, such fee automatically expires and the associated rule text becomes obsolete after October 31, 2016. Accordingly, the Exchange is deleting the associated rule text in footnote 8 to the Fee Schedule.

The Exchange is proposing that this rule change become operative November 1, 2016.

2. Statutory Basis

The Exchange believes that its proposal to amend its Fee Schedule is consistent with Section 6(b) of the Act [7] in general, and furthers the objectives of Section 6(b)(4) of the Act [8] in that it is an equitable allocation of reasonable dues, fees, and other charges among its Members and issuers and other persons using its facilities, and 6(b)(5) of the Act,[9] 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 mechanisms of a free and open market and a national market system and, in general, to protect investors and the public interest.

The proposed deletions of all rule text regarding the three (3) limited duration transaction fees that are expiring on October 31, 2016 (the $0.12 per contract Posted Liquidity Marketing Fee in the designated symbols; the $0.50 per contract transaction fee applicable to orders executed for the account of non-MIAX market makers in the designated symbols; and the discounted $0.48 per contract transaction fee applicable to orders executed for the account of non-MIAX market makers in options overlying in the designated symbols applicable to any Member or its Affiliate that qualifies for the PCRP Volume Tier 3 or Higher) are fair, equitable, and not unreasonably discriminatory because such fees are no longer in effect after October 31, 2016, and the corresponding rule text is therefore obsolete and unnecessary to remain in the Fee Schedule.

B. Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposed rule change will result in any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act.

The Exchange notes that it operates in a highly competitive market in which market participants can readily favor competing venues if they deem fee levels at a particular venue to be excessive. In such an environment, the Exchange must continually adjust its fees to remain competitive with other exchanges and to attract order flow to the Exchange. The Exchange believes that the proposed rule change reflects this competitive environment because it applies equally to all similarly situated MIAX participants.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

Written comments were neither solicited nor received.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

The foregoing rule change has become effective pursuant to Section 19(b)(3)(A)(ii) of the Act,[10] and Rule 19b–4(f)(2)[11] thereunder. 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. If the Commission takes such action, the Commission shall institute proceedings to determine whether the proposed rule should be approved or 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–MIAX–2016–41 on the subject line.

Paper Comments

- Send paper comments in triplicate to Brent J. Fields, Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549–1090.

All submissions should refer to File Number SR–MIAX–2016–41. 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 10:00 a.m. and 3:00 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–MIAX–2016–41, and should be submitted on or before December 1, 2016.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[12]

Brent J. Fields,

Secretary.

[FR Doc. 2016–27155 Filed 11–9–16; 8:45 am]

BILLING CODE 8011–01–P

[7] 15 U.S.C. 78f(b).

[8] 15 U.S.C. 78f(b)(4).

[9] 15 U.S.C. 78f(b)(1) and (b)(5).

[10] 15 U.S.C. 78s(b)(3)(A)(ii).

[11] 17 CFR 240.19b–4(f)(2).

[12] 17 CFR 200.30–3(a)(12).

SECURITIES AND EXCHANGE COMMISSION

Sunshine Act Meeting; Additional Item

FEDERAL REGISTER CITATION OF PREVIOUS ANNOUNCEMENT: 81 FR 78678 (November 8, 2016).

PREVIOUSLY ANNOUNCED TIME AND DATE OF THE MEETING: Thursday, November 10, 2016 at 2 p.m.

CHANGES IN THE MEETING: The following matters will also be considered during the 2 p.m. closed meeting scheduled for Thursday, November 10, 2016: Settlement of injunctive actions.

CONTACT PERSON FOR MORE INFORMATION: For further information and to ascertain what, if any, matters have been added, deleted or postponed, please contact the Office of the Secretary at (202) 551–5400.

Dated: November 4, 2016.

Brent J. Fields,

Secretary.

[FR Doc. 2016–27147 Filed 11–8–16; 11:15 am]

BILLING CODE 8011–01–P

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–79242; File No. SR–NYSEMKT–2016–97]

Self-Regulatory Organizations; NYSE MKT LLC; Notice of Filing and Immediate Effectiveness of Proposed Rule Change Adopting New Rules To Reflect the Implementation of Pillar, the Exchange's New Trading Technology

November 4, 2016.

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 October 25, 2016, NYSE MKT LLC (the ''Exchange'' or ''NYSE MKT'') 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 Substance of the Proposed Rule Change

The Exchange proposes to adopt new rules to reflect the implementation of Pillar, the Exchange's new trading technology. The proposed rule change is available on the Exchange's Web site at *www.nyse.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 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

On January 29, 2015, the Exchange announced the implementation of Pillar, which is an integrated trading technology platform designed to use a single specification for connecting to the equities and options markets operated by the Exchange and its affiliates, NYSE Arca, Inc. (''NYSE Arca'') and New York Stock Exchange LLC (''NYSE'').[4] NYSE Arca Equities, Inc. (''NYSE Arca Equities), which operates the equities trading platform for NYSE Arca, was the first trading system to migrate to Pillar.[5] In connection with the NYSE Arca implementation of Pillar, NYSE Arca filed four rule proposals relating to Pillar.[6]

To streamline and simplify trading across the Exchange, NYSE Arca, and NYSE, the Exchange proposes to adopt the rule numbering framework of the NYSE Arca Equities rules for Exchange trading on the Pillar trading platform. The Exchange believes that if it and its affiliates are operating on the same trading platform, using the same rule numbering scheme across all markets will make it easier for members, the public, and the Commission to navigate the rules of each market. The Exchange therefore proposes to adopt a framework of rule numbering that is based on the current NYSE Arca Equities rules. The Exchange proposes to place this framework of rules following current Rule 0—Equities. As proposed, this framework would use the current rule numbering scheme of NYSE Arca Equities, and would consist of proposed Rules 1E–13E. Accordingly, the Exchange proposes to add a new heading following Rule 0 that would provide ''Pillar Platform Rules (Rules 1E–Rule 13E).''

To explain that the proposed rules would only be applicable to trading in a security once that security is trading on the Pillar platform, the Exchange proposes to state that Rules 1E–13E would be operative for securities that are trading on the Pillar equities trading platform. The Exchange would further provide that the Exchange would announce by Trader Update when securities are trading on the Pillar trading platform. Because there will be a period when specified securities that trade on the Exchange would continue to trade on the current trading platform, while other securities would be trading on the Pillar platform, the Exchange would not delete current Exchange rules when it adopts Pillar rules that cover the same topic as a current Exchange rule. Unless specified in this list of rules, current Exchange rules would continue to be applicable to trading in a security on the Pillar platform.

The Exchange proposes to denote the Pillar rules with the letter ''E'' to distinguish such rules from current Exchange rules with the same numbering. Except as described below, at this time, the Exchange would be adopting the framework for only these rule numbers and would designate the proposed rules as ''Reserved.'' Through a series of subsequent rule filings, the Exchange will propose to populate the individual rules with the rule text to

[1] 15 U.S.C. 78s(b)(1).

[2] 15 U.S.C. 78a.

[3] 17 CFR 240.19b–4.

[4] *See* Trader Update dated January 29, 2015, available here: *http://www1.nyse.com/pdfs/Pillar_Trader_Update_Jan_2015.pdf.*

[5] NYSE Arca Equities is a wholly-owned corporation of NYSE Arca and operates as a facility of NYSE Arca.

[6] *See* Securities Exchange Act Release Nos. 74951 (May 13, 2015), 80 FR 28721 (May 19, 2015) (Notice) and 75494 (July 20, 2015), 80 FR 44170 (July 24, 2015) (SR–NYSEArca–2015–38) (Approval Order of NYSE Arca Pillar I Filing, adopting rules for Trading Sessions, Order Ranking and Display, and Order Execution); Securities Exchange Act Release Nos. 75497 (July 21, 2015), 80 FR 45022 (July 28, 2015) (Notice) and 76267 (October 26, 2015), 80 FR 66951 (October 30, 2015) (SR–NYSEArca–2015–56) (Approval Order of NYSE Arca Pillar II Filing, adopting rules for Orders and Modifiers and the Retail Liquidity Program); Securities Exchange Act Release Nos. 75467 (July 16, 2015), 80 FR 43515 (July 22, 2015) (Notice) and 76198 (October 20, 2015), 80 FR 65274 (October 26, 2015) (SR–NYSEArca–2015–58) (Approval Order of NYSE Arca Pillar III Filing, adopting rules for Trading Halts, Short Sales, Limit Up-Limit Down, and Odd Lots and Mixed Lots); and Securities Exchange Act Release Nos. 76085 (October 6, 2015), 80 FR 61513 (October 13, 2015) (Notice) and 76869 (January 11, 2016), 81 FR 2276 (January 15, 2016) (Approval Order of NYSE Arca Pillar IV Filing, adopting rules for Auctions).

operate the Exchange on the Pillar platform.

In addition to adopting a framework of rule numbering, the Exchange also proposes to adopt specified rules that would be operative to trading on Pillar. The proposed rules would be based on NYSE Arca Equities rules, but with non-substantive differences to use the term ''Exchange'' instead of the terms ''NYSE Arca Marketplace'' or ''Corporation,'' and to use the terms ''mean'' or ''have the meaning'' instead of the terms ''shall mean'' or ''shall have the meaning.'' The Exchange has selected these rules because they are either definitional or the same substantively across all markets today and would not change when the Exchange migrates to Pillar.

First, the Exchange proposes certain definitions in Rule 1.1E. The terms defined in these proposed rules, unless the context requires otherwise, would have the meaning specified.

• Proposed Rule 1.1E(h) would define the term ''BBO'' as the best bid or offer on the Exchange and the term ''BB'' to mean the best bid on the Exchange and the term ''BO'' to mean the best offer on the Exchange. This proposed rule text is based on NYSE Arca Equities Rule 1.1(h) and current Exchange Rule 7, which defines the term ''Exchange BBO'' as the best bid or offer disseminated to the Consolidated Quotation System (''CQS'') by the Exchange.

• Proposed Rule 1.1E(l) would define the term ''Eligible Security'' as any equity security (i) either listed on the Exchange or traded on the Exchange pursuant to a grant of unlisted trading privileges under Section 12(f) of the Exchange Act and (ii) specified by the Exchange to be traded on the Exchange or other facility, as the case may be. This proposed rule text is based on NYSE Arca Equities Rule 1.1(l). The term Eligible Security is not currently used in Exchange rules.

• Proposed Rule 1.1E(o) would define the term ''FINRA'' as the Financial Industry Regulatory Authority, Inc. This proposed rule text is based on NYSE Arca Equities Rule 1.1(o). The term ''FINRA'' is used in current Exchange rules, but is not defined separately.

• Proposed Rule 1.1E(dd) would define the term ''NBBO'' as the national best bid or offer, the term ''NBB'' as the national best bid, the term ''NBO'' as the national best offer, the terms ''Best Protected Bid'' or ''PBB'' as the highest Protected Bid, the terms ''Best Protected Offer'' or ''PBO'' as the lowest Protected Offer, and the term ''Protected Best Bid and Offer'' (''PBBO'') as the Best Protected Bid and Best Protected Offer. This proposed rule text is based on NYSE Arca Equities Rule 1.1(dd). These terms are used in current Exchange rules, but are not defined separately.

• Proposed Rule 1.1E(ff) would define the term ''Away Market'' as any exchange, alternative trading system (''ATS'') or other broker-dealer (1) with which the Exchange maintains an electronic linkage and (2) that provides instantaneous responses to orders routed from the Exchange. As further proposed, the Exchange would designate from time to time those ATSs or other broker-dealers that qualify as Away Markets. This proposed rule text is based on NYSE Arca Equities Rule 1.1(ff). This term is not currently defined in Exchange rules because, on the current trading platform, the Exchange only maintains electronic linkage with those markets that display protected quotations.

• Proposed Rule 1.1E(ii) would define the term ''UTP Security'' as a security that is listed on a national securities exchange other than the Exchange and that trades on the Exchange pursuant to unlisted trading privileges. This proposed rule text is based on NYSE Arca Equities Rule 1.1(ii). This term is not currently defined in Exchange rules.

• Proposed Rule 1.1E(jj) would define the term ''UTP Listing Market'' as the primary listing market for a UTP Security. This proposed rule text is based on NYSE Arca Equities Rule 1.1(jj).

• Proposed Rule 1.1E(ddd) would define the term ''NMS Stock'' as any security, other than an option, for which transaction reports are collected, processed, and made available pursuant to an effective transaction reporting plan. This proposed rule text is based on NYSE Arca Equities Rule 1.1(ddd). This term is not currently defined in Exchange rules.

• Proposed Rule 1.1E(eee) would define the terms ''Protected Bid'' or ''Protected Offer'' as a quotation in an NMS stock that is (i) displayed by an Automated Trading Center; (ii) disseminated pursuant to an effective national market system plan; and (iii) an Automated Quotation that is the best bid or best offer of a national securities exchange or the best bid or best offer of a national securities association. The proposed rule would further define the term ''Protected Quotation'' as a quotation that is a Protected Bid or Protected Offer and would provide that, for purposes of the foregoing definitions, the terms ''Automated Trading Center,'' ''Automated Quotation,'' ''Manual Quotation,'' ''Best Bid,'' and ''Best Offer,'' would have the meanings ascribed to them in Rule 600(b) of Regulation NMS under the Securities Exchange Act. This proposed rule text is based on NYSE Arca Equities Rule 1.1(eee). These terms are used in current Exchange rules, but not separately defined.

• Proposed Rule 1.1E(fff) would define the term ''trade-through'' as the purchase or sale of an NMS stock during regular trading hours, either as principal or agent, at a price that is lower than a Protected Bid or higher than a Protected Offer. This proposed rule text is based on NYSE Arca Equities Rule 1.1(fff). This term is not currently defined in Exchange rules.

• Proposed Rule 1.1E(hhh) would define the terms ''effective national market system plan'' and ''regular trading hours'' as having the meanings set forth in Rule 600(b) of Regulation NMS under the Securities Exchange Act of 1934. This proposed rule text is based on NYSE Arca Equities Rule 1.1(hhh). These terms are not currently defined in Exchange rules.

The Exchange proposes the remaining rule numbers that correspond to the sub-numbering of NYSE Arca Equities Rule 1.1E on a ''reserved'' basis.

Next, the Exchange proposes rules that would be grouped under proposed Rule 7E—EQUITIES TRADING. With the exception of Rules 7.5E, 7.6E, and 7.12E the Exchange proposes Rules 7.1E–Rule 7.46E on a ''Reserved'' basis.

• Proposed Rule 7.5E would be entitled ''Trading Units'' and would specify that the unit of trading in stocks is 1 share. The rule would further provide that a ''round lot'' is 100 shares, unless specified by the primary listing market to be fewer than 100 shares. The rule would also provide that any amount less than a round lot would constitute an ''odd lot'' and any amount greater than a round lot that is not a multiple of a round lot would constitute a ''mixed lot.'' This proposed rule text is based on NYSE Arca Equities Rule 7.5 without any differences. The substance of this proposed rule is currently set forth in Rules 55 and 56. The Exchange proposes a non-substantive difference to use the term ''mixed lot'' instead of ''partial round lot'' or ''PRL.''

• Proposed Rule 7.6E would be entitled ''Trading Differentials'' and would provide that the minimum price variation (''MPV'') for quoting and entry of securities traded on the Exchange would be $0.01, with the exception of securities that are priced less than $1.00 for which the MPV for quoting and entry of orders would be $0.0001. This proposed rule text is based on NYSE Arca Equities Rule 7.6 without any differences. The substance of this proposed rule is currently set forth in Rule 62.

• Proposed Rule 7.12E would be entitled ''Trading Halts Due to Extraordinary Market Volatility'' and would specify the Exchange's procedures for halting trading in all stocks. The proposed text is based on NYSE MKT Rule 80B—Equities without any differences.

Because trading on Pillar would be under the above-described rules, the Exchange proposes to specify that Rules 7—Equities, 55—Equities, 56—Equities, 62—Equities, and 80B—Equities would not be applicable to trading on the Pillar trading platform.

* * * * *

As discussed above, because of the technology changes associated with the migration to the Pillar trading platform, the Exchange will announce by Trader Update when rules with an ''E'' modifier will become operative and for which symbols. Accordingly, the Exchange is not proposing to delete rules applicable to trading on the current platform until all securities are trading on Pillar.

2. Statutory Basis

The proposed rule change is consistent with Section 6(b) of the Securities Exchange Act of 1934 (the ''Act''),[7] in general, and furthers the objectives of Section 6(b)(5),[8] in particular, because 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 the proposed rules to support Pillar on the Exchange would remove impediments to and perfect the mechanism of a free and open market because the proposed rule set would promote transparency in Exchange rules by using consistent rule numbers with NYSE Arca Equities, which was the first market to migrate to the Pillar trading platform. The Exchange believes that using a common framework of rule numbers for the markets that operate on the Pillar trading platform will better allow members, regulators, and the public to navigate the Exchange's rulebook and better understand how equity trading is conducted on the Exchange and its affiliated exchanges. Adding new rules with the modifier ''E'' to denote those rules that would be operative for the Pillar trading platform would remove impediments to and perfect the mechanism of a free and open market by providing transparency of which rules govern trading once a symbol has been migrated to the Pillar platform.

The Exchange further believes that adopting specified definitions in proposed Rule 1E and proposed Rules 7.5E, 7.6E, and 7.12E under proposed Rule 7E would remove impediments to and perfect the mechanism of a free and open market and national market system because the proposed rules are definitional and are based on approved rules of NYSE Arca Equities without any substantive differences and would be operative once the Exchange migrates to Pillar.

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. The proposed change is not designed to address any competitive issue but rather to adopt new rules to support the Exchange's new Pillar trading platform. As discussed in detail above, with this rule filing, the Exchange is not proposing to change its core functionality but rather to adopt a rule numbering framework based on the rules of NYSE Arca Equities. The Exchange believes that the proposed rule change would promote consistent use of terminology to support the Pillar trading platform on both the Exchange and its affiliate NYSE Arca Equities, thus making the Exchange's rules easier to navigate.

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

The Exchange has filed the proposed rule change pursuant to Section 19(b)(3)(A)(iii) of the Act[9] and Rule 19b–4(f)(6) thereunder.[10] Because the foregoing proposed rule change does not: (i) Significantly affect the protection of investors or the public interest; (ii) impose any significant burden on competition; and (iii) 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)(iii) of the Act[11] and subparagraph (f)(6) of Rule 19b–4 thereunder.[12]

A proposed rule change filed pursuant to Rule 19b–4(f)(6) under the Act[13] normally does not become operative for 30 days after the date of its filing. However, Rule 19b–4(f)(6)(iii)[14] permits the Commission to designate a shorter time if such action is consistent with the protection of investors and the public interest. The Exchange has asked the Commission to waive the 30-day operative delay so that the proposal may become operative immediately upon filing. The Exchange states that it believes the proposed rule change will not significantly affect the protection of investors or the public interest or impose any significant burden on competition because the proposed rule change is not designed to make any substantive changes to how the Exchange operates. Rather, the Exchange believes that the proposed rule change would promote transparency in Exchange rules by adopting a rule-numbering framework based on the rules of NYSE Arca Equities, which was the first market to migrate to the Pillar trading platform, so that when the Exchange migrates to the Pillar trading platform, its rules will follow the same numbering scheme of NYSE Arca Equities. Because the proposed rule change makes no substantive changes to how the Exchange operates, the Commission believes that waiving the 30-day operative delay is consistent with the protection of investors and the public interest. Therefore, the Commission hereby waives the operative delay and designates the proposed rule change operative upon filing.[15]

At any time within 60 days of the filing of the proposed rule change, the Commission summarily may temporarily suspend the rule change if it appears to the Commission that such action is: (i) Necessary or appropriate in

[7] 15 U.S.C. 78f(b).

[8] 15 U.S.C. 78f(b)(5).

[9] 15 U.S.C. 78s(b)(3)(A)(iii).

[10] 17 CFR 240.19b–4(f)(6).

[11] 15 U.S.C. 78s(b)(3)(A)(iii).

[12] 17 CFR 240.19b–4(f)(6)(iii). As required under Rule 19b–4(f)(6)(iii), the Exchange provided the Commission with written notice of its intent to file the proposed rule change, along with a brief description and the 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.

[13] 17 CFR 240.19b–4(f)(6).

[14] 17 CFR 240.19b–4(f)(6)(iii).

[15] 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).

the public interest; (ii) for the protection of investors; or (iii) otherwise in furtherance of the purposes of the Act. If the Commission takes such action, the Commission shall institute proceedings to determine whether the proposed rule should be approved or 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–NYSEMKT–2016–97 on the subject line.

Paper Comments

- Send paper comments in triplicate to Brent J. Fields, Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549–1090.

All submissions should refer to File Number SR–NYSEMKT–2016–97. 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 10:00 a.m. and 3:00 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–NYSEMKT–2016–97 and should be submitted on or before December 1, 2016.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[16]

Brent J. Fields,

Secretary.

[FR Doc. 2016–27152 Filed 11–9–16; 8:45 am]

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SECURITIES AND EXCHANGE COMMISSION

Sunshine Act Meeting

Notice is hereby given, pursuant to the provisions of the Government in the Sunshine Act, Public Law 94–409, that the Securities and Exchange Commission will hold a Fintech Forum on Monday, November 14, 2016, in the Auditorium, Room L–002. The meeting will begin at 9:00 a.m. ET. and will be open to the public. Seating will be on a first-come, first served basis. Doors will be open at 7:45 a.m. ET. Visitors will be subject to security checks. The forum will be webcast on the Commission's Web site at *www.sec.gov* and will be archived for later viewing.

The agenda for the forum will discuss financial technology innovation in the financial services industry. Panelists will be invited to discuss issues such as blockchain technology, automated investment advice or robo-advisors, online marketplace lending and crowdfunding, and how they may impact investors.

This Sunshine Act notice is being issued because a majority of the Commission may attend the meeting.

For further information, please contact Brent J. Fields from the Office of the Secretary at (202) 551–5400.

Dated: November 7, 2016.

Brent J. Fields,

Secretary.

[FR Doc. 2016–27247 Filed 11–8–16; 11:15 am]

BILLING CODE 8011–01–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Notice of Intent To Rule on Disposal of Aeronautical Property at Cincinnati/Northern Kentucky International Airport, Hebron, KY (CVG)

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice.

SUMMARY: The Federal Aviation Administration is requesting public comment on a request by Kenton County Airport Board, to release of land (1.49 acres) at Cincinnati/Northern Kentucky International Airport from federal obligations.

DATES: Comments must be received on or before December 12, 2016.

ADDRESSES: Comments on this notice may be mailed or delivered in triplicate to the FAA at the following address: Memphis Airports District Office, Attn: Tommy L. Dupree, Assistant Manager, 2600 Thousand Oaks Boulevard, Suite 2250, Memphis, TN 38118.

In addition, one copy of any comments submitted to the FAA must be mailed or delivered to Ms. Candace S. McGraw, CEO, Kenton County Airport Board at the following address: 77 Comair Blvd., Erlanger, KY 41018.

FOR FURTHER INFORMATION CONTACT: Tommy L. Dupree, Assistant Manager, Federal Aviation Administration, Memphis Airports District Office, 2600, Thousand Oaks Boulevard, Suite 2250, Memphis, TN 38118–2482. The application may be reviewed in person at this same location, by appointment.

SUPPLEMENTARY INFORMATION: The FAA proposes to rule and invites public comment on the request to release property for disposal at Cincinnati/Northern Kentucky International Airport, 2939 Terminal Drive, Hebron, KY 41048, under the provisions of 49 U.S.C. 47107(h)(2). The FAA determined that the request to release property at Cincinnati/Northern Kentucky International Airport (CVG) submitted by the Sponsor meets the procedural requirements of the Federal Aviation Administration and the release of these properties does not and will not impact future aviation needs at the airport. The FAA may approve the request, in whole or in part, no sooner than thirty days after the publication of this notice.

The request consists of the following:

The Kenton County Airport Board is proposing the release of airport property totaling 1.49 acres, more or less. This land is to be used by the City of Florence for construction of proposed Bosch Road (1.02 acres) and a permanent utility easement (0.47 acres). The release of land is necessary to comply with Federal Aviation Administration Grant Assurances that do not allow federally acquired airport property to be used for non-aviation purposes. The sale of the subject property will result in the land at Cincinnati/Northern Kentucky International Airport (CVG) being changed from aeronautical to non-

[16] 17 CFR 200.30–3(a)(12).

aeronautical use and release the lands from the conditions of the Airport Improvement Program Grant Agreement Grant Assurances. In accordance with 49 U.S.C. 47107(c)(2)(B)(i) and (iii), the airport will receive fair market value for the property, which will be subsequently reinvested in another eligible airport improvement project for aviation facilities at Cincinnati/Northern Kentucky International Airport (CVG). The proposed use of this property is compatible with airport operations.

This request will release this property from federal obligations. This action is taken under the provisions of 49 U.S.C. 47107(h)(2).

Any person may inspect the request in person at the FAA office listed above under **FOR FURTHER INFORMATION CONTACT**.

In addition, any person may, upon request, inspect the request, notice and other documents germane to the request in person at the Cincinnati/Northern Kentucky International Airport.

Issued in Memphis, Tennessee on November 2, 2016.

Tommy L. Dupree,

Assistant Manager, Memphis Airports District Office, Southern Region.

[FR Doc. 2016–27090 Filed 11–9–16; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Notice of Request To Release Airport Property at Malden Regional Airport & Industrial Park (MAW)

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of intent to rule on request to release airport property at the Malden Regional Airport & Industrial Park (MAW), Malden, Missouri.

SUMMARY: The FAA proposes to rule and invites public comment on the release of land at the Malden Regional Airport & Industrial Park (MAW), Malden, Missouri.

DATES: Comments must be received on or before December 12, 2016.

ADDRESSES: Comments on this application may be mailed or delivered to the FAA at the following address: Lynn D. Martin, Airports Compliance Specialist, Federal Aviation Administration, Airports Division, ACE–610C, 901 Locust, Room 364, Kansas City, MO 64106.

In addition, one copy of any comments submitted to the FAA must be mailed or delivered to: Barbara Crayne, Airport Manager, Malden Regional Airport & Industrial Park, 3077 Mitchell Dr., P.O. Box 411, Malden, MO 63863–0411, (573) 276–2279.

FOR FURTHER INFORMATION CONTACT: Lynn D. Martin, Airports Compliance Specialist, Federal Aviation Administration, Airports Division, ACE–610C, 901 Locust Room 364, Kansas City, MO 64106, (816) 329–2644, *lynn.martin@faa.gov.*

The request to release property may be reviewed, by appointment, in person at this same location.

SUPPLEMENTARY INFORMATION: The FAA invites public comment on the request to release approximately 2.9± acres of airport property at the Malden Regional Airport & Industrial Airport (MAW). On September 19, 2016, the Mayor of the City of Malden and the Airport Manager at the Malden Regional Airport requested from the FAA that approximately 2.9± acres of property be released for sale to Darren Metz for business/industrial development. On October 28, 2016, the FAA determined that the request to release property at Malden Regional Airport and Industrial Park (MAW) submitted by the Sponsor meets the procedural requirements of the Federal Aviation Administration and the release of the property does not and will not impact future aviation needs at the airport. The FAA may approve the request, in whole or in part, no sooner than thirty days after the publication of this Notice.

The following is a brief overview of the request:

Malden Regional Airport and Industrial Park (MAW) is proposing the release of a parcel, of land totaling 2.9± acres. The release of land is necessary to comply with Federal Aviation Administration Grant Assurances that do not allow federally acquired airport property to be used for non-aviation purposes. The sale of the subject property will result in the land at the Malden Regional Airport and Industrial Park (MAW) being changed from aeronautical to nonaeronautical use and release the lands from the conditions of the AIP Grant Agreement Grant Assurances. In accordance with 49 U.S.C. 47107(c)(2)(B)(i) and (iii), the airport will receive fair market value for the property, which will be subsequently reinvested in another eligible airport improvement project for general aviation facilities at the Malden Regional Airport and Industrial Park.

Any person may inspect, by appointment, the request in person at the FAA office listed above under **FOR FURTHER INFORMATION CONTACT**. In addition, any person may, upon appointment and request, inspect the application, notice and other documents determined by the FAA to be related to the application in person at the Malden Regional Airport and Industrial Park.

Issued in Kansas City, MO, on October 28, 2016.

Nardos Wills,

Acting Manager, Airports Division.

[FR Doc. 2016–27211 Filed 11–9–16; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Motor Carrier Safety Administration

[Docket No. FMCSA–2016–0359]

Agency Information Collection Activities; Revision and Extension of a Currently-Approved Information Collection Request: Hazardous Materials Safety Permits

AGENCY: Federal Motor Carrier Safety Administration, DOT.

ACTION: Notice and request for comments.

SUMMARY: In accordance with the Paperwork Reduction Act of 1995, FMCSA announces its plan to submit the Information Collection Request (ICR) described below to the Office of Management and Budget (OMB) for its review and approval and invites public comment. The FMCSA requests approval to revise and extend an existing ICR titled, ''Hazardous Materials Safety Permits.'' This ICR requires companies holding safety permits to develop communications plans that allow for the periodic tracking of the shipments. A record of the communications that includes the time of the call and location of the shipment may be kept by either the driver (*e.g.,* recorded in the log book) or the company. These records must be kept, either physically or electronically, for at least six months at the company's principal place of business or readily available to the employees at the company's principal place of business.

DATES: We must receive your comments on or before January 9, 2017.

ADDRESSES: You may submit comments identified by Federal Docket Management System (FDMS) Docket Number FMCSA–2016–0359 using any of the following methods:

- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the online instructions for submitting comments.
- *Fax:* 1–202–493–2251.
- *Mail:* Docket Management Facility; U.S. Department of Transportation, 1200

New Jersey Avenue SE., West Building, Ground Floor, Room W12–140, 20590–0001.

• *Hand Delivery or Courier:* West Building, Ground Floor, Room W12–140, 1200 New Jersey Avenue SE., Washington, DC, between 9 a.m. and 5 p.m. e.t., Monday through Friday, except Federal holidays.

Instructions: All submissions must include the Agency name and docket number. For detailed instructions on submitting comments see the Public Participation heading below. 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.

Docket: For access to the docket to read background documents or comments received, go to *http://www.regulations.gov*, and follow the online instructions for accessing the dockets, or go to the street address listed above.

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 for the Federal Docket Management System published in the **Federal Register** on January 17, 2008 (73 FR 3316), or you may visit *http://edocket.access.gpo.gov/2008/pdfE8-794.pdf.*

Public Participation: The Federal eRulemaking Portal is available 24 hours each day, 365 days each year. You can obtain electronic submission and retrieval help and guidelines under the ''help'' section of the Federal eRulemaking Portal Web site. If you want us to notify you that we received your comments, please include a self-addressed, stamped envelope or postcard, or print the acknowledgement page that appears after submitting comments online. Comments received after the comment closing date will be included in the docket and will be considered to the extent practicable.

FOR FURTHER INFORMATION CONTACT: Mr. Vincent Babich or Mr. Tyrone Gibbs, Office of Enforcement and Compliance, Hazardous Materials Division, Department of Transportation, FMCSA, West Building 6th Floor, 1200 New Jersey Avenue SE., Washington, DC 20590. Telephone: 202–366–4871 or 202–366–1705; email *vincent.babich@dot.gov* or *tyrone.gibbs@dot.gov.*

SUPPLEMENTARY INFORMATION:

Background: The Secretary of Transportation (Secretary) is responsible for implementing regulations to issue safety permits for transporting certain hazardous materials (HM) in accordance with 49 U.S.C. 5101 *et seq.* The HM Safety Permit regulations (49 CFR part 385, subpart E) require carriers to develop and maintain route plans so that law enforcement officials can verify the correct location of the HM shipment. The FMCSA requires companies holding safety permits to develop a communications plan that allows for the periodic tracking of the shipment. This ICR covers the record of communications that includes the time of the call and location of the shipment. The records may be kept by either the driver (*e.g.,* recorded in the log book) or the company. These records must be kept, either physically or electronically, for at least six months at the company's principal place of business or be readily available to employees at the company's principal place of business. The currently-approved information collection is based on an estimated 1,382 respondents. The total number of companies now holding a safety permit is 1,304 therefore in this ICR the estimated number of respondents is being revised to reflect this number.

Title: Hazardous Materials Safety Permits.

OMB Control Number: 2126–0030.

Type of Request: Revision and extension of a currently-approved information collection.

Respondents: Motor carriers subject to the HM Safety Permit requirements in 49 CFR part 385, subpart E.

Estimated Number of Respondents: 1,304.

Estimated Time per Response: 5 minutes. The communication between motor carriers and their drivers must take place at least two times per day. It is estimated that it will take 5 minutes to maintain a daily communication record for each driver.

Expiration Date: July 31, 2017.

Frequency of Response: On occasion.

Estimated Total Annual Burden: 908,000 hours [10.9 million trips × 5 minutes per record ÷ 60 minutes per hour = 908,333.33 rounded to 908,000].

Public Comments Invited: You are asked to comment on any aspect of this information collection, including: (1) Whether the proposed collection is necessary for the performance of FMCSA's functions; (2) the accuracy of the estimated burden; (3) ways for FMCSA to enhance the quality, usefulness, and clarity of the collected information; and (4) ways that the burden could be minimized without reducing the quality of the collected information. The agency will summarize or include your comments in the request for OMB's clearance of this information collection.

Issued under the authority of 49 CFR 1.87 on: October 27, 2016.

Kelly Regal,

Associate Administrator for Office of Research and Information Technology.

[FR Doc. 2016–26559 Filed 11–9–16; 8:45 am]

BILLING CODE 4910–EX–P

DEPARTMENT OF TRANSPORTATION

Federal Transit Administration (FTA)

Announcement of Fiscal Year 2016 Rides to Wellness Demonstration and Innovative Coordinated Access and Mobility Grants Competitive Program Project Selections

AGENCY: Federal Transit Administration, DOT.

ACTION: Notice.

SUMMARY: The U.S. Department of Transportation's (DOT) Federal Transit Administration (FTA) announces the selection of Rides to Wellness Demonstration and Innovative Coordinated Access and Mobility Program (R2W Program) projects, with $7.2 million of funding from two programs: Section 3006(b) of the Fixing America's Surface Transportation Act (FAST), Public Law 114–94, which authorized a pilot program for innovative coordinated access and mobility at $2 million; and $5.3 million from 49 U.S.C. 5312 (Section 5312). On March 29, 2016, FTA published a Notice of Funding Opportunity (NOFO) (81 FR 17549) announcing the availability of Federal funding for the R2W Program. These program funds will provide financial assistance to States and Designated or Direct Recipients to test promising, replicable public transportation healthcare access solutions that support the following goals: Increased access to care, improved health outcomes and reduced healthcare costs.

FOR FURTHER INFORMATION CONTACT: Successful applicants should contact the appropriate FTA Regional Office for information regarding applying for the funds or program-specific information. A list of Regional Offices can be found at *www.transit.dot.gov.* Unsuccessful applicants may contact Danielle Nelson, Office of Program Management at (202) 366–2160, email: *Danielle.Nelson@dot.gov,* to arrange a proposal debriefing within 30 days of this announcement. A TDD is available at 1–800–877–8339 (TDD/FIRS).

SUPPLEMENTARY INFORMATION: In response to the NOFO, FTA received 78

project proposals requesting $28 million from 34 states. Project proposals were evaluated based on each applicant's responsiveness to the program evaluation criteria outlined in the NOFO. FTA is funding 19 projects, as shown here: *https://www.transit.dot.gov/funding/grants/fy-2016-rides-wellness-demonstration-and-innovative-coordinated-access-and-mobility* and in Table 1, for a total of $7,211,518. Recipients selected for competitive funding should work with their FTA Regional Office to submit a grant application in FTA's Transit Award Management System (TrAMs) for the projects identified in the attached table. Funds must be used consistent with the competitive proposal and for the eligible purposes established in the NOFO and described in the FTA Circular 9070.1G.

Recipients are reminded that program requirements such as cost sharing or local match can be found in the NOFO. A discretionary project identification number has been assigned to each project for tracking purposes and must be used in the TrAMs application.

Selected projects are eligible to incur costs under pre-award authority no earlier than the date projects were publicly announced, September 12, 2016. Pre-award authority does not guarantee that project expenses incurred prior to the award of a grant will be eligible for reimbursement, as eligibility for reimbursement is contingent upon other requirements. For more about FTA's policy on pre-award authority, please see the FTA Fiscal Year 2016 Apportionments, Allocations, and Program Information and Interim Guidance found in 81 FR 7893 (February 16, 2016). Post-award reporting requirements include submission of the Federal Financial Report and Milestone progress reports in TrAMs as appropriate (see FTA.C.5010.1D). Recipients must comply with all applicable Federal statutes, regulations, executive orders, FTA circulars, and other Federal requirements in carrying out the project supported by the FTA grant. FTA emphasizes that recipients must follow all third-party procurement guidance, as described in FTA.C.4220.1F. Funds allocated in this announcement must be obligated in a grant by September 30, 2018.

Carolyn Flowers,

Acting Administrator.

TABLE 1—FY 16 GRANTS FOR RIDES TO WELLNESS COMPETITION PROJECT SELECTIONS

State	Recipient	Project ID	Project description	Allocation
MD	Maryland Transit Administration.	D2016–RTWD–001	The Maryland Transit Administration will receive $103,344 to increase the capacity of a mobility management program that addresses barriers for low-income individuals in Allegany County western Maryland who lack reliable access to transportation to receive non-emergency medical care. The program, which will be updated with transportation coordination software, coordinates and provides transportation to and from non-emergency medical appointments at no cost to the individuals.	$103,334
CA	Riverside County Transportation Commission.	D2016–RTWD–002	Riverside County Transportation Commission and its partner organizations will receive $185,753 for the Blythe Wellness Express, a program that provides access to preventative healthcare for South California residents. This travel navigator/mobility management coordination project will address access to services in an underserved area and involve staff from the public transit agency, healthcare providers and community volunteers. An evaluation piece will document health-related outcomes.	185,753
PA	Pennsylvania Department of Transportation.	D2016–RTWD–003	The Pennsylvania Department of Transportation will receive $1,190,000 to fund FindMyRidePA. a one-call, one-click center and real-time transportation service serving a three-county area in central Pennsylvania. Building off the one-call center concept developed from an FTA-funded Veterans Transportation and Community Living Initiative project, the project will address the challenge of missed health appointments due to a lack of transportation in a targeted community, then scale it for deployment in other areas of the state.	1,190,000
IL	Rides Mass Transit District.	D2016–RTWD–004	Rides Mass Transit District of Illinois will receive $518,844 to establish a ''one-call'' center, expand mobility management services for patients at risk of re-hospitalization, and initiate transportation coordination for patients seeking drug abuse and mental health services in southern Illinois with a high rate of mental health and substance abuse and a disproportionately low number of healthcare providers. The project is intended to close the gap in access to mental health for patients due to transportation challenges in rural areas and builds on a 2015 FTA-funded Rides to Wellness Healthcare Access Challenge Grant.	518,844

TABLE 1—FY 16 GRANTS FOR RIDES TO WELLNESS COMPETITION PROJECT SELECTIONS—Continued

State	Recipient	Project ID	Project description	Allocation
MI	Michigan Department of Transportation.	D2016–RTWR–001–001	The Michigan Department of Transportation will receive $1 million to expand a brokerage-based program currently only available in certain parts of the state to a statewide model. The program manages and delivers non-emergency medical transportation for older adults, people with low incomes, and people with disabilities, ensuring they have access to non-emergency healthcare. The coordination software records trips reserved by county in each region based on trip types, procedures and clinic visits. Local health centers will integrate the software and refer clients to the service.	1,006,387
VT	Vermont Agency of Transportation.	D2016–RTWR–001–002	The Vermont Agency of Transportation will receive $170,000 to develop a program to train staff at Community Health Services to act as mobility managers to help individuals in the Ascutney, Windsor and St. Johnsbury regions of Vermont schedule and attend medical appointments. This will lead to better health outcomes, a reduction in missed appointments, and a reduction in the use of emergency services for routine medical care. Modeled on a program in another region of Vermont, the mobility managers will help patients, medical providers and social service agencies identify individuals most at risk and provide alternative transportation options via local transit providers.	170,000
MI	Flint Mass Transportation Authority.	D2016–RTWR–001–003	The Flint Mass Transportation Authority will receive $310,040 to develop a mobility management program, including coordinated non-emergency medical transportation, trip planning and training. The program will provide rides to wellness appointments for behavioral health patients, dialysis patients, and primary/urgent care for families, and elderly and elderly disabled patients in Flint and nearby Genesee County, both of which are impacted by Flint's municipal water crisis. Building on a 2015 FTA-funded Healthcare Access Mobility Design Challenge Grant, the project will improve local coordination and access in the community.	310,040
MA	Montachusett Regional Transit Authority.	D2016–RTWR–001–004	Montachusett Regional Transit Authority will receive $200,000 to implement a technology that analyzes routing and dispatching among several providers to integrate management of rides to healthcare in western Massachusetts and boost under-used fixed route and paratransit services. The software will allow paratransit and Council on Aging systems to bid on demand response, long-term and shared ride contracts so people seeking fixed route, paratransit and senior ride services can request additional rides or mix rides to maximize efficiencies. The software also will determine if a provider has the capacity to deliver service.	200,000
FL	Jacksonville Transportation Authority.	D2016–RTWR–001–005	The Jacksonville Transportation Authority will receive $399,200 to develop a software interface connecting medical scheduling programs and transit schedules to generate transit travel times and costs for healthcare receptionists and patients as they choose appointments. With the potential to link a large number of healthcare providers to mobility management nationally, the project will provide a pilot data set to prove the value of linking transportation options with medical appointments.	399,200
TN	Knoxville Area Transit.	D2016–RTWR–001–006	Knoxville Area Transit will receive $200,000 to expand its 2–1–1 call center as a single point of entry for older adults and people with disabilities to access transit to healthcare facilities in the region. The project will improve local coordination and access in the community and train public information staff, healthcare providers and residents on how to use KAT buses.	200,000
GA	Atlanta Regional Commission.	D2016–RTWR–001–007	The Atlanta Regional Commission will receive $337,628 to provide travel training, free transit passes over a six-month period, and paratransit or reduced fare enrollment assistance to at least 200 individuals to be selected from four area health centers. The program will address the difficulty in accessing medical services via paratransit by bolstering a travel training and mobility management effort and leveraging creative community partnerships. A regional summit will explore future opportunities for collaboration, identify barriers and propose solutions.	337,628

TABLE 1—FY 16 GRANTS FOR RIDES TO WELLNESS COMPETITION PROJECT SELECTIONS—Continued

State	Recipient	Project ID	Project description	Allocation
NY	Niagara Frontier Transportation Authority.	D2016–RTWR–001–008	The Niagara Frontier Transportation Authority will receive $468,566 to fund transportation to prenatal healthcare appointments for low-income, high-risk pregnant women in Buffalo, NY. The project provides participants with a transit pass as well as guidance on how to use the public transportation system for healthcare appointments. The project concept was formed through a HUD Sustainable Communities Initiative and a 2015 FTA-funded Healthcare Access Mobility Design Challenge grant.	468,566
CA	San Diego Association of Governments.	D2016–RTWR–001–009	The San Diego Association of Governments will receive $160,000 to coordinate rides for patients, both those traveling from emergency rooms to hospitals for admission and discharged patients traveling to pharmacies, treatments or their homes. The project will apply mobility management as part of hospital discharge planning, helping patients learn about how to attend healthcare appointments as well as wellness activities using public transportation.	160,000
MI	Detroit Department of Transportation.	D2016–RTWR–001–010	The Detroit Department of Transportation will receive $509,475 to increase mobility for older adults, particularly city residents with lower incomes and/or disabilities, to non-emergency medical care. The project will use scheduling software that improves efficiency and coordination between transportation and healthcare providers, as well as offer transportation to health/wellness/prevention activities such as recreation centers, parks, and farmers markets.	509,475
IA	Iowa Department of Transportation.	D2016–RTWR–001–011	The Iowa Department of Transportation will receive $130,560 for the Delaware County Connections Program, a rural, volunteer-based transit service that will improve the coordination of non-emergency medical transportation and provide healthcare access for people with low incomes, older adults and individuals with intellectual challenges. The project focuses on rides to wellness activities at senior centers, farmers markets and support groups.	130,560
NH	New Hampshire Department of Transportation.	D2016–RTWR–001–012	The New Hampshire Department of Transportation will receive $182,880 to fund the Bridge to Integration Project, a technology that will bridge the gap between Medicaid-funded transportation brokers and NHDOT's coordination software vendor system, an innovation that will be tested at three pilot sites. The sites will test the new technology with the goal of increasing access to transportation for healthcare appointments for Medicaid recipients, older adults and people with disabilities. Under NH's managed care model authorized in 2011, all Medicaid populations are to be enrolled in a managed care program. The result has been an increase in the Medicaid care management population. By partnering with the brokers and implementing a coordination software system, it will allow more efficient and effective coordination of transportation resources and assets throughout the state.	182,880
MO	Bi-State Development Agency.	D2016–RTWR–001–013	The Bi-State Development Agency of St. Louis, MO, will receive $940,251 for its Gateway Program, which features a public health mobile clinic that provides health screenings such as blood pressure and cholesterol tests at MetroLink Public Transportation Stations in north St. Louis County. This public transit and healthcare partnership creates a bridge between silos by serving the healthcare needs of public transit riders along their route. The program includes non-emergency medical transportation to and from appointments using transit subsidies, and is designed to provide underserved residents with a bridge in care until they are able to enroll in health insurance coverage options available through the Affordable Care Act.	940,251
OH	Ohio Department of Transportation.	D2016–RTWR–001–014	The Ohio Department of Transportation will receive $133,000 to fund the Mommy and Me Ride for Free program on behalf of the Hospital Council of Northwest Ohio. The project, which improves coordination and access in Lucas County by leveraging existing transportation options, will provide pregnant women and women with infants access to transportation. Using the TARPS and TARTA transit systems, women will increase their access to healthcare, leading to better birth outcomes and improved health status for both mother and baby.	133,000

TABLE 1—FY 16 GRANTS FOR RIDES TO WELLNESS COMPETITION PROJECT SELECTIONS—Continued

State	Recipient	Project ID	Project description	Allocation
NC	Research Triangle Regional Public Transportation Authority.	D2016–RTWR–001–015	The Research Triangle Regional Public Transportation Authority of Durham, N.C., will receive $65,600 to expand the Go Triangle Regional Call Center to improve coordinated transit planning and application assistance for paratransit riders who are low-income, uninsured or have mental health special needs. By co-locating paratransit mobility management services with fixed route mobility management services, the project will increase access to care. The project builds on a 2015 FTA-funded Healthcare Access Challenge Grant that tested solutions for transportation for low income, uninsured, or Medicaid consumers of behavior healthcare and developed a plan to implement solutions.	65,600

Total: $7,211,518.

[FR Doc. 2016–27157 Filed 11–9–16; 8:45 am]

BILLING CODE 4910–57–P

DEPARTMENT OF TRANSPORTATION

Federal Transit Administration

2016 Mobility on Demand (MOD) Sandbox Program

AGENCY: Federal Transit Administration (FTA), DOT.

ACTION: Notice of selections of Fiscal Year 2016 MOD Sandbox Program.

SUMMARY: The U.S. Department of Transportation's (DOT) Federal Transit Administration (FTA) announced the selection of 11 projects on October 13, 2016, (see Table 1) to receive $7,931,080 in Fiscal Year (FY) 2014 and 2016 funding in support of FTA's Mobility on Demand (MOD) Sandbox Program.

On May 3, 2016, FTA published a Notice of Funding Opportunity (NOFO) (81 FR 26621) announcing the availability of $8 Million for the 2016 MOD Sandbox Program. The MOD Sandbox Program is a new FTA research program to demonstrate and evaluate innovative approaches to integrating emerging mobility solutions within a public transportation framework. The program seeks to support transit agencies and communities as they navigate the dynamic, evolving landscape of personal mobility and integrated multimodal transportation networks. FTA is interested in conducting research on new service options in combination with available technologies that enable a traveler-centric approach to transportation, and provide better mobility options for everyone. FTA's MOD Sandbox Program provides a platform where integrated MOD concepts and solutions—supported through local partnerships—can be demonstrated in real-world settings.

FOR FURTHER INFORMATION CONTACT: The FTA Office of Research, Demonstration and Innovation will contact successful applicants regarding the next steps in applying for funds (see Table 1). Unsuccessful applicants may contact Christina Gikakis, Office of Research, Demonstration and Innovation at email address *modsandbox@dot.gov* to arrange a proposal debriefing within 30 days of this announcement.

SUPPLEMENTARY INFORMATION: In response to the MOD Sandbox NOFO, FTA received 78 eligible proposals requesting $57,146,181 in Federal funds. Project proposals were evaluated based on each applicant's responsiveness to the program evaluation criteria published in the NOFO. FTA is funding 11 MOD Sandbox projects, as shown in Table 1, for a total of $7,931,080.

Grantees selected for the MOD Sandbox Program should work with the FTA Office of Research, Demonstration and Innovation (TRI) to complete the cooperative agreement applications in FTA's electronic grants management system, Transit Award Management System (TrAMS).

Cooperative agreements must only include eligible activities applied for in the original project application. Project partner organizations identified as team members or sub-recipients in the original project application must be identified and included in the grant application in the capacity as originally proposed. Funds must be used consistent with the competitive proposal and for the eligible purposes established in the NOFO and described in the FTA *Circular 6100.1E.* Grantees are reminded that program requirements such as cost sharing or local match can be found in the NOFO and that applicants must provide the cost-share and source consistent with the selected proposal. A discretionary research project identification number has been assigned to each project, as shown in Table 1, for tracking purposes and must be used in the TrAMS application.

Projects are eligible for pre-award authority with an effective date no earlier than October 13, 2016. Grantees seeking pre-award authority must request and receive approval from the TRI Associate Administrator through a Letter of No Prejudice. FTA may grant pre-award authority to any project under this program so long as all required conditions for pre-award authority have been met and the activities undertaken in advance of federal funding are contained in the approved project plan or statement of work. Post-award reporting requirements include submission of the Federal Financial Report and Milestone reports in TrAMS as appropriate (FTA *Circular 6100.1E* and *Circular 5010.1D*). The grantees must comply with all applicable Federal statutes, regulations, executive orders, FTA circulars, and other Federal requirements detailed in the current Master Agreement in carrying out the project supported by the FTA research grant. The current Master Agreement can be found in the following FTA Grant Agreements Web page: *https://www.transit.dot.gov/funding/grantee-resources/sample-fta-agreements/fta-grant-agreements.* In addition, FTA will issue special conditions for certain MOD Sandbox projects to include specific data collection and reporting requirements related to compliance areas such as provision of equivalent service under the Americans with Disabilities Act (ADA).

For non-selected applicants, FTA may contact certain MOD Sandbox applicant(s) whose proposals were not selected for Sandbox funding, but considered meritorious to advance the transit industry's knowledge on MOD. FTA encourages all non-selected Sandbox applicants to notify FTA's MOD Program Manager, Christina Gikakis, at email address *modsandbox@*

dot.gov regarding their intent to proceed without FTA MOD Sandbox program funding. FTA may enter into agreements or other arrangements or relationships with these non-selected Sandbox applicants to collaborate in the format of technical assistance, such as data collection and analysis. Such agreements will assist FTA's effort in building a MOD Community of Practice (CoP) to maximize learning and opportunities for collaboration for all.

In addition, FTA intends to continue the dialogue with industry stakeholders on how FTA can continue to support innovative practices and shared-ride, on-demand mobility services. This may be done through an upcoming online dialogue to seek public comment on the overall MOD Program as it relates to advancing public transportation through the provision of flexible mobility choices and innovative business models. FTA also intends to issue Frequently Asked Questions (FAQs), to further explain the eligibility of such services under current transit law and FTA's core programs, such as the Urbanized Area and Rural formula programs. FTA encourages your comments and questions, which can be submitted to *TransitInnovations@dot.gov.*

Carolyn Flowers,

Acting Administrator.

TABLE 1—2016 MOD SANDBOX PROGRAM PROJECT SELECTIONS

State	Recipient	Discretionary ID	Project title	FTA Allocation
AZ	Regional Transportation Authority of Pima County.	D2017–MODD–001	Adaptive Mobility with Reliability and Efficiency (AMORE)—Rita Ranch Area Pilot in Tucson.	$669,158
AZ	Valley Metro Rail, Inc.	D2017–MODD–002	Mobility Platform	1,001,000
CA	City of Palo Alto	D2017–MODD–003; D2017–MODD–004	Bay Area Fair Value Commuting Demonstration.	1,085,000
CA	Los Angeles County Metropolitan Transportation Authority (Metro).	D2017–MODD–005	Los Angeles County and Puget Sound MOD Partnership.	1,350,000
CA	San Francisco Bay Area Rapid Transit District (BART).	D2017–MODD–006	Integrated Carpool to Transit Access Program.	358,000
FL	Pinellas Suncoast Transit Authority	D2017–MODD–007	Public-Private-Partnership for Paratransit Mobility on Demand Demonstration (P4–MOD).	500,000
IL	Chicago Transit Authority (CTA)	D2017–MODD–008	Integrated Fare Systems—From Transit Fare to Bike Share.	400,000
OR	Tri-County Metropolitan Transportation District of Oregon.	D2017–MODD–009	Open Trip Planner Share Use Mobility (OTP SUM): Open Trip Planner Integration of Transit with Shared-Use Mobility Real-Time and Data Enhancements.	678,000
TX	Dallas Area Rapid Transit	D2017–MODD–010	MOD Sandbox—The First and Last Mile Solution.	1,204,000
VT	Vermont Agency of Transportation	D2017–MODD–011	Vermont Statewide Transit Trip Planner—Fixed and Flex.	480,000
WA	Pierce County Public Transportation Benefit Area Corporation.	D2017–MODD–012	Limited Access Connections	205,922

[FR Doc. 2016–27158 Filed 11–9–16; 8:45 am]

BILLING CODE 4910–57–P

DEPARTMENT OF TRANSPORTATION

Maritime Administration

[Docket No. MARAD–2016 0115]

Requested Administrative Waiver of the Coastwise Trade Laws: Vessel FLACA; Invitation for Public Comments

AGENCY: Maritime Administration, Department of Transportation.

ACTION: Notice.

SUMMARY: As authorized by 46 U.S.C. 12121, the Secretary of Transportation, as represented by the Maritime Administration (MARAD), is authorized to grant waivers of the U.S.-build requirement of the coastwise laws under certain circumstances. A request for such a waiver has been received by MARAD. The vessel, and a brief description of the proposed service, is listed below.

DATES: Submit comments on or before December 12, 2016.

ADDRESSES: Comments should refer to docket number MARAD–2016–0115. Written comments may be submitted by hand or by mail to the Docket Clerk, U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE., Washington, DC 20590. You may also send comments electronically via the Internet at *http://www.regulations.gov.* All comments will become part of this docket and will be available for inspection and copying at the above address between 10 a.m. and 5 p.m., E.T., Monday through Friday, except federal holidays. An electronic version of this document and all documents entered into this docket is available on the World Wide Web at *http://www.regulations.gov.*

FOR FURTHER INFORMATION CONTACT: Bianca Carr, U.S. Department of Transportation, Maritime Administration, 1200 New Jersey Avenue SE., Room W23–453, Washington, DC 20590. Telephone 202–366–9309, Email *Bianca.carr@dot.gov.*

SUPPLEMENTARY INFORMATION:

As described by the applicant the intended service of the vessel FLACA is:

Intended Commercial Use of Vessel: ''Sailing day charters''

Geographic Region: ''Puerto Rico''

The complete application is given in DOT docket MARAD–2016–0115 at *http://www.regulations.gov.* Interested parties may comment on the effect this action may have on U.S. vessel builders or businesses in the U.S. that use U.S.-flag vessels. If MARAD determines, in accordance with 46 U.S.C. 12121 and MARAD's regulations at 46 CFR part 388, that the issuance of the waiver will

have an unduly adverse effect on a U.S.-vessel builder or a business that uses U.S.-flag vessels in that business, a waiver will not be granted. Comments should refer to the docket number of this notice and the vessel name in order for MARAD to properly consider the comments. Comments should also state the commenter's interest in the waiver application, and address the waiver criteria given in § 388.4 of MARAD's regulations at 46 CFR part 388.

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).

By Order of the Maritime Administrator.

Dated: November 1, 2016.

T. Mitchell Hudson, Jr.,

Secretary, Maritime Administration.

[FR Doc. 2016–27210 Filed 11–9–16; 8:45 am]

BILLING CODE 4910–81–P

DEPARTMENT OF TRANSPORTATION

Maritime Administration

[Docket No. MARAD–2016 0116]

Requested Administrative Waiver of the Coastwise Trade Laws: Vessel CAPRICE; Invitation for Public Comments

AGENCY: Maritime Administration, Department of Transportation.

ACTION: Notice.

SUMMARY: The Secretary of Transportation, as represented by the Maritime Administration (MARAD), is authorized to grant waivers of the U.S.-build requirement of the coastwise laws under certain circumstances. A request for such a waiver has been received by MARAD. The vessel, and a brief description of the proposed service, is listed below.

DATES: Submit comments on or before December 12, 2016.

ADDRESSES: Comments should refer to docket number MARAD–2016–0116. Written comments may be submitted by hand or by mail to the Docket Clerk, U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE., Washington, DC 20590. You may also send comments electronically via the Internet at *http://www.regulations.gov.* All comments will become part of this docket and will be available for inspection and copying at the above address between 10 a.m. and 5 p.m., E.T., Monday through Friday, except federal holidays. An electronic version of this document and all documents entered into this docket is available on the World Wide Web at *http://www.regulations.gov.*

FOR FURTHER INFORMATION CONTACT: Bianca Carr, U.S. Department of Transportation, Maritime Administration, 1200 New Jersey Avenue SE., Room W23–453, Washington, DC 20590. Telephone 202–366–9309, Email *Bianca.carr@dot.gov.*

SUPPLEMENTARY INFORMATION: As described by the applicant the intended service of the vessel CAPRICE is:

Intended Commercial Use of Vessel: hotel barge for a 12 passenger operation providing scenic overnight cruises.

Geographic Region: ''New York, Vermont, New Jersey, Connecticut, Delaware, Maryland, District of Columbia, Virginia, North Carolina, South Carolina, Georgia, Florida''

The complete application is given in DOT docket MARAD–2016–0116 at *http://www.regulations.gov.* Interested parties may comment on the effect this action may have on U.S. vessel builders or businesses in the U.S. that use U.S.-flag vessels. If MARAD determines, in accordance with 46 U.S.C. 12121 and MARAD's regulations at 46 CFR part 388, that the issuance of the waiver will have an unduly adverse effect on a U.S.-vessel builder or a business that uses U.S.-flag vessels in that business, a waiver will not be granted. Comments should refer to the docket number of this notice and the vessel name in order for MARAD to properly consider the comments. Comments should also state the commenter's interest in the waiver application, and address the waiver criteria given in § 388.4 of MARAD's regulations at 46 CFR part 388.

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).

By Order of the Maritime Administrator.

Dated: November 1, 2016.

T. Mitchell Hudson, Jr.,

Secretary, Maritime Administration.

[FR Doc. 2016–27213 Filed 11–9–16; 8:45 am]

BILLING CODE 4910–81–P

DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

[Docket No. NHTSA–2016–0112]

School Transportation Safety—Thinking Outside the Bus Meeting

AGENCY: National Highway Traffic Safety Administration (NHTSA), U.S. Department of Transportation (DOT).

ACTION: Notice.

SUMMARY: The National Highway Traffic Safety Administration (NHTSA) is announcing a meeting that will be held in Washington, DC on December 1, 2016 to explore the risk factors associated with pupil transportation and potential solutions to prevent school transportation-related crashes. The School Transportation Safety—Thinking Outside the Bus meeting will include presentations and discussions on a number of topics including trends in school transportation-related crashes; updates on lap/shoulder belts in school buses; pedestrians around the bus, illegal passing of school buses, school bus driver distraction; research on camera enforcement of stop arm violations; school bus vehicle technology and Moving Toward Zero—Reducing School Transportation-related fatalities. Attendance at the meeting is limited to invited participants because of space limitations of the DOT Conference Center. However, the meeting will be available for live public viewing on the NHTSA Web site (*www.nhtsa.gov*).

DATES: The meeting will be held on December 1, 2016 from 8:30 a.m. to 3:00 p.m.

ADDRESSES: The meeting will be held in the Media Center of the U.S. Department of Transportation, 1200 New Jersey Avenue SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Mr. Brian Chodrow, Telephone: 202–366–9765; email address: *brian.chodrow@dot.gov.*

SUPPLEMENTARY INFORMATION: NHTSA will host a meeting to focus on ways to improve the safety of pupil transportation. The School Transportation Safety—Thinking Outside the Bus Meeting will begin with an introduction by NHTSA Administrator Mark Rosekind, followed

by a discussion of the trends in pupil transportation crashes; updates on lap/shoulder seat belts in school buses, a risk panel concerning pedestrians around the school bus, and a discussion on school bus vehicle technology from school bus manufacturers. The meeting will conclude with a discussion on Moving Toward Zero—Reducing School Transportation-related fatalities.

Invited participants will include representatives from a number of fields including the behavioral and engineering sciences, traffic and highway safety, and public health, as well as from diverse organizations including advocacy groups, industry, state government, and other Federal Agencies.

NHTSA will facilitate sharing of important information regarding programs to improve the safety of pupil transportation. Saving lives by preventing traffic deaths is a top priority of this Administration.

Workshop Procedures. NHTSA will conduct the meeting informally. Thus, technical rules of evidence will not apply. The meeting will consist of presentations and panels. Each panel will have two or three short presentations, a roundtable discussion among the panel members, and participant questions to be discussed by the panel members and other meeting participants.

Authority: 49 U.S.C. 30182.

Issued in Washington, DC on November 7, 2016.

Jeff Michael,

Associate Administrator, Research and Program Development.

[FR Doc. 2016–27166 Filed 11–9–16; 8:45 am]

BILLING CODE 4910–59–P

DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

[Docket No. NHTSA–2016–0094; Notice 1]

Michelin North America, Inc., Receipt of Petition for Decision of Inconsequential Noncompliance

AGENCY: National Highway Traffic Safety Administration (NHTSA), Department of Transportation (DOT).

ACTION: Receipt of petition.

SUMMARY: Michelin North America, Inc. (MNA), has determined that certain MNA tires do not fully comply with paragraph S6.5(d) of Federal Motor Vehicle Safety Standard (FMVSS) No. 119, *New pneumatic tires for motor vehicles with a GVWR of more than 4,536 kilograms (10,000 pounds) and motorcycles.* MNA filed a report dated September 1, 2016, pursuant to 49 CFR part 573, *Defect and Noncompliance Responsibility and Reports.* MNA then petitioned NHTSA under 49 CFR part 556 for a decision that the subject noncompliance is inconsequential as it relates to motor vehicle safety.

DATES: The closing date for comments on the petition is December 12, 2016.

ADDRESSES: Interested persons are invited to submit written data, views, and arguments on this petition. Comments must refer to the docket and notice number cited in the title of this notice and submitted by any of the following methods:

- *Mail:* Send comments by mail addressed to U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- *Hand Delivery:* Deliver comments by hand to U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE., Washington, DC 20590. The Docket Section is open on weekdays from 10 a.m. to 5 p.m. except Federal Holidays.
- *Electronically:* Submit comments electronically by logging onto the Federal Docket Management System (FDMS) Web site at *https://www.regulations.gov/.* Follow the online instructions for submitting comments.
- Comments may also be faxed to (202) 493–2251.

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 comments you have submitted by mail were received, please enclose a stamped, self-addressed postcard with the comments. Note that all comments received will be posted without change to *https://www.regulations.gov,* including any personal information provided.

All comments and supporting materials received before the close of business on the closing date indicated above will be filed in the docket and will be considered. All comments and supporting materials received after the closing date will also be filed and will be considered to the fullest extent possible.

When the petition is granted or denied, notice of the decision will also be published in the **Federal Register** pursuant to the authority indicated at the end of this notice.

All comments, background documentation, and supporting materials submitted to the docket may be viewed by anyone at the address and times given above. The documents may also be viewed on the Internet at *https://www.regulations.gov* by following the online instructions for accessing the dockets. The docket ID number for this petition is shown in the heading of this notice.

DOT's complete Privacy Act Statement is available for review in a **Federal Register** notice published on April 11, 2000, (65 FR 19477–78).

SUPPLEMENTARY INFORMATION:

I. Overview

Pursuant to 49 U.S.C. 30118(d) and 30120(h) and their implementing regulations at 49 CFR part 556, MNA submitted a petition for an exemption from the notification and remedy requirements of 49 U.S.C. Chapter 301 on the basis that this noncompliance is inconsequential as it relates to motor vehicle safety.

This notice of receipt of MNA's petition is published under 49 U.S.C. 30118 and 30120 and does not represent any agency decision or other exercise of judgment concerning the merits of the petition.

II. Tires Involved

Affected are approximately 184 Michelin Pilot Power 3 size 180/55ZR17 M/C (73W) replacement tires manufactured between April 17, 2016, and May 7, 2016 that are primarily intended for street use on sport motorcycles.

III. Noncompliance

MNA describes the noncompliance as the inadvertent omission of the markings that designate the maximum load and corresponding inflation pressure for the load, as required by paragraph S6.5(d) of FMVSS No. 119.

IV. Rule Text

Paragraph S6.5(d) of FMVSS No. 119 provides, in pertinent part:

S6.5 Tire markings. Except as specified in this paragraph, each tire shall be marked on each sidewall with the information specified in paragraphs (a) through (j) of this section . . .

(d) The maximum load rating and corresponding inflation pressure of the tire, shown as follows:

(Mark on tires rated for single and dual load): Max load single __kg (__lb) at __kPa (__psi) cold. Max load dual __kg (__lb) at __kPa (__psi) cold.

(Mark on tires rated only for single load): Max load __kg (__lb) at __kPa (__psi) cold
. . .

V. Summary of MNA's Petition

MNA described the subject noncompliance and stated its belief that the noncompliance is inconsequential as it relates to motor vehicle safety.

In support of its petition, MNA submitted the following reasoning:

(a) *Installation*—The subject tires provide sidewall markings that include the correct industry standard tire size identified as ''180/55ZR17 M/C,'' the service description identified as ''(73W)'' using an ISO load index and speed symbol, and the load range identified as Load Range ''B.'' This properly and precisely identifies the tire for correct installation.

(b) *Inflation Pressure*—The correct application pressures for the front and rear positions are identified on the motorcycle vehicle placard as required by 49 CFR part 567 and in the owner's manual, and these sources are referred to specifically in information published by NHTSA, motorcycle manufacturers, and tire manufacturers. The inflation pressures furnished by the motorcycle manufacturer via these two sources are the pressures that provide the load capacity and optimum ride and handling characteristics specific to the application. The sidewall marking is not cited as a source for the recommended operating inflation pressure.

a. For example, NHTSA's online ''Motorcycle Safety Tips'' specifically refers to the owner's manual and vehicle placard: ''*Look in your motorcycle owner's manual to find the right PSI (pounds per square inch) of air pressure for your tires. Some bike manufacturers also list this information on the bike itself. Common locations include the swing arm, front fork tubes, inside the trunk, and under the seat.*''

b. Additionally, the Motorcycle Industry Council Tire Guide explains, ''*Check the air pressure when the tires are cold. . .and adjust it according to your motorcycle owner's manual or the tire information label on the chain guard, frame, or swingarm.*''

c. Similarly, Michelin's Professional Motorcycle Tire Guide 2016 states: ''*Use the inflation pressure recommended by the motorcycle manufacturer . . . The proper inflation pressures for your motorcycle tires are shown in your motorcycle owner's manual.*''

d. The applicable pressure is also a function of the maximum speed capability of the motorcycle, another reason that the proper source for tire inflation pressure is the motorcycle vehicle placard or owner's manual rather than the tire sidewall.

e. Michelin's Professional Motorcycle Tire Guide 2016 and the Motorcycle Industry Tire Guide both advise not to exceed the pressure marked on the sidewall when setting a usage pressure. However, the recommended pressure on the motorcycle vehicle placard and the motorcycle owner's manual conforming to 49 CFR 571.120 will never exceed the sidewall pressure for a properly fitted tire as described above in section ''A'' (Installation). The tire size, load index, speed symbol, and load range all provide for proper installation. Additionally, the sidewall pressure is not a ''maximum'' pressure. It is the pressure corresponding to the maximum load. For example, Michelin's Professional Motorcycle Tire Guide 2016 advises that the pressure regulator be set at 60 psi for mounting motorcycle tires, and the Michelin motorcycle Web site FAQ section explains that up to 60 psi of pressure can be used to seat beads when mounting motorcycle tires and then adjusted to the recommended pressure found on the vehicle placard or owner's manual. The sidewall pressure corresponding to the maximum load on the subject tire is 290 kPa or 42 psi.

(c) *Max Load Information*—The maximum load value corresponding to the ISO load index on the tire is published in Michelin's Professional Motorcycle Tire Guide 2016 available online, the Motorcycle Industry Council Tire Guide available online, as well as a number of retail sites. The ISO load index of ''73'' and the designation Load Range ''B'' that are present on the tire provide load description information, and along with the tire size they provide a clear cross reference to the cited publications that offer the load value in pounds if needed. Again, the tire size and load range provided are sufficient to assure the tire is appropriate for the motorcycle and corresponding pressure requirements as a function of speed capability are provided on the vehicle placard as well as the owner's manual.

(d) *Other Markings*—All other markings conform to the applicable regulations.

(e) *Performance*—The subject tire meets all performance requirements of FMVSS No. 119.

MNA concluded by expressing the belief that the subject noncompliance is inconsequential as it relates to motor vehicle safety, and that its petition to be exempted from providing notification of the noncompliance, as required by 49 U.S.C. 30118, and a remedy for the noncompliance, as required by 49 U.S.C. 30120, should be granted.

NHTSA notes that the statutory provisions (49 U.S.C. 30118(d) and 30120(h)) that permit manufacturers to file petitions for a determination of inconsequentiality allow NHTSA to exempt manufacturers only from the duties found in sections 30118 and 30120, respectively, to notify owners, purchasers, and dealers of a defect or noncompliance and to remedy the defect or noncompliance. Therefore, any decision on this petition only applies to the subject tires that MNA no longer controlled at the time it determined that the noncompliance existed. However, any decision on this petition does not relieve tire distributors and dealers of the prohibitions on the sale, offer for sale, or introduction or delivery for introduction into interstate commerce of the noncompliant tires under their control after MNA notified them that the subject noncompliance existed.

Authority: (49 U.S.C. 30118, 30120: Delegations of authority at 49 CFR 1.95 and 501.8)

Jeffrey M. Giuseppe,

Director, Office of Vehicle Safety Compliance.

[FR Doc. 2016–27118 Filed 11–9–16; 8:45 am]

BILLING CODE 4910–59–P

DEPARTMENT OF THE TREASURY

Internal Revenue Service

Proposed Collection; Comment Request for Form 990–N

AGENCY: Internal Revenue Service (IRS), Treasury.

ACTION: Notice and request for comments.

SUMMARY: The Department of the Treasury, 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)). Currently, the IRS is soliciting comments concerning Form 990–N, Electronic Filing System (e-Postcard) for Tax-Exempt Organizations not Required To file Form 990 or 990–EZ.

DATES: Written comments should be received on or before January 9, 2017 to be assured of consideration.

ADDRESSES: Direct all written comments to Tuawana Pinkston, Internal Revenue Service, Room 6526, 1111 Constitution Avenue NW., Washington, DC 20224.

FOR FURTHER INFORMATION CONTACT: Requests for additional information or copies of the form and instructions should be directed to Martha R. Brinson, Internal Revenue Service, Room 6129, 1111 Constitution Avenue NW., Washington DC 20224, or through the Internet at *Martha.R.Brinson@irs.gov.*

SUPPLEMENTARY INFORMATION:

Title: Electronic Filing System (e-Postcard) for Tax-Exempt Organizations not Required To file Form 990 or 990–EZ.

OMB Number: 1545–2085. Form Number: 990–N.

Abstract: Section 1223 of the Pension Protection Act of 2006 (PPA '06), enacted on August 17, 2006, amended Internal Revenue Code (Code) section 6033 by adding Code section 6033(i), which requires certain tax-exempt organizations to file an annual electronic notice (Form 990–N) for tax years beginning after December 31, 2006. These organizations are not required to file Form 990 (or Form 990–EZ) because their gross receipts are normally $25,000 or less.

Current Actions: There are no changes being made to the form at this time.

Type of Review: Extension of a currently approved collection.

Affected Public: Not-for-profit institutions.

Estimated Number of Respondents: 300,000.

Estimated Time per Respondent: 15 min.

Estimated Total Annual Burden Hours: 75,000.

The following paragraph applies to all of the collections of information covered by this notice:

An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless the collection of information displays a valid OMB control number. Books or records relating to a collection of information must be retained as long as their contents may become material in the administration of any internal revenue law. Generally, tax returns and tax return information are confidential, as required by 26 U.S.C. 6103.

Request for Comments: Comments submitted in response to this notice will be summarized and/or included in the request for OMB approval. All comments will become a matter of public record. 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 collection of information; (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 respondents, including through the use of automated collection techniques or other forms of information technology; and (e) estimates of capital or start-up costs and costs of operation, maintenance, and purchase of services to provide information.

Approved: November 1, 2016.

Tuawana Pinkston,

IRS Reports Clearance Officer.

[FR Doc. 2016–27097 Filed 11–9–16; 8:45 am]

BILLING CODE 4830–01–P

DEPARTMENT OF THE TREASURY

Internal Revenue Service

Proposed Collection; Comment Request for Form 1099–INT

AGENCY: Internal Revenue Service (IRS), Treasury.

ACTION: Notice and request for comments.

SUMMARY: The Department of the Treasury, 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)). Currently, the IRS is soliciting comments concerning Form 1099–INT, Interest Income.

DATES: Written comments should be received on or before January 9, 2017 to be assured of consideration.

ADDRESSES: Direct all written comments to Tuawana Pinkston, Internal Revenue Service, Room 6526, 1111 Constitution Avenue NW., Washington, DC 20224.

FOR FURTHER INFORMATION CONTACT: Requests for additional information or copies of the form and instructions should be directed to Martha R. Brinson, Internal Revenue Service, Room 6129, 1111 Constitution Avenue NW., Washington, DC 20224, or through the Internet at *Martha.R.Brinson@irs.gov.*

SUPPLEMENTARY INFORMATION:

Title: Interest Income.

OMB Number: 1545–0112.

Form Number: 1099–INT.

Abstract: Form 1099–INT is used for reporting interest income paid, as required by sections 6049 and 6041 of the Internal Revenue Code. The IRS uses the form to verify compliance with the reporting rules and to verify that the recipient has included the proper amount of interest on his or her income tax return.

Current Actions: There are no changes being made to the form at this time.

Type of Review: Extension of a currently approved collection.

Affected Public: Business or other for-profit organizations, Federal Government, individuals or households, and not-for-profit institutions.

Estimated Number of Responses: 243,536,300.

Estimated Time per Response: 17 minutes.

Estimated Total Annual Burden Hours: 63,079,438.

The following paragraph applies to all of the collections of information covered by this notice:

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the collection of information displays a valid OMB control number. Books or records relating to a collection of information must be retained as long as their contents may become material in the administration of any internal revenue law. Generally, tax returns and tax return information are confidential, as required by 26 U.S.C. 6103.

Request for Comments: Comments submitted in response to this notice will be summarized and/or included in the request for OMB approval. All comments will become a matter of public record. 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 collection of information; (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 respondents, including through the use of automated collection techniques or other forms of information technology; and (e) estimates of capital or start-up costs and costs of operation, maintenance, and purchase of services to provide information.

Approved: November 1, 2016.

Tuawana Pinkston,

IRS Reports Clearance Officer.

[FR Doc. 2016–27110 Filed 11–9–16; 8:45 am]

BILLING CODE 4830–01–P

DEPARTMENT OF THE TREASURY

Internal Revenue Service

Proposed Collection; Comment Request for Form 1098–E

AGENCY: Internal Revenue Service (IRS), Treasury.

ACTION: Notice and request for comments.

SUMMARY: The Department of the Treasury, 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)). Currently, the IRS is soliciting comments concerning Form 1098–E, Student Loan Interest Statement.

DATES: Written comments should be received on or before January 9, 2017 to be assured of consideration.

ADDRESSES: Direct all written comments to Tuawana Pinkston, Internal Revenue Service, Room 6526, 1111 Constitution Avenue NW., Washington, DC 20224.

FOR FURTHER INFORMATION CONTACT: Requests for additional information or copies of the form and instructions should be directed to LaNita Van Dyke, at Internal Revenue Service, Room 6526, 1111 Constitution Avenue NW., Washington, DC 20224, or through the internet, at *Lanita.VanDyke@irs.gov.*

SUPPLEMENTARY INFORMATION:

Title: Student Loan Interest Statement.

OMB Number: 1545–1576.

Form Number: Form 1098–E.

Abstract: Section 6050S(b)(2) of the Internal Revenue Code requires persons (financial institutions, governmental units, etc.) to report $600 or more of interest paid on student loans to the IRS and the students. Form 1098–E is used for this purpose.

Current Actions: There are no changes being made to the form at this time.

Type of Review: Extension of a currently approved collection.

Affected Public: Business or other for-profit organizations, not-for-profit institutions, and State, local or tribal governments.

Estimated Number of Respondents: 8,761,303.

Estimated Time per Respondent: 7 min.

Estimated Total Annual Burden Hours: 1,051,357.

The following paragraph applies to all of the collections of information covered by this notice:

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the collection of information displays a valid OMB control number. Books or records relating to a collection of information must be retained as long as their contents may become material in the administration of any internal revenue law. Generally, tax returns and tax return information are confidential, as required by 26 U.S.C. 6103.

Request for Comments: Comments submitted in response to this notice will be summarized and/or included in the request for OMB approval. All comments will become a matter of public record. 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 collection of information; (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 respondents, including through the use of automated collection techniques or other forms of information technology; and (e) estimates of capital or start-up costs and costs of operation, maintenance, and purchase of services to provide information.

Approved: November 1, 2016,

Tuawana Pinkston,

Supervisory Tax Analyst.

[FR Doc. 2016–27104 Filed 11–9–16; 8:45 am]

BILLING CODE 4830–01–P

DEPARTMENT OF THE TREASURY

Internal Revenue Service

Proposed Collection; Comment Request for Revenue Procedure 2016–47

AGENCY: Internal Revenue Service (IRS), Treasury.

ACTION: Notice and request for comments.

SUMMARY: The Department of the Treasury, 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)). Currently, the IRS is soliciting comments concerning Revenue Procedure 2016–47, Waiver of 60-Day Rollover Requirement.

DATES: Written comments should be received on or before January 9, 2017 to be assured of consideration.

ADDRESSES: Direct all written comments to Tuawana Pinkston, Internal Revenue Service, Room 6526, 1111 Constitution Avenue NW., Washington, DC 20224.

FOR FURTHER INFORMATION CONTACT: Requests for additional information or copies of the revenue procedure should be directed to Kerry Dennis, at Internal Revenue Service, Room 6526, 1111 Constitution Avenue NW., Washington DC 20224, or through the Internet, at *Kerry.Dennis@irs.gov*.

SUPPLEMENTARY INFORMATION:

Title: Waiver of 60-Day Rollover Requirement.

OMB Number: 1545–2269.

Revenue Procedure Number: Revenue Procedure 2016–47.

Abstract: Revenue Procedure 2016–47 describes a program for self-certification by taxpayers who missed the 60-day statutory requirement for making a rollover contribution to a qualified plan or individual retirement arrangement (IRA). Upon receipt of a self-certification, a plan administrator of IRA trustee may accept the contribution and treat it as having satisfied the requirements for a waiver of the 60-day requirement. Currently, the only way for a taxpayer to obtain a waiver of the 60-day requirement is to apply to the Internal Revenue Service (IRS) for a favorable ruling, which is issued by the Tax Exempt and Government Entities Division (TE/GE). The fee for a ruling is $10,000. The program outlined in this revenue procedure permits taxpayers to receive the benefits of a waiver without paying a user fee.

Current Actions: Extension of a currently approved collection.

Affected Public: Individuals or Households.

Estimated Number of Respondents: 150.

Estimated Time per Respondent: 3 hours.

Estimated Total Annual Burden Hours: 450.

The following paragraph applies to all of the collections of information covered by this notice:

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the collection of information displays a valid OMB control number. Books or records relating to a collection of information must be retained as long as their contents may become material

in the administration of any internal revenue law. Generally, tax returns and tax return information are confidential, as required by 26 U.S.C. 6103.

Request for Comments: Comments submitted in response to this notice will be summarized and/or included in the request for OMB approval. All comments will become a matter of public record. 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 collection of information; (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 respondents, including through the use of automated collection techniques or other forms of information technology; and (e) estimates of capital or start-up costs and costs of operation, maintenance, and purchase of services to provide information.

Approved: October 27, 2016.

Tuawana Pinkston,

IRS Reports Clearance Officer.

[FR Doc. 2016–27100 Filed 11–9–16; 8:45 am]

BILLING CODE 4830–01–P

DEPARTMENT OF THE TREASURY

Internal Revenue Service

Proposed Collection; Comment Request for Regulation Project

AGENCY: Internal Revenue Service (IRS), Treasury.

ACTION: Notice and request for comments.

SUMMARY: The Department of the Treasury, 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)). Currently, the IRS is soliciting comments concerning nonbank trustees.

DATES: Written comments should be received on or before January 9, 2017 to be assured of consideration.

ADDRESSES: Direct all written comments to Tuawana Pinkston, Internal Revenue Service, Room 6526, 1111 Constitution Avenue NW., Washington, DC 20224.

FOR FURTHER INFORMATION CONTACT: Requests for additional information or copies of the information collection should be directed to LaNita Van Dyke at Internal Revenue Service, Room 6526, 1111 Constitution Avenue NW., Washington, DC 20224, or through the Internet, at *Lanita.VanDyke@irs.gov.*

SUPPLEMENTARY INFORMATION:

Title: Nonbank Trustees.

OMB Number: 1545–0806.

Regulation Project Number: EE–12–78.

Abstract: Internal Revenue Code section 408(a)(2) permits an institution other than a bank to be the trustee of an individual retirement account. This regulation imposes certain reporting and recordkeeping requirements to enable the IRS to determine whether an institution qualifies to be a nonbank trustee and to insure that accounts are administered according to sound fiduciary principles.

Current Actions: There is no change to this existing regulation.

Type of Review: Extension of a currently approved collection.

Affected Public: Business or other for-profit organizations.

Estimated Number of Respondents: 23.

Estimated Time per Respondent: 34 minutes.

Estimated Total Annual Burden Hours: 13.

The following paragraph applies to all of the collections of information covered by this notice:

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the collection of information displays a valid OMB control number. Books or records relating to a collection of information must be retained as long as their contents may become material in the administration of any internal revenue law. Generally, tax returns and tax return information are confidential, as required by 26 U.S.C. 6103.

Request for Comments: Comments submitted in response to this notice will be summarized and/or included in the request for OMB approval. All comments will become a matter of public record. 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 collection of information; (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 respondents, including through the use of automated collection techniques or other forms of information technology; and (e) estimates of capital or start-up costs and costs of operation, maintenance, and purchase of services to provide information.

Approved: November 1, 2016.

Tuawana Pinkston,

Supervisory Tax Analyst.

[FR Doc. 2016–27111 Filed 11–9–16; 8:45 am]

BILLING CODE 4830–01–P

DEPARTMENT OF THE TREASURY

Internal Revenue Service

Proposed Collection; Comment Request for Form 13614–C

AGENCY: Internal Revenue Service (IRS), Treasury.

ACTION: Notice and request for comments.

SUMMARY: The Department of the Treasury, 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)). Currently, the IRS is soliciting comments concerning Form 13614–C, Interview and Intake Sheet.

DATES: Written comments should be received on or before January 9, 2017 to be assured of consideration.

ADDRESSES: Direct all written comments to Tuawana Pinkston, Internal Revenue Service, Room 6526, 1111 Constitution Avenue NW., Washington, DC 20224.

FOR FURTHER INFORMATION CONTACT: Requests for additional information or copies of the form and instructions should be directed to LaNita Van Dyke, at Internal Revenue Service, Room 6526, 1111 Constitution Avenue NW., Washington, DC 20224, or through the internet, at *Lanita.VanDyke@irs.gov.*

SUPPLEMENTARY INFORMATION:

Title: Interview and Intake Sheet.

OMB Number: 1545–1964

Form Numbers: 13614–C, 13614–C (SP), 13614(AR), 13614(CN–S), 13614(CN–T), 13614(HT), 13614(KR), 13614(PL), 13614(PT), 13614(TL), and, 13614(VN).

Abstract: Forms 13614–C, 13614–C (SP), 13614(AR), 13614(CN–S), 13614(CN–T), 13614(HT), 13614(KR), 13614(PL), 13614(PT), 13614(TL), and, 13614(VN) contain a standardized list of required intake questions to guide volunteers in asking taxpayers basic questions about themselves. The intake

sheet is an effective tool ensuring that critical taxpayer information is obtained and applied during the interview process.

Current Actions: There are no changes being made to these forms at this time, however, the agency has updated its most recent number of respondent estimates and updated the collection to include all 11 language translations.

Type of Review: Revision of a currently approved collection.

Affected Public: Individuals or households, Business or other for-profit organizations, and not-for-profit institutions, and Federal Government.

Estimated Number of Responses: 3,700,000.

Estimated Time per Response: 17 min.

Estimated Total Annual Burden Hours: 616,803.

The following paragraph applies to all of the collections of information covered by this notice:

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the collection of information displays a valid OMB control number. Books or records relating to a collection of information must be retained as long as their contents may become material in the administration of any internal revenue law. Generally, tax returns and tax return information are confidential, as required by 26 U.S.C. 6103.

Request for Comments: Comments submitted in response to this notice will be summarized and/or included in the request for OMB approval. All comments will become a matter of public record. 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 collection of information; (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 respondents, including through the use of automated collection techniques or other forms of information technology; and (e) estimates of capital or start-up costs and costs of operation, maintenance, and purchase of services to provide information.

Approved: November 1, 2016.

Tuawana Pinkston,

IRS Reports Clearance Officer.

[FR Doc. 2016–27099 Filed 11–9–16; 8:45 am]

BILLING CODE 4830–01–P

DEPARTMENT OF THE TREASURY

Internal Revenue Service

Proposed Collection; Comment Request for Regulation Project

AGENCY: Internal Revenue Service (IRS), Treasury.

ACTION: Notice and request for comments.

SUMMARY: The Department of the Treasury, 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)). Currently, the IRS is soliciting comments capitalization of certain policy acquisition expenses.

DATES: Written comments should be received on or before January 9, 2017 to be assured of consideration.

ADDRESSES: Direct all written comments to Tuawana Pinkston, Internal Revenue Service, Room 6526, 1111 Constitution Avenue NW., Washington, DC 20224.

FOR FURTHER INFORMATION CONTACT: Requests for additional information or copies of the regulations should be directed to LaNita Van Dyke at Internal Revenue Service, Room 6526, 1111 Constitution Avenue NW., Washington, DC 20224, or through the internet at *Lanita.VanDyke@irs.gov.*

SUPPLEMENTARY INFORMATION:

Title: Capitalization of Certain Policy Acquisition Expenses.

OMB Number: 1545–1287.

Regulation Project Number: FI–3–91 (TD 8456).

Abstract: Internal Revenue Code section 848 provides that insurance companies' must capitalize ''specified policy acquisition expenses. In lieu of identifying the categories of expenses that must be capitalized, section 848 requires that a company capitalize an amount of otherwise deductible expenses equal to specified percentages of net premiums with respect to certain types of insurance contracts. Insurance companies that enter into reinsurance agreements must determine the amounts to be capitalized under those agreements consistently. This regulation provides elections to permit the parties to a reinsurance agreement to shift the burden of capitalization for their mutual benefit.

Current Actions: There is no change to these existing regulation.

Type of Review: Extension of a currently approved collection.

Affected Public: Business or other for-profit organizations.

Estimated Number of Respondents: 2,070.

Estimated Time per Respondent: 1 hr.

Estimated Total Annual Burden Hours: 2,070.

The following paragraph applies to all of the collections of information covered by this notice:

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the collection of information displays a valid OMB control number. Books or records relating to a collection of information must be retained as long as their contents may become material in the administration of any internal revenue law. Generally, tax returns and tax return information are confidential, as required by 26 U.S.C. 6103.

Request for Comments: Comments submitted in response to this notice will be summarized and/or included in the request for OMB approval. All comments will become a matter of public record. 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 collection of information; (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 respondents, including through the use of automated collection techniques or other forms of information technology; and (e) estimates of capital or start-up costs and costs of operation, maintenance, and purchase of services toprovide information.

Approved: November 1, 2016.

Tuawana Pinkston,

Supervisory Tax Analyst.

[FR Doc. 2016–27113 Filed 11–9–16; 8:45 am]

BILLING CODE 4830–01–P

DEPARTMENT OF THE TREASURY

Internal Revenue Service

Quarterly Publication of Individuals, Who Have Chosen To Expatriate, as Required by Section 6039G

AGENCY: Internal Revenue Service (IRS), Treasury.

ACTION: Notice.

SUMMARY: This notice is provided in accordance with IRC section 6039G of the Health Insurance Portability and Accountability Act (HIPPA) of 1996, as

amended. This listing contains the name of each individual losing United States citizenship (within the meaning of section 877(a) or 877A) with respect to whom the Secretary received information during the quarter ending September 30, 2016. For purposes of this listing, long-term residents, as defined in section 877(e)(2), are treated as if they were citizens of the United States who lost citizenship.

Last name	First name	Middle name/initials
AARON	EMMANUEL	DOMINIQUE
ABDALLA	ZEINA	
ABDULLA	ALI	MOHAMED
ABOITIZ	SOFIA	ISABEL
ADAMS	ANTHONY	HAYWARD
ADAMSON	PAULINA	KRISTINE
ADSHEAD	PETER	NEIL
AGGARWAL	SONA	RAI
AHMED	EIFAZ	
AHMED	MAHIR	
AHMED	MOHAMMED	WAHEEB
AHMED	ZAHUR	
AJAJ	DUHA	MOHAMMED
AKERMAN	PIA	LANDRIEU
AKERMAN	TESSA	AIRLIE
AL-DAKHIL	DHARAR	ABDULLAH
AL-GHAMDI	ABDULLAH	MOHAMMAD
ALIPOUR	MOHAMMAD	
ALLEN	JESSICA	MYRIAM
ALLEN BIATEL	JENNIFER	RAHEL
ALLISON	WANDA	LOUISE
ALMASY	WARREN	MARK
AL-MAZEEDI	NAELA	MOOSA
AL-QASIMI	NOOR	FAHHIM
AL-QUAIMI	MOHAMMAD	JASSEM
ALRASHIDI	SALEM	TALAL
ALTMAN	LEE	WELLS
ALWAY	MARY	KATHERINE
ANAND	CHRISTOPHER	
ANDERSON	LISA	YVONNE
ANDERSON	NAOMI	NADINE
ANDOR	CHRISTIAN	JOSEPH
ANDREWS	DAVID	STEFAN
ANDREWS	RONALD	LEE
ANIS	AHMAD	HUSSEIN
ANSEL	DOUGLAS	
ANTONIETTI	ALEX	JULIEN
APPELS	BOUDEWIJN	BERNARD
AREGGER	FELIX	ANTON
ARIAS	ALEXANDRA	
ARMSTRONG	ANN	CHRISTINE
ARNDER	ROBERT	LEE
ARNET	JARV IS	KASIMIR
ARYA	ANKUR	
ASLAKSEN-SCHUERHOLZ	KATHRINE	DORIS
ASSI	EMANUELA	
ASSI	UGO	AURELIO
AUGIS	BRIGITTE	LILLIAN
AWAD BEHBAHANI	BALSAM	MUHAMAD H N
AZOULAY	JEAN	MARC EMILE
BABIC	MARCO	STAN
BACHMAN	KARIN	BETH
BACHMAN	RODNEY	ALAN
BAER	JOEL	JULIUS
BAFICO SALICE	LINDA	MARIE
BAILEY	MARSHALL	CHARLES
BAISI	PATRICIA	ANN
BAKHSHANDEH	ALI	
BAKHTIAR	SHAHRIAR	
BAKKUM	KIMBERLY	ELLEN
BALLMER	CHRISTINA	MARIE
BAN	JAMES	
BANG	HAE	OK
BAO	CHARLES	
BAO	DOUGLAS	
BAO	SHIRLEY	
BARBOUR	NATALIA	ANA ARCILA
BARTLETT CASPARIS	HEATHER	MARIE
BARWICK	JAMES	DEAN

Last name	First name	Middle name/initials
BASILE	RICCARDO	
BASSAN	JACOBO	
BASUALDO	LINDA	ANN
BATTEN	JAMES	ROBERT
BAULD	BONNIE	JEAN
BAUMANN	PETER	
BAUMGARTNER	BARBARA	ANNE GLAETTLI
BAUR	DANIEL	JOSIAS
BAUR	JULIAN	
BAZIN	EMILY	CLAIRE
BEACH	SCOTT	FREDERICK
BEATTIE	DONALD	ALLISON
BECHER	LORENZ	MARCUS
BECKER	BRITTA	ANNA
BEER	MICHAEL	BEAT
BEHBEHANI	SAYED	HAMID NASRALLAH
BEIQUE	PAUL	LOUIS
BEKAERT	DOMINIC	CU UNJIENG
BELL	JARED	HARRISON MICHAEL
BENSON	BYRON	ELLIOT
BERGE	TOM	DONALD
BERGMANS	NATHALIE	ANNE
BERKELEY	LISE	
BERNARD	JAMES	CROTHERS
BERTING	ELIZABETH	MARION
BERTNER-MOATI	SARAH	LEYSHON
BETTS	SUZANNE	ELIZABETH
BETZ	MICHAEL	THOMAS
BEUTHE	BRITA	ORR
BICHELMEIR	PETER	JOHN
BIEBUYCK	FRANCESCA	
BIGWOOD	SALLY	
BISCHOF	STEVE	FRANCIS
BISHOP	JOAN	REMPLE
BLACKMUR	JUDITH	ANN
BLAIR	JOANNA	
BLATT	RENE	HANS
BLEILER	TERESA	JO-ANNE
BLOCHLINGER	MARC	URS
BLOND	PIERRE-LOUIS	ANDREW
BODEUX	DOROTHY	MAY
BODIN	NOELIE	
BOEHMER	EKKEHART	
BOENI	CHRISTINE	SUSAN
BOER STALLMAN	DOROTHY	BUCKNER WESSELS
BOERLIN-LEUENBERBER	HEIDI	KIM
BOGART	LUDMILLA	
BOGERT	DEBORAH	SUE
BOKHOVEN	JOACHIME	MARGARETHA LOUISE
BOLLI	DOMINIQUE	NICHOLAS
BOND	MICHAEL	EDWARD
BONSTEIN	HERBERT	SAMUEL
BORN	MICHELLE	LEA
BOTMAN	ADRIANA	CATHERINE
BOUMENDIL-KRON	AMELIE	THERESE
BOURGON	LUC	PIERRE
BOURRET	SUZANNE	
BOVEY	CHRISTOPHER	BENEDICT
BOVEY	MARIA	THERESA
BOWERS	DAVID	ALAN
BOYD	SARA	LESLEY
BOZZINO	JULIUS	M
BRADER	LINDA	MARGRIT
BRANDT	JAMES	ROGER
BRANDT	MARY	ELIZABETH
BRANDWIJK	HENDRIKA	BERNICE
BRENNAN	MICHAEL	RONALD
BRENNER	STEVEN	ALAN
BRENNINKMEYER	CHARLOTTE	MARGARETHA
BRIGGER	CLAUDIA	MIRIAM
BRIMINGHAM	JENNIFER	LEE
BRISSON	MARCELLE	LILIANE
BRODER	HANS	
BROMLEY	STEPHEN	ARTHUR

Last name	First name	Middle name/initials
BROUWER	JITSKE	MARGARETHA
BROWN	CHARLES	
BROWN	MICHAEL	PHILIP
BROWNE	LOIS	MARGARET
BRUGGER	ELISABETH	HELENE
BRUNIER	CHRISTINE	JOSIANNE
BRUNIER	ISABELLE	JOSETTE
BRUNSVOLD	RICHARD	ELDREN
BRYANT	JILL	MARY
BUCKINGHAM	CHRISTOPHER	EDWARD ROBERT
BUFFONE DASSIER	KATHLEEN	MARY
BULACH	ROSALYN	GALE
BURKARD	VERONIQUE	SOPHIA
BURKART	SYLVIA	ELKE
BURKE	KATHRYN	ALLISON
BUSH	CLAIRE	
BUSH	HARRY	
BUSSER	PETER	WILHELM
BUSWELL	SALLY	ANN
BUTLER	DEBORAH	LYNNE
BUTTERFIELD	DEBRA	MARY FRIEMANN
CABANA	FRANCINE	
CALLAGHAN	KATHERINE	LINDSAY
CALLAHAN	DAVID	LEE
CALLOT	NADINE	ANDREA
CALVERLEY	PETER	CHARLES
CAMENZIND	PAMELA	
CAMILLI	ANDRE	CHRISTOPHER
CAMP	DEBRA	RENAE
CAMP	KATHERINE	RUTH VIRGILS
CAMP	VAL	DEE
CAMPBELL	JOHN	MICHAEL
CAMPBELL	KATHRYN	GIBSON
CAMPBELL	ROBERT	MICHAEL
CAMPBELL-OTTEN	MARGARET	
CAPPELLANIA	JERRY	DOMENICO GIUSEPPE
CAPT	GLORIA	NANCY
CARCIUMARU	GABRIEL	
CARLETTI	LEO	RIVOLUZIO
CARRELL	ELIZABETH	ANNE
CARRELL	SARAH	JO
CARROLL	LORA	ANN
CARTER	JOAN	ELLEN
CASHMAN-PUGSLEY	SUSAN	LYNETTE
CASIER	GABRIELLE	MARIE JEANNE LOUISE CHISLAINE
CASPARY	MARTIN	RUDOLF
CASSINOS	SUZANNE	ALEXANDRA
CASTELNUOVO	BETHANIE	MARIE
CATHLES HAGEN	POLLY	RUTH
CATTANI	SACHA	MARGARET
CAYRE	PASCAL	ALAIN
CAYZER	AMY	LYNN
CEFIS	JAMES	BRUCE
CEREZO	NICOLAS	LAWRENCE
CHAFFEY	ROBERT	AMYON
CHAI	JAI	HYUN
CHAMBERS	DIANA	LOUISE
CHAMBERS	MELCHIOR	ANDRE RICHARD
CHAMBERS	PATRICK	MICHAEL
CHAMBERS	VERITY	SUSAN STOWELL
CHAMMAS	DYALA	EMILE
CHAN	CHEUNG	FU
CHAN	CHI	HOI
CHAN	GLORIA	YU
CHAN	JUDY	KAPUI
CHAN	KENDRICK	MARC
CHANDLER	PETER	
CHANG	HOA-CHUN	
CHANG	JAMES	SHO FINE
CHANG	JASON	K
CHARBIN	ELIANE	MARIE FRANCOISE
CHASE	JOANNAH	CHRISTINE
CHASE	KENNETH	HUESSY
CHATELET	AUDREY	LOUISE

Last name	First name	Middle name/initials
CHEDAL VAN HANDEL	CHRISTIANE	ANGELA
CHEE-A-TOW, JR	RODNEY	WAYNE
CHEHABEDDINE	SAEB	FAROUK
CHEN	ADELE	PIN
CHEN	DAR	CIN
CHEN	ELINOR	JUIHUNG
CHENG	ERIC	WING HANG
CHEUNG	JOSEPH	YEE SHUN
CHIN	SHERMAN	C
CHIRATHIVAT	ISAREIT	
CHIU	HERBERT	
CHIU	YEE	YING
CHO	ALBERT	
CHO	YOON-JE	
CHOI	IAN	GAR-WAI
CHOU	FFU	HSIANG
CHOW	ANTHEA	
CHOW	EDWARD	KYAIT HING
CHOW	ELAINE	
CHUA	ANDREW	WAI KIONG
CHUA	CAROLINA	TANG
CHURCH	CATHERINE	SUE
CIECHANOWSKI	YOLANTA	MARYA ZOFJA
CLANCY	PAULA	
CLARK	CHARLES	MATTHEW FLINTOFF
CLARK	MARY	ELIZABETH
CLARK	MATTHEW	BERNARD
CLARK	MICHAEL	THOMAS
CLARKE	JOHN	ELTON
CLARKE	RACHEL	SARAH
CLASSEN	BRIAN	JOHN
CLEMENTS	ANDREA	JANE
CLYBOUW	MARGARETA	ANTOINETTE P
COCKBURN	MEGAN	JANE
COFFMAN MAYER	BARBRA	ANN
COFLIN	JAY	HUGH ALEXANDER
COGHLAN	ALEXANDRA	
COHEN	TATIANA	
COHRS	CHRISTOPH	
COLE	JENNIFER	MARGARET
COLE	KATHERINE	LYNNE
COLLAUD	CHRISTOPHE	SAMUEL
COLLIN	HEINRICH	HANS RUDOLF
COLLINS	LAURA	LYNN
CONNELLY	GILLIAN	LESLEY
CONNER	OLGA	VALERYEVNA
CONNORS	BRENDAN	MICHAEL
CONNORS	JOSEPH	MICHAEL
CONRAD	MONIQUE	LOUISE
CONTRERAS	ANGEL	BENNETT
COOK	CHERYL	ELLEN
COOK	DOYLE	BLAKE
COOKE	CAROL	MASZKA
COOPER	ADRIAAN	ANTONIUS
COOPER	JACQUELINE	AVISE
CORBETT	BRIAN	O
CORBETT	MAX	STUART
CORDOVA	GABRIEL	LEON
COREY	EDWARD	ALBERT
CORFF	SONDRA	CAROL
CORRADIN	ERIC	MATTEO
COSSON	NICHOLAS	
COSTELLO ROMIG	CLAIRE	
COTTIER	MARIE	BERNADETTE
COUDARI	SEVILLA	VALENTINE
COURTENAY	CHARLES	PEREGRINE
COWIESON	NANETTE	STEWART
COX	CHRISTIAN-ANN	FRANCES
CREAMER-BRAND	COLLEEN	
CREASE	MALCOLM	ANDREW
CRISTOFARI	JEAN	
CROOM	TIANA	ASHONI
CROSETTI	PASCAL	GILBERT
CROWELL	PETER	OTFRIED

Last name	First name	Middle name/initials
CROWLEY	DALE	MICHAEL
CUA	SOLANA	LIBERTAD
CUSACK	MAUREEN	
CUTMORE	GEORGE	
DA ORO	RENAE	DIONNE
DALOZE	VINCENT	GILBERT
DANZER ERNST	ANNA	MAGDALENA
D'APICE	MARCUS	ALLAN PAUL
DARYANANI	ASHVIND	MOHAN
DAVEY	GINA	PULEO
DAVEY	JILLIAN	GLENNA
DAVIDSON	NORMA	FAYE
DAVIES	ANASTASIA	GABRIELLA
DAVIES	VAUGHN	LINDLEY
DAVIS	KIRK	JAMES
DE AQUINO	STEPHEN	MONTENEGRO
DE BAPTISTA	CAROLINA	GUIMARAES
DE BOER	IJSBRAND	
DE BRABANDERE	ASTRID	BEA
DE CAPITANI	OLIVER	CHRISTIAN
DE GALBERT	EMMANUEL	PATRICK MARIE
DE GRAFFENRIED	CAROLINE	HELENE
DE LA CHEVRELIERE	DOMINIQUE	LOUIS AYME
DE LA CUESTA	IMANT	ODIN
DE LA GUARDIA	ILEANA	GRACIELA
DE LA GUARDIA LINARES	LORENA	ISABEL
DE LA MORINIERE	TANNEGUY	MARIE LE LIEVRE
DE LA VEGA	CHRISTOPHER	ANTHONY
DE LIEDEKERKE	CHARLES	ANTOINE
DE LOOF	KOEN	ARNOLD EMIEL
DE MESQUITA	SYLVIA	TESSA GOMEZ
DE SCHEPPER	JOHAN	JOZEF A
DE SENARCLENS	CAROLE	
DE SUAREZ D'AULAN	KRISTEN	MARY
DE VENECIA	CHRISTOPHER	PEREZ
DE VIGNIER RILEY	KEVIN	
DE ZEVALLOS	MERCEDES	ORTIZ
DEAK	JOSEPH	STEPHEN
DEAN	ROY	NICHOLAS
DEDERICHS	FRANK	PETER
DEEKER	KATHLEEN	MAY
DEESON	TIMOTHY	WILLIAM
DEGROOT	JOANNE	
DEHALLEUX	CHLOE	CHRISTINE
DEIGHTON-SMYTHE	ZOE	MAY
DELAJARA	RAPHAEL	HYRAM
DELAMADELEINE-TILBURY	FLORENCE	YVONNE MOIRA
DELEAMONT	PIERRE-YVES	
DELISLE	LUCIE	MADELEINE
DELMONTE	PIERO	
DELORME	MELISSA	MARY
DEMAY	LINDA	FOLSOM HAIGHT
DEMCHICK	PAUL	HERMANN
DEMIRAY	TURHAN	HILMI
DENELL	ANGELA	INA
DENTON	ALAN	ERIC
DEPASQUALE	ANTHONY	RICHARD
DERCOLE	MARCO	OLINDO
DERRIEN	NATHALIE	RENEE LOUISE
DERUSHA STAFFORD	DEBRA-ANN	MILDRED
DETTLING	PAUL	PIUS
DEVOGEL	DOMINIQUE	CHRISTINE
DEVOR	AARON	H
DI BERARDINO	KRISTEN	ANN
DI MARE	MARCY	ANN
DIEBSCHLAG	PRYDERI	CLARE
DIETRICH	CHRISTOPH	CARL
DIETRICH	GILLES	NICOLAS
DIETRICH	LISA	MARIE
DIKE	DEBORAH	ANN
DIXON	LESLIE	HOPE
DOCKRELL	DERVILA	MARIE
DODDS	STEPHANIE	ELIZABETH HILTON
DOMMASCHK	ANNA	CAROLINE

Last name	First name	Middle name/initials
DOORNBOS	MELLANY	FOKKO
DOUGLAS	JOSALEE	
DOUVILLE	LUCIE	
DOYLE-SCHELLER	CAROL	ELISABETH
DROUIN	RENEE	
DRURY	CAROLYN	SAMANTHA
D'SOUZA	MARY	GABRIEL
DUBASH	LALEH	ARDESHIR
DUCHARME	MARIE	MICHELE
DUECK	KAYLEEN	L
DUFOUR	JEAN	RICHARD
DUISENBERG	PIETER	JACOB
DUNN	CLAUDETTE	ALMA
DUNNE	THOMAS	PATRICK
DUPONT	REBECCA	ANNE
DUROVIC	ILIA	
DUTTON	JESS	
DUZDABANIAN	GUY	HENRI
DYER	EMILY	PATRICIA
DYMENT	STEPHEN	JOHN
EADS	SAMUEL	GARRETT
EADS	STEPHEN	GARRETT
EARDLEY	ALAN	A
EAST	SOPHIE	VIRGINIA ADDISON
EBERSBERGER	LAURA	KAY
ECHARREN	ROSMARIE	SILVIA
ECKERT	LOWELL	EDGAR
ECKLE	KAREN	LEE
EDWARDS	ERIN	MARGARET
EGGENBERGER	CHRISTINA	LOUISE
EGGENSCHWILER	THOMAS	
EGGER	JACQUELINE	ELIZABETH
EGOLF	SUSANA	PEVERINI
EICHENBERGER	HAZEL	A
EICHENBERGER	PATRICK	
ELDER	NICHOLAS	WILLIAM
ELLIS	NICHOLAS	RAPHAEL
ELMANAWY	HANY	ADEL
ELNAGGAR	AHMED	KHALED
ELSA	MAXIMILIAN	STEWART D
ENDARA	CHANDRI	ALYNE
ENDERLE	WENDY	CHAMPNEY
ENDZWEIG	CHAIM	JACOB
ENGELHARDT	MARKUS	JOCHEN
ENGLER-GERSHT	NOGAH	
ENGLISH	AMANDA	
EPSTEIN	MARCIA	JENNETH
ERCHADI	ANITA	MARIA AHADZADEH
ERTL	ANDREW	MAGNUS WALTER
ERTL	JOACHIM	PHILIPP ALEXANDER
ESQUIBEL	AITOR	
ESQUIBEL	ANA	
ESTORICK	MICHAEL	JACOB
EVANS	CAROLYN	RUTH
EVANS	DIANA	HEATHER
EVANS	LORETTA	MAE
EVANS	WILLIAM	B
FAERBER	KIMO	JULIAN
FAERBER	LEON	CIDNEY
FAERBER	SILAS	MELVIN
FALK	DIANA	JEAN
FARRELL	ALANA	CHRISTINA
FARSEROTU	JOHN	ROLAND
FATSIS	THEODORE	MICHAEL
FEHR	ERIC	R
FEHR	JURG	PETER
FEINER	ADAM	SCOTT
FELDMAN	DANIEL	RIEVAN
FELDMAN	NAIDA	A
FELDMAN	TEVY	RYAN
FENG	HUINING	
FERLAND	ANDREE	GISELLE MARY
FERLAND	JOCELYNE	MARIE
FERMAN MOORE	CAROLINE	LUCY

Last name	First name	Middle name/initials
FERNANDEZ GARZA	JORGE	HUMBERTO
FINDLING	EDOUARD	THOMAS
FISCHER	ALEXANDER	KENCANA
FISHER	ANTHONY	KENT
FISHER	JORDAN	NEIL
FITZ	SEBASTIAN	REINHARD
FLACH	DIANE	ELIZABETH
FLANNERY	DANIEL	JOHN
FLATLEY	CHLOE	MICHAELA
FLESHMAN	DAVID	ROY
FLETCHER	JESSICA	ANN
FLORESCU	MADELEINE	LAUREN
FOLEY	PAUL	FRANCIS
FONG	JEFFREY	WILLIAM
FORESTER-MUELLER	SANDRA	MANUELA
FORSYTH	MARGOT	FRANCES KONTAK
FOSTER	ALICE	RITA
FOX	ROBERT	LOUIS
FRAMINGHAM	DALE	WAYNE
FRANK	BRANDON	MATTHEW
FRANKFURTER	ERNA	
FRANKLIN JR	BOBBY	JOE
FREEMAN	RHONA	ROSS
FREEMAN	SHERRILL	BROOKE
FREY	PERRY	
FREYTAG	RICHARD	BERND
FRIGAN	ANITA	LOUISE
FRITSCHI	SELINA	JENNIFER
FROIDEVAUX	ALAIN	MICHEL
FRYDBERG	JANA	RUTH
FUEGER	MONIKA	CORNELIA
FUGERE	ROBERT	WARD
FUKUTOME	SOPHIE	ASTA
FURMAN	SYLVIA	
GAECHTER	CAROLE	JEANNE YVONNE
GALEMMO	JOSEPHINE	HELEN
GALLAND	JULIEN	ALEXANDRE
GALLI-ZUGARO	CRISTIANO	
GAMBLE	CLAUDETTE	LOUISE
GARCIN	EMMANUEL	
GARZA HERRERA	ANDRES	ENRIQUE
GASTALDON	ROBERTO	
GAUDISSART	XAVIER	PAUL
GEDDES	JILL	
GEISSBUHLER	ESTELLE	ALINE
GEISSBUHLER-MORF	JACQUELINE	LILLIAN
GENDROT	BENOIT	NORBERT
GERBER-BAUMGARTNER	SANDRA	ANETTE
GERITS	BENOIT	JOSEPH
GERMUNDSON	STEPHAN	NILS
GHEKIERE VAN LANDUYT	FRANCESCA	
GIACOMINI	MARIE	RENEE
GIBBONS	CLARE	ANTONIE
GIBSON	CHRISTOPHER	EDWARD JESUS
GIESENBERG	ALEXANDRA	
GILBERT	CANDACE	BENTON
GILBERT	CAROL	ANN
GILES	JENNIFER	GARRATT
GILLETTE PARDOI	LINDA	JEAN
GILMOUR	JOHN	
GILPIN	LYNDA	ANN
GIROLAMI	PHILIPPE	FRANCIS
GIUBELLINI	ALICE	
GLADSTONE	MICHAEL	SEBASTIAN
GLASTRA	TACO	HENDRIK
GLOOR	PETER	
GOEMAERE	ELODIE	
GOENKA	PAWAN	KUMAR
GOHARI	SARAH	GARGASH
GOINS	RODNEY	KENNETH
GOLD-MIRE	MICHELLE	HEATHER
GOLDSTEIN	GAYLE	ROSE
GOMES	ANA	PAULA MIZUTA
GONZALEZ	TOMAS	ROBERTO

Last name	First name	Middle name/initials
GOOD	ROSEMARY	ANNE
GOODELL	ROBERT	FREDERICK
GOODWIN	MAUREEN	ELIZABETH
GORICK	GREER	HELEN
GOTZ	CHRISTINE	MARIANNE
GOULD	RUTH	LEONA
GRADISHER	JAMES	JOSEPH
GRAF	SEBASTIEN	PIERRE
GRANT	VIRGINIA	LILY
GRAVES	STANLEY	MORTON
GREGG	JOANNE	
GRIFFIN	CHARLES	DANIEL
GRIFFIN	JILL	ST. CLAIR PRATT
GROENENDIJK	HENDRIK	ARIE
GROPIUS	PETER	KLAUS
GROS	ALEXANDRA	MATTMANN
GROSVENOR	GABRIELLA	MARGUERITE
GRUENDORFER	STEPHAN	WILLIAM
GRUENIG	DOMINIK	FELIX
GRUNDY	NICHOLAS	MORRISON
GUILARTE	YUVIA	NAOMI
GULISEK	TOMAS	
GULISKOVA	PATRICIA	
GURNANI	NEHA	AROON
GUT	ALINE	OPHELIA
GUT	ALTHEA	MELANIE
GUT	ANAIS	CHARLOTTE
GUTMAN	ANTHONY	JOHN CHARLES
GYGI	KIMBERLEY	VICTORIA
GYLES	BRIAN	ROBERT
HAAG	INGER	
HAAS	PETER	GUSTAV
HADDAD	FARES	NASRI
HAEFELI	ANDREAS	
HAEGELI	ANOUK	SIMONE
HAERTSCH	EDITH	
HAERTSCH	PETER	
HAESSLER	GABRIELA	SYLVIA
HAFIZOVIC	KAMBER	
HAIDAR	AYA	
HAMA	ANGELA	MICHIKO
HAMANN	DANIEL	JOHN
HAMBURGER	NIKOLAUS	PETER
HAMERSLEY	LESLIE	CARRE
HAMMERSCHMIED	HANS	HEINRICH
HANNY VOLMER	SABINE	
HARP	DONNA	LYNN
HARRELL	REGINA	LEIGH
HARRINGTON	BRANDI	JO
HARRINGTON-JONES	ROBERT	DAVID
HARRIS	DORIS	JEAN
HARTMANGRUBER	MICHELE	MARIE
HARTMANN	SONIA	IVANNA
HARTWICK	PHILIP	THOMAS
HAYES	ANNA	MAGDALEN
HEAD	THOMAS	HARRISON
HEALY	ALEXANDRA	
HEBBERT	JEANETTE	BYNES
HEHR-DESI	ELIZABETH	WHITAKER
HEINRICHS-GALE	ANNA	MAE
HEINZER	RAPHAEL	CHARLES
HEINZER-IMMOOS	SILVIA	THERESA
HEITZER	ELIZABETH	
HELD	DOUGLAS	FREDERICK
HELLER	EVA	REGULA
HEMME	ILSABE	ISA
HENDRICKX	MICHAEL	EDWARD
HERRON, JR	WILLIAM	ROBERT
HERSCHKOWITZ	ELINORE	ROSE
HERSMAN	FRANK	ERIC
HESSLER-BITTL	DIANE	PATRICIA
HICKS	BRIAN	MICHAEL STEPHEN
HICKS	RONALD	GENE
HILL	CHRISTOPHER	ALEXANDER

Last name	First name	Middle name/initials
HILL	PAMELA	SUSAN
HILLIARD	RICHARD	SCOTT
HINCH	HARRY	BRITTREN
HO	DEBORAH	MAI-JONG
HO	LEO	
HO	RICHARD	CHI YUNG
HODDER	ELIZABETH	ANNE
HODDER	LESLEY	ROSE
HODSON	PATRICIA	MARGARET
HOENIG	GREGORY	ANTHONY
HOESSLY	CHRISTIAN	MARTIN
HOFBAUER	NANCY	JEAN
HOFMANN	JASMINE	TERESA
HOHL	EDMUND	HARRY
HOLCOMB	RICHARD	STEWART
HOLD	ELEANOR	COTTLE
HOLLAND	CHRISTINE	MIRANDA
HOLTAWAY	GERALD	THOMAS
HOLTER	ANNE	LISE
HOLTER	KRISTIN	MARIE
HOLTZMAN	MARC	LAWRENCE
HOME	JANET	
HOMSANY	EDMOND	MAURICE
HONDERICH	ROBIN	CHRISTIAN GOVIER
HONE	DIGBY	GIES
HOOKS	JOHN	MICHAEL
HOPE	ALEXANDER	JAMES
HORNG	DAVID	
HOTTINGER	JULIAN	THOMAS
HOTZ-REUSSER	CLAUDIA	JOANNE
HOWARD	DAVID	PATTERSON
HOWAT	JUSTIN	KAY
HSIN	FANNEAU	CHING
HSU	EN-CHI	EMMANUEL
HU	PHILIP	QI XING
HUANG	ALICIA	LING
HUANG	DOROTHY	JANE
HUANG	TIMOTHY	C
HUBER	HANS	
HUELS	PETER	MAX
HUERTA	PAULA	
HUGGINS	JOHN	GERARD
HUGHES	BRANDACE	ALYCE
HUGHES	GINA	
HUIE BRICKERT	CLAUDE	YVONNE ODILE
HUNT	MARY	ELIZABETH
HURLIMANN	CHRISTINE	NICOLE
HUTCHINSON	DANIEL	BROCHWICZ
HUTCHISON	VIVIENNE	AUDREY
HWANG	CURTIS	
IERVASI	ARMANDO	EMILIO
ILLING	CHRISTINA	MARIE
IMAYOSHI	LAURA	TODD
INCHAUSTI	MARIA	DEL PILAR
INNES	JAMES	DONALD
IRRIZARRY	SARAH	ANGELIKA
IRVINE	ARTHUR	BARRY
IRWIN	THOMAS	WILLIAM
ISELI	FRANCE-LAURENCE	LINDA PATRICIA
ITESCU	SILVIU	
IVERSON	VICTORIA	MARIE
JACOBS	SARAH	J
JAEGER	SUSAN	ELIZABETH
JAGGER	WILLIAM	STALLARD
JAGGY	PETER	JOSEPH LEO
JAIN	ALPANA	
JAKOB	CYPRIEN	LYLE
JAKOB	DANIEL	DANNY
JAQUET	CELINE	DIXIE
JARVIE	CHRISTINE	MARIE
JENKINS	MARYALYCE	REED
JENNER	VIRGINIA	ASHLEY
JENNI	VANESSA	BLAKE
JEWEL	MARK	HERBERT

Last name	First name	Middle name/initials
JOHNSON	KIRSTIN	ELIZABETH JEFFREY
JOHNSON	MICHAEL	PETER
JOHNSON	ZACKERY	MELVIN
JOHNSTONE	DIANA	MAUDE
JONES	ALISON	
JONES	DEBORAH	CECILY
JONES	ENRIQUE	PIEDRA
JONG TO	SARAH	WING
JOOS	CASSANDRA	LOUISE
JORDAN	JOHN	EVERETT
JOSEPHSON	JOYCE	ELLEN
JOUMAA	ALISON	DARRAH
JOVANOVIC	TRISTAN	MARK
JUENEMANN	ERIKA	
JULIEN	BRIANNA	M
JUNG	DO	HYUNG JOSHUA
JUNOD PERRON	NOELLE	ASTRID
JUTER	KLAS	
KAMARUDDIN	SAMIA	
KAMINSKI	LYNN	HOPPE
KANG	ESUN	
KANG	MICHAEL	
KANKE	DOROTHY	LYNN
KANTILAL	RAJESHKUMAR	NARESHCHANDRA
KAO	ALLEN	SHIH-CHI
KAULISCH	AXEL	MATTHIAS
KAZIM	FARYAL	GARGASH
KEATING	AMBER	ARLENE
KEATING	FREDERICK	MICHAEL
KEEVIL	SUSAN	JILL
KELLS	ZOE	SAMANTHA
KEMP	ROBERTA	KIM
KEMPE	PETER	BENJAMIN
KENNARD	TERESA	CHANDOS
KENNINCK	SARAH	PAULINE
KENT	ELIZABETH	ANNE
KERR	CARRIE	DUNCAN
KERR	MARIE	LORRAINE
KESARLA	JYOTHSNA	
KESTIN	MARK	
KHOURY	RAMSEY	GEORGE
KHURI	AL	ZIYAD
KILIAN II	LUDWIG	ALLEIN
KIM	ANDREW	SUNWOO
KIM	JONATHAN	GIANT
KIMURA	MARIANNE	
KING	DAVID	MICHAEL
KINGHORN TAENZER	APRIL	LAURA
KIRALY	SUZANNE	
KLASSEN	BRENT	DOUGLAS
KLEES	BRADLEY	
KLEINE	HANS	GEORG
KLINE	PATRICIA	LYNN
KNELL	STEFAN	ROLF
KNIGHT	RICK	MALONEY
KNIGHTS	SANDRA	DENISE
KNOBEL	REGINA	
KNOCKAERT	VERONIEK	MONIQUE ESTHER
KOBELT	GEOFFREY	MICHAEL
KOBELT	JENNIFER	MICHELLE
KOBELT HAUGE	KAREN	ELAINE
KOBLET	MARTIN	ROBERT
KOCH	LORNA	IRENE
KOEHLER	EVAN	GRANT
KOENIG	JOAN	ANNE
KOHLER	SANDRA	JENNIFER
KOLFF	ADRIAAN	QUIRIJN
KONG	CHARIS	CHI YAN
KONG	JANESSA	HUIXIAN
KONG	NIKOLAS	
KOPPEN	HENRY	ANDREAS
KREITZER	LINDA	MARLENE
KRENGEL	ELIANE	RUTH
KROEHN	HELEN	NORMA

Last name	First name	Middle name/initials
KROHN	TAYLOR	AMANDA
KUBBA	LAITH	JOHN
KUBBA	WAYIL	
KUEI	MICHELLE	MIN-HSUAN
KUHL	SIMONA	JANINE
KUHN	STEFAN	
KUNST	MARIA	ANNA CONSTANTIA
KUNZ	CLIFFORD	FELIX
KWOK	CLARENCE	BRYANT
KWOK	STEPHANIE	HIU WAI
KYRIACOU	DEMETRIS	P
LACROIX	ANNE-SYLVIE	
LAD	HITESHKUMAR	BHAGVANJI
LAELY	RIA-LADINA	SANDRINE
LAFLAMME	MARTHA	EILEEN
LAI	CHI	KIN WILLIAM
LAIK	MONICA	
LAKHANI	FATIMA	
LALJI	FAAIZA	
LAM	CRYSTAL	THAO
LAM	MANDY	JOSEPHINE
LAMOTHE	JEREMY	MICHAEL
LANDES	SUSAN	LARSON
LANDES III	PAUL	TODD
LANDIS	ANDREAS	MARIUS
LANGILLE	JUDITH	DIANE
LANGLOIS	NATALIE	DENISE
LANIER	SARA	CRAIG
LARRINAGA	ADAM	CHRISTOPHER
LARRINAGA	STEPHANIE	NICOLE
LAU	JASON	
LAU	JEROME	
LAU	REBECCA	SEE-KIT
LAW	KEVIN	KA LUN
LAZZARELLI VETTIGER	KIM	LOUISE
LEBELLE	CLAIRE	HELENE
LEE	AARON	HANOOL
LEE	ANDREA	YING
LEE	BRIAN	
LEE	CAROLINE	
LEE	CHAN	YOUNG
LEE	CHIH-KUNG	
LEE	CHUL-JOO	
LEE	EUI	NAM
LEE	JIN-SOO	
LEE	JOON	H
LEE	JOSEPH	
LEE	JULIAN	DAVID
LEE	MICHELE	YEEUN
LEE	RICHARD	JOO HWAN
LEE	ROANNA	OI WEI
LEE	RYAN	HIAN HAO
LEE	SANGKYOUNG	
LEE	TERESA	YUAN NING
LEEK	SUSAN	ELAINE
LEENDERTZ	VIKTOR	NIKOLAUS
LEHMANN	KAREN	PAULA
LEIMER	RENATA	ELIZABETH
LEMER	MIRIAM	MANDA
LEONG	KATELYN	WAN-YI
LEROY	PEGGY	CARINE
LEUKERS	HANS	CHRISTIAN
LEUNG	YVONNE	WANG
LEUTHOLD	NICOLE	ANNE
LEWANDOWSKA	ELIZA	
LEWIN	CARMEL	KEREN
LEWIS	ROBERT	ALEXANDER
LEZIUS	MATTHIAS	AXEL PHILLIP
LI	ANNA	YAU YU
LI	VICTORIA	KENG YEE
LIAO	MING	
LIAW	JANIE	
LIDDELL	RAE	MARIE
LIEDL	DAWN	VALERIE

Last name	First name	Middle name/initials
LIGHTFOOT	ANN	MUIR
LIM	SHENG	HUI
LIM	SUZANNAH	BEE HWA
LIMOGES	ANDRE	JEAN
LIN	HSIN-PEI	
LLAMANZARES	TEODORO	MISAEL DANIEL
LLOREDA	MAURICIO	
LO	AGNES	
LOEB	STEVEN	IRAI
LOH	ASHLEY	SHIHUI
LOPEZ	ROBERTO	JAVIER
LORENZO	JOSEPH	HENRY
LOW	LUIS	PATRICK
LOWENTHAL	JAN	MAUREEN
LUCCIOLI	CLAUDIA	MARIA
LUI	JONATHAN	JUNYAN
LUNNY	WENDY	HELEN
LUTTERBECK	DEREK	STEVEN
LYEN	STEPHEN	MARK MENG TUCK
LYONS	CHRISTOPHER	JOSEPH
MA	JUI-CHEN	RICHARD
MAARIJ	NURISHA	AFFA
MAC NAUGHTON	CHRISTOPHER	ANTHONY
MAC NAUGHTON	LUKAS	MICHAEL
MACARAS	JESSICA	ERIN
MACDONALD	LINDA	DAVIS
MACDONALD	LINDA	SUSAN ELLIS
MACH	FRANCOIS	ALEXANDRE
MADANAT	SAHAR	ANIS
MADJELISI	ALYSSA	BINTE ALI
MADURO	LYNDA	FIDANQUE
MAEHLY	MICHAEL	ANDREAS
MAHLER	KRISTINA	ANDREA
MAINWARING	ANDREAS	PAUL
MAK	ESTHER	EN-HUA
MALAMA	ANNINA	DELIA
MANZ	JOELLE	SARIT
MAPOLES	SHAWN	LOUIS
MARANTZ	KILIAN	
MARCHAND	KRISTIN	
MAROZEAU	MAUREEN	ODETTE KATHERINE
MARR	ANNE	
MARSH	INGE	ANNEMARIE
MARTEL	CARLOS	ERIK
MARTIN	LESLIE	ELLEN
MARTINEZ	AZUCENA	
MASON	DAVID	HERBERT RICHARD
MASON	WILLIAM	BRUCE
MATHIEU	CHRISTOPHER	PAUL CHRISTIAN
MAY	JONATHAN	STONE
MAZZEI	EUGENE	SAM
MCCORMICK	EDITH	ELLEN
MCCORMICK	FINLAY	ADEN
MCDONALD	GAIL	HELEN
MCDONALD	SHEILA	MAY
MCDONALD	SUSANNE	
MCDOWELL	TERESA	RACHEL
MCGONIGAL	DAVID	IAN
MCGUIRE	MARTIN	WALSH
MCKAY	DAVID	ANDREW
MCKINLEY	REBECCA	KAE
MCLOUGHLIN	KEVIN	MICHAEL
MCMECKAN	DOUGLAS	HUGH
MCVICKER	JOHN	ALEXANDER
MEAN	NATHALIE	BEATRICE
MEANEY	LEONARD	ERNEST
MEARS	REBECCA	ADAMS
MEHTA	HINA	SACHIN
MEIER	DANIEL	ERNST
MEINERS	RAYMOND	GERHARD
MENDEZ LLERA	ROSA	ANA
MERCIER	CAROLINE	HELENE
MESSICCI, JR	JOHN	ANTHONY
MEYNARD	ANNE	LAURA

Last name	First name	Middle name/initials
MICHL	CHARLES	JOSEPH
MILANESE	PAUL	CHARLES
MILLER	KEITH	LAWRENCE
MILLONIG	RAFFAELA	CHRISTINA
MIMS	CATHERINE	HENRIETTE JACQUELINE
MINCHIN	KATHLEEN	MAIRE
MINGARD	SUSAN	CLARE
MIRE	CHARLES	ALAN
MIRO	PAULO	
MITCHELL	AITEINA	
MITCHELL	MARTHA	ANNE
MITICH	MICHAEL	ANDREW
MIZZELL	JANE	ELLEN
MOCARQUER	SEBASTIAN	
MOECKLI WEBSTER	ROBIN	KRISTEN
MOFFAT	WANDA	MAE
MONTAGU-WILLIAMS	REBECCA	KAREN
MOORE III	WILLIAM	RAYMOND
MORALES	DIANE	
MOREN	SHARON	ANN WINKLER
MORGAN	EUGENE	LAWRENCE
MORRIS	CATHARINE	JOACHIM
MORRISON	DONALD	SCOTT
MORTON	MELANIE	CLAIRE
MORTON	PHILIPPA	JANE HANDYSIDE
MOSCA	NICOLA	
MOSKOVITZ	DAVID	ARI
MOSSERI-MARLIO	JENNIFER	OLIVIA
MOUYNES	RAMON	CRISTOBAL
MUELLER	ERIC	MATTHEW
MULDER	CARL	FRANK
MULVANEY	KEVIN	JAMES
MURDOCH	COLIN	DOUGLASS
MURDOCK	CHRISTOPHER	DONALD ROSS
MURDOCK	JOANNA	ALEXANDRA BOUCHER
MUTTITT	SARAH	EMMA
NABEEL AL-MANNAE	ABDUL	RAHMAN
NAEF	CHANTEL	AVALON
NARISHKIN	MARINA	NATHALIE
NASSIER	MIHAAD	M
NAZARCHUK	COLLEEN	LOUISE
NEILL	JOYCE	EILEEN
NELLIS	JULIE	ANN
NELSON	BARBARA	MANN
NELSON	COREY	ROGER
NELSON	DIANNE	ELIZABETH
NEUHAUS	GABRIELA	MARTINA
NEWMAN	LEAH	ALEXANDRA
NEWTON	BRIAN	JOHN
NG	EVA	YEE-WAH
NG	NICHOLAS	TIAN JUN
NG	YUK	CHING CHAN
NICHOLSON	LINDA	JOAN
NIGGLI	BRYAN	DENNIS
NIJE	KAREN	JACQUELINE
NIJE	MINKE	LIESBETH
NISBET	EVEONNE	MERLE
NULTY	WILLIAM	GEORGE
OBERDORFER	HENRY	GEORG
O'BRIEN	STEVEN	JEFFREY
O'BRIEN	WILLIAM	HAY
O'DOWD	DAVID	EDWARD
OETKER	CARL	CHRISTIAN
OH	MYUNG	HEE
OHTA	TOMOKI	BRIAN
OKEEFFE	EILEEN	MARGARET
OKUYAMA	MUTSUMI	
OLDSBERG	BENGT	VIKTOR
OLLIVIER	HELYETT	HELENE
OLSEN	PHILIP	JOHN
OLSON III	MELVIN	PORTER
OMALLEY	MARY	DEIRDRE
ONG	CODY	WAI
OPPRECHT	JONATHAN	

Last name	First name	Middle name/initials
ORAA	ISABEL	LEONORE
ORIOL	FELIPE	AUGUSTO
ORMSTON	DOMINIC	PETER
ORNATOWSKI	DANIEL	KEI
OSTERWALDER	RACHEL	BETTINA
OSWALD	PHILLIP	DOMINIK
OTAKY	AMEER	NICOLAS
OTTMANN	OLIVER	GERHARD
PAIK	DONNA	
PAN	GEORGE	
PANG	CHIN	HENG RYAN
PARK	CHAN	JOO
PARK	REGINA	EONBYEL
PARMAR	JENNIFER	DAVIS
PASCHE	GENEVIEVE	CLAIRE
PATEL	INDUBEN	BHANUBHAI
PATEL	MANISH	
PATEL	SHARAN	MEHUL
PATEL	SHIVAM	MEHUL
PATERNOGA	ISA	
PATIENT	MARIE	CARINNE DENISE
PAWELEK	RICHARD	ANDREW
PEARSON	ROBERTA	ELLEN
PECORELLA	ALEXANDER	GABRIEL
PEETERS	KAREN	KRISTIN
PEGG	TARALIN	ANN
PENNEY	CHELSEA	ELIZABETH
PEREIRA	ANTONIO	
PETER	MARKUS	ANDREAS
PETER	OLIVER	JOHN
PETIT	MARK	ERWIN
PETTMAN	MARK	CHRISTOPHER
PIANETTI-BERTHOLDS	IRENE	
PICCIOTTO	GRACIA	
PICKETT	STACIA	SARAH
PILCHER	TIFFANY	MARIE
PLANT	DANIELLE	MARIE
PLANTENBERG	GWENDOLYN	RENSKE
PLATT	ROBERT	WILLIAM
POLLET	JEAN	CLAUDE
POPOV	VALERIU	
PORSBERG	VANESSA	
POST	JOANNE	NATALIE
POSUS	NOEL	TIMM
POZZA	EVA	MARIA
PRANKERD	JOANNE	MARIE
PREINDL	LUCAS	MARKUS
PRESTON	EVELYN	LEIGH
PRETOR-PINNEY	GILES	WINTHROP
PRINDLE	LYNN	VIOLA
PROBER	NANCY	GAIL
PROBST	ALIA	SUZANNE
PROBST	VALERIE	
PURCELL	JENNIFER	SARAH
PUSHMAN	ROBERT	DUNCAN
QIRBI	RIYAN	LABEEB
QUAN	PETER	PHILIPPE
QUANCE	MARILYN	JEAN
QUEEN	ALVIN	LEROY
RAJABALI	NISHA	AMIRALI
RAMU	PRIYA	
RANT	JANET	MARIE
RAVINDRAN	KUPPUSAMY	
RAYNERI	MARIA	ELENA
REAL	EDUARDO	ANTONIO
RENFRO	CHRISTINE	ANN
RESCH	ANNE-KRISTIN	
REUBEN	DAVID	ALEXANDER
REUSSER	PETER	JOHN
REVKIN	SUSANNAH	K
RIBARDO	RICHARD	JAMES
RICKARD	KIMBERLEY	ANNETTE
RIKER	ROBERT	RAY
ROBERTON	SUSAN	RACHEL

Last name	First name	Middle name/initials
ROBERTS	EMILY	CATHERINE
ROBERTS	MARGARET	ANN
ROBERTSON	ANDREA	LEIGH
ROBINSON	MARLENE	CHERYL
ROBINSON	SVEND	JOHANNES
RODENBERG	BASTIAAN	ALEXANDER
ROSENBAUER	JUDITH	URSULA
ROSKELLY	SUSAN	ALISON
ROSS	JAMES	ALEXANDER
ROSSI	DONNA	R
ROTSAERT	CYNTHIA	
ROTSTEIN	BENJAMIN	ABBA
ROX OGINO	MELISSA	MIYUKI
ROY	JANICE	JOURDAN
ROY	RONALD	PAUL
RUBLI NIEBEL	ANDREA	CORNELIA
RULE	GEORGE	BENJAMIN
RUMSEY	SHARON	RAE
RUNGTA	ANIL	K
RUSS	JOEL	BERNARD
RUTHERFORD	MICHAEL	JAMES ANTHONY
RYERSON	OVE	KJELL
SAARINEN	GLADYS	ODERAY
SABAN	ISAAC	MOSS
SABATE	FRANCOIS	
SAFFER	MICHAEL	IAN
SAHENK	DEFINE	DIANNE
SALAZAR	SONIA	VINDAS
SALLOT	JEFFRY	GEORGE
SALOMON	JOHN	MORGAN
SALVARY	ROXANNE	THERESA
SANDEL	YISROEL	
SANDERS	TIMOTHY	PATRICK
SANFORD	ROBERT	GENE
SAPIR	JACQUELINE	ESTHER
SARASIN	LUCY	VICTORIA GRACE
SARASIN	NICHOLAS	JAMES ERIC
SARASIN	ROBERT	ANTHONY WILLIAM
SATO	YURI	
SAUNDERS	LINDA	CAROL
SAUTER	KYM	MARTINE
SCHAAD	ALEX	ERIC
SCHACHTER	KAI	GABRIEL
SCHAEPPI	SANDRA	ELISABETH
SCHAICH	SIMON	ANDREAS
SCHAT	ALIDA	DEBORAH
SCHELLER	LORIANNE	NISSA
SCHEPENS	ANGEL	LORRAINE
SCHIEMANN	NATALIE	KATHERINE
SCHIFF	JONATHAN	JAMES
SCHITTKO	CHARLOTTE	MARIE
SCHLAURI LEBER	BARBARA	ELENA
SCHLOSS	SONDRA	MARCELLE
SCHMEHL	OTMAR	
SCHMID	CATHERINE	ANN
SCHMID	IRENE	HEDWIG
SCHMIDLIN	LISELOTTE	
SCHMIDT	DIERK-STEFAN	
SCHMIDT	PAULA	CHRISTINE
SCHMIDT	RUDOLPH	PAUL
SCHNEEBERGER	RALPH	ERNST
SCHNEIDER-WENK	CLAUDIA	
SCHNEIDEWIND	SIMONE	BETTINA
SCHOCH	NATALIE	
SCHOENENBERGER	PETER	ANDREAS
SCHOENER	ULF	JOERG
SCHRAG	LISA	GAIL
SCHROEDER	GERNOT	
SCHUBIGER-KAMBER	ANNA	MARIA ELIZABETH
SCHULTZ	CHRISTOPHER	ANDREW
SCHWAERZLER	KATHLEEN	MARY
SCHWARZ	REBECCA	SELINA
SCHWARZ	STEPHANIE	MARIE
SCHWINDT	CRAIG	WARD

Last name	First name	Middle name/initials
SCHWYN	PAUL	JAKOB
SCIALFA	CHARLES	THOMAS
SCICLUNA	LORAINE	JEAN
SCINTO IV	DANIEL	ANDREWS
SCOTT	ELEANOR	JESSICA WYNETH
SCULLY	SUE	KYONG
SEGAL	SYLVIA	LISETTE
SEGUIN	MARIE	CLAUDEL
SEIDEL ROGENMOSER	BIRGIT	
SEIP	JEFFREY	DAVID
SEITHER	BERNHARD	KARL
SELVIK	ANNE	BRITT
SERRES	MICHAEL	
SEUNG	ROBERT	BUMSOO
SEUSS	ELLEN	ERIKA
SHANTZ	MARIAN	FAY
SHAPIRO	MARK	
SHARARA	MOHAMED	
SHARP	LON	BERNAL
SHEA-BUDGELL	MELISSA	ANNE
SHEPPARD	LAUREL	BETH
SHERIDAN	WAYNE	PATRICK
SHERMAN	MICHAEL	
SHIMAMOTO	LAURA	CASTERLINE
SHOUL	ETHEL	BARBARA
SHUE	KAREN	LESLIE
SIAO	GEORGE	HOWARD
SIEBENMANN	RUTH	ELISABETH
SILBER	DANIEL	TERENCE
SINGER	CLAUDINE	
SINGH	MANJIT	
SKARDA	NICOL	
SKIERKA	ROGER	LELAND
SKIERKA	TRACI	LYNN
SLABOSZEWICZ	VICTORIA	CAROLINE MARIA
SLENTZ	PATRICIA	JEAN
SLIWA	NADEZHDA	
SMITH	ELLEN	SARAH JANE
SMITH	MARGARET	M
SMITH	WILLIAM	KHAN
SOHM	VANESSA	LANETT
SOLBERG	KEVIN	TIMOTHY
SOLLER	BENJAMIN	
SOLNIK	VINCENT	ALEXANDRE
SOMMERFELDT	THERON	DREW
SON	GIL	BOK
SOUTHERN	PETER	JOHN
SPALDING	KERRY	CAROLINE
SPALDING	RICHARD	JAMES
SPEH	PATRICIA	ESHELMAN
SPENCER	SILAS	PAUL
SPIELMANN	SARAH	MICHELE
SPONAGEL	BEAT	TOBIAS
SPONAGEL	LUCAS	DAVID
SRAGOVICZ	GABRIEL	
ST JOHNSTON	THOMAS	ANDREW
STADLER	MICHAEL	LUCIUS
STAEHLI	MELINA	JOELLE
STAENBERG	JILL	ALISON
STALLEY	ELLEN	MAY
STAUFFER	SCOTT	DAVID
STEINBERG	PAULA	EMILE
STEINEBRUNNER	FELIX	ADRIANOS
STEINEMANN	PASCAL	PATRICK
STEINER	EVELYN	JACOBSON
STEINMANN	RUDOLF	
STENBOCK-FERMOR	ALEXIS	
STOLL	ALAIN	HENRI
STONE	GUY	BENIAH
STRANG	GRAEME	IAN
STREIT	VIRGINIA	MARGARITE
STRICKLAND	JULIA	MARGARET
STRUB	BENEDIKT	SAMUEL
STUART	THERESE	CHRISTINE OLEARY

Last name	First name	Middle name/initials
STUER	SCOTT	JULES
STURDY	LESLIE	ANN
SUCKFUELL	MARKUS	MICHAEL
SUED	DALIA	KATHERINE
SUESS	FRANK	
SUESS	PHYLISS	STEFANIE
SUH	SOON	HEE
SUN	JUOLUN	LAUREN
SURIKOV	CYRIL	
SWAN	JULIA	COREEN
SWANSON	MICHAEL	JOSEPH
TAKANASHI	CHRISTINE	MIKA
TALBERT	ELIZABETH	MARY
TANG	HING-PANG	DONMANY
TAVARES	JOAO	LUIS RIBEIRO
TAVERNIER	BARBARA	ANNE
TAWFIK	MUSAB	MUNDHIR
TAYMANS	FRANCOIS	ROBERT MARIE JEAN
TEDESCO	LORI	ELLEN
TEMPLE	BONNIE	JILL
TEMPLE	KIRK	COLLINS
TESSLER	LISA	SUSAN
THANG	FELIX	
THEUX	NICHOLAS	FRANCO LOWEN
THOMAE	DIANA	LUCILE
THOMAS	CLIO	SASKIA THONGER
THOMAS	DAVID	JAMES
THOMAS	PHILIPPE	ALAIN
THOMAS	RICHARD	PETRUS
THOMMEN	REBEKKA	
THOMPSON	LINDA	SUE
THOMPSON	STEPHEN	RUSSELL
THONNART	VINCENT	ANDRE
THORNTON	TRASZHA	
THULER	SABINE	
TIELENS	ERIKA	INGRID
TIETJE	KAI	
TO	BRIAN	EDWARD
TO	FLORA	WING SZE
TOBLER	PETER	PAUL
TOMAN	MELANIE	VICTORIA
TOONE	ADRIENNE	
TOOP	MARIE-THERESE	
TORDOFF	JUSTINE	CHARLOTTE
TRACOL	LAURENCE	VERONIQUE CORINNE
TRANTER	JEANETTE	DENISE RASMUSSEN
TRETHEWAY	DANIEL	GLENN
TROST	MINELLA	
TSAI	HOA	LUONG
TSAO	GUANG-TSANN	
TSAO	KENNY	
TSCHYRKOW	NATHALIE	
TSUJITA	SHOGO	
TSUNG	PETER	SHAW-HO
TSUNG	SAMANTHA	SHAW-PING
TURNER	DENNIS	CLAIR
TUTTLE	KEVIN	JOHN
TYSON	INGRID	MARIE
UHLMANN	SASHA	JOBIM SATYA
USHER	LAURIE	FRANCES
VACCARO	JESSICA	SILKE
VADER	AMELIA	MUNIRIH
VALENTA	MATHIAS	JULIUS FERBER
VALIQUETTE	TARA	ANNE
VALLEE	YVES	DANIEL
VALLIERE	JANICE	
VALLOTTON	JACQUES	CHRISTIAN
VAN ACKER	PHILIP	MARCEL
VAN BORREN	MARGOT	PAULINE
VAN BOXTEL	MARGOT	ELISABETH HUBERTINE
VAN DEELEN	LAURA	DIANE
VAN DEN HERIK	BRENDA	
VAN DEN OSTENDE	GAETAN	PAUL
VAN DER LANDE	ALBERTINE	ELIZABETH MARGUERITE

Last name	First name	Middle name/initials
VAN DER MEULEN	MARYLEE	JOYCE
VAN DER PLANCKE	JEAN-MARC	FRANCOIS ROBERT
VAN LANDUYT	NICHOLAS	ETIENNE
VAN LANDUYT	PHILIP	JOSEPH
VAN RAVENSTEIN	HENRIETTE	ROSALIE ADA MARIA
VAN ROECHOUDT	MADELEINE	SUZANNE
VAN VEEN	GILBERT	WILLEM
VAN WOLLINGEN	JESSE	ROELOF
VAN ZANDT	RACHEL	EATON RUSSELL
VANDIVERE	DEREK	ALAN
VANKNIPPENBERGH	ROBERT	JACOBUS
VASELLA	MAURO	GIOVANNI
VECHTER	JOSHUA	SIMON
VERNIERES	ALEXIS	CHRISTIAN MICHAEL
VERNON	ALEXIS	JOANNE
VESNAVER	LISA	PATRICIA
VINGE	KAREN	EVELYN
VITELLI	PIERO	
VIZE	PETER	DARREN
VOGEL	ANNA	KARIN
VOGEL	JANIS	RANAE
VOGT HAUTER	ELLEN	SUSIE
VOLLENWEIDER	MARIE-LAURE	ELIZABETH
VON DER WENSE	SUSAN	BARBARA
VON FELDAU HANCOCK	MARGARET	JEAN
VOS	MARK	JOHANNES
VUARIDEL	AMBROISE	ROGER
WACASEY	JENNIFER	LEE
WAISBERG	JODIE	LOREN
WALKER	DAVID	CABOT
WALKER	DIANE	CAROL
WALKER	SANDRA	
WALKER	WILLIAM	KIMBERLY
WALSH	AURA	CECILIA
WALSH	NATALIE	TOVE
WALSH	SEAN	FALKENBERG ANDRE
WALSTON	DAVID	CHARLES
WANG	DAVID	
WANG	KUO-YING	
WANG	MAOCHANG	
WANG	SCARLETT	YU
WANG	THOMAS	CHOON
WANSKE	CAROL	KOEPPEL
WARMINGTON	JAMES	LIM
WASOW	ANNE	ELIZABETH
WASSMER	ADELHEID	
WATKINS	JONATHAN	DEVEREUX
WAUMANS	KRIS	
WAYRETHMAYR	YASUKO	
WEATHERLEY	DARYL	
WEBER	SABRINA	MICHELLE
WEBER	THOMAS	CHRISTIAN
WEBSTER	STEVEN	HAYDEN
WEIKL	CHRISTIAN	THOMAS
WEINHEIMER	CYRUS	RICHARDSON
WEIR	MARINA	
WEISERBS	DAVID	PAUL PHILIPPE
WELLS	JOHANNA	
WELSH	RITA	JEAN STOER
WEN	TRACY	
WENGER	DAVID	STEVEN
WENNER	BARBARA	FRANCES
WENZIKER	LINDA	
WESTON	CASPAR	TOBIN
WHIPKEY	STUART	JAMES
WHITEHEAD	BRIAN	HOWARD
WHITMORE	TESS	LARISSA
WIDLER	CATHRINE	CAROLINE
WIEBUSCH	ADRIENNE	BROMBAUGH
WIESMANN-MUNZ	DORIS	ERIKA
WIESNER	STEVEN	PAUL
WILDE	THOMAS	JAMES
WILKINS	SARAH	JANE
WILLIAMS	DEBRA	JEAN

Last name	First name	Middle name/initials
WILLIAMS	KATHARINA	ESTELL PATRICIA
WILLIAMS	TINA	WATTS
WILLIAMSON	DOUGLAS	WAYNE
WILLIS	BARBARA	
WILLIS	RANDOLPH	KENT
WILLMOTT	GLENN	ALLAN
WILSON	CHARLES	HAMANN
WILSON	CHRISTOPHER	ROBERTSON
WILSON	CYNTHIA	ANN
WILSON	JANE	ELIZABETH
WINEGARTEN	AVRIL	RUTH
WINGFIELD	ANNA	
WINSLADE	PAUL	ELLIOTT
WINTER	MARK	
WIRTH	CHRISTIAN	NIKLAUS
WOLCOUGH	VICTORIA	WENDELL
WOLF	SABINE	EVA
WOLFE	CHRISTINA	ROSEMARY SARA
WONG	GLENN	TULSA
WONG	SO	NUI AMY
WONG	VINCENT	HIN KEI
WOOD	JOHN	FIRBANK
WOOD	MARGARET	SUSAN
WOODFORD-HOLLICK	GEORGINA	
WOODRUFF	PETER	ARTHUR
WOODWORTH	VIRGINIA	RENNEE
WOU	CONSTANCE	CHEN-HWA
WRIGHT	ALISON	GRACE
WRIGHT	TIMOTHY	JAMES
WRINKLE	GAIL	ERIN KELLY
WU	SELENA	TSAN
WUTHOLEN	MARINA	VALERIE
WUWER	JACEK	MARIUSZ
WYVILL	SHAUN	PETER
YALAMANCHILI	SUSHMA	S
YANG	YU	CHING
YAP	PAULINE	
YASSIN	NA'AMAN	H
YAU	EMILY	GUADALUPE
YEUNG	JASPER	
YI	SUNG	HI
YU	PIK	KI
YU	SUK	HUI
ZABOLOTSKIKH	ALEXEY	
ZANDER	ELIZABETH	JANE
ZAYAC	SUCHONG	CHAE
ZEHNDER	REGINA	JOAN
ZESCHIN	ELIZABETH	ANNE
ZHU	SU	
ZINSER	EMILY	CLAIRE
ZURMUEHLE	CINDY	LOUISE
ZWAHLEN	JUDIT	CECILIA

Dated: October 24, 2016.

Maureen Manieri,

Manager Classification Team 82413, Examinations Operations—Philadelphia Compliance Services.

[FR Doc. 2016-27108 Filed 11-9-16; 8:45 am]

BILLING CODE 4830-01-P

DEPARTMENT OF THE TREASURY

Internal Revenue Service

Proposed Collection; Comment Request for Regulation Project

AGENCY: Internal Revenue Service (IRS), Treasury.

ACTION: Notice and request for comments.

SUMMARY: The Department of the Treasury, 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)). Currently, the IRS is soliciting comments concerning TD 8449, Election, Revocation, Termination, and Tax Effect of Subchapter S Status.

DATES: Written comments should be received on or before January 9, 2017 to be assured of consideration.

ADDRESSES: Direct all written comments to Tuawana Pinkston, Internal Revenue Service, Room 6526, 1111 Constitution Avenue NW., Washington, DC 20224.

FOR FURTHER INFORMATION CONTACT: Requests for additional information or copies of the regulation should be directed to Martha R. Brinson, Internal Revenue Service, Room 6129, 1111 Constitution Avenue NW., Washington,

DC 20224, or through the Internet at *Martha.R.Brinson@irs.gov.*

SUPPLEMENTARY INFORMATION:

Title: Election, Revocation, Termination, and Tax Effect of Subchapter S Status.

OMB Number: 1545–1308.

Regulation Project Number: TD 8449.

Abstract: Section 1362 of the Internal Revenue Code provides for the election, termination, and tax effect of subchapter S status. Sections 1.1362–1 through 1.1362–7 of this regulation provides the specific procedures and requirements necessary to implement Code section 1362, including the filing of various elections and statements with the Internal Revenue Service.

Current Actions: There is no change in the paperwork burden previously approved by OMB.

Type of Review: Extension of a currently approved collection.

Affected Public: Individuals or households, business or other for-profit organizations, and farms.

Estimated Number of Respondents: 133.

Estimated Time per Respondent: 2 hours, 25 minutes.

Estimated Total Annual Burden Hours: 322.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the collection of information displays a valid OMB control number. Books or records relating to a collection of information must be retained as long as their contents may become material in the administration of any internal revenue law. Generally, tax returns and tax return information are confidential, as required by 26 U.S.C. 6103.

Request for Comments: Comments submitted in response to this notice will be summarized and/or included in the request for OMB approval. All comments will become a matter of public record. 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 collection of information; (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 respondents, including through the use of automated collection techniques or other forms of information technology; and (e) estimates of capital or start-up costs and costs of operation, maintenance, and purchase of services to provide information.

Approved: October 18, 2016.

Tuawana Pinkston,

IRS Reports Clearance Officer.

[FR Doc. 2016–27103 Filed 11–9–16; 8:45 am]

BILLING CODE 4830–01–P

DEPARTMENT OF THE TREASURY

Internal Revenue Service

Proposed Collection; Comment Request for Form 970

AGENCY: Internal Revenue Service (IRS), Treasury.

ACTION: Notice and request for comments.

SUMMARY: The Department of the Treasury, 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)). Currently, the IRS is soliciting comments concerning Form 970, Application To Use LIFO Inventory Method.

DATES: Written comments should be received on or before January 9, 2017 to be assured of consideration.

ADDRESSES: Direct all written comments to Tuawana Pinkston, Internal Revenue Service, Room 6526, 1111 Constitution Avenue NW., Washington, DC 20224.

FOR FURTHER INFORMATION CONTACT: Requests for additional information or copies of the form and instructions should be directed to LaNita VanDyke, Internal Revenue Service, Room 6526, 1111 Constitution Avenue NW., Washington, DC 20224, or through the internet at *Lanita.VanDyke@irs.gov.*

SUPPLEMENTARY INFORMATION:

Title: Application To Use LIFO Inventory Method.

OMB Number: 1545–0042.

Form Number: Form 970.

Abstract: Form 970 is filed by individuals, partnerships, trusts, estates, or corporations to elect to use the last-in first-out (LIFO) inventory method or to extend the LIFO method to additional goods. The IRS uses Form 970 to determine if the election was properly made.

Current Actions: There are no changes being made to Form 970 at this time.

Type of Review: Extension of a currently approved collection.

Affected Public: Business or other for-profit organizations and individual or households.

Estimated Number of Respondents: 2,000.

Estimated Time per Respondent: 21 hours, 6 minutes.

Estimated Total Annual Reporting Burden Hours: 42,220.

The following paragraph applies to all of the collections of information covered by this notice:

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the collection of information displays a valid OMB control number. Books or records relating to a collection of information must be retained as long as their contents may become material in the administration of any internal revenue law. Generally, tax returns and tax return information are confidential, as required by 26 U.S.C. 6103.

Request for Comments: Comments submitted in response to this notice will be summarized and/or included in the request for OMB approval. All comments will become a matter of public record. 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 collection of information; (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 respondents, including through the use of automated collection techniques or other forms of information technology; and (e) estimates of capital or start-up costs and costs of operation, maintenance, and purchase of services to provide information.

Approved: November 1, 2016.

Tuawana Pinkston,

IRS Reports Clearance Officer.

[FR Doc. 2016–27098 Filed 11–9–16; 8:45 am]

BILLING CODE 4830–01–P

DEPARTMENT OF THE TREASURY

Internal Revenue Service

Proposed Collection; Comment Request for Regulation Project

AGENCY: Internal Revenue Service (IRS), Treasury.

ACTION: Notice and request for comments.

SUMMARY: The Department of the Treasury, 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)). Currently, the IRS is soliciting comments concerning revised regulations concerning section 403(b) tax-sheltered annuity contracts.

DATES: Written comments should be received on or before January 9, 2017 to be assured of consideration.

ADDRESSES: Direct all written comments to Tuawana Pinkston, Internal Revenue Service, Room 6526, 1111 Constitution Avenue NW., Washington, DC 20224.

FOR FURTHER INFORMATION CONTACT: Requests for additional information or copies of the regulations should be directed to Kerry Dennis at Internal Revenue Service, Room 6526, 1111 Constitution Avenue NW., Washington, DC 20224, or through the internet at *Kerry.Dennis@irs.gov.*

SUPPLEMENTARY INFORMATION:

Title: Revised Regulations Concerning Section 403(b) Tax-Sheltered Annuity Contracts.

OMB Number: 1545–2068.

Regulation Project Number: TD 9340.

Abstract: The collection of information in the regulations is in final regulations under section 403(b) of the Internal Revenue Code and under related provisions of sections 402(b), 402(g), 402A, and 414(c). The regulations provide updated guidance on section 403(b) contracts of public schools and tax-exempt organizations described in section 501(c)(3). Such information exchange is necessary to ensure compliance with tax law requirements relating to loans and hardship distributions from section 403(b) plans and sponsors of section 403(b) contracts, administrators, participants, and beneficiaries.

Current Actions: There are no changes being made to this regulation.

Type of Review: Extension of a previously approved collection.

Affected Public: Individuals or households, state, local or tribal governments, and not-for-profit institutions.

Estimated Number of Respondents: 11,000.

Estimated Number of Responses: 90,000.

Estimated Time per Respondent: 4.1 hours.

Estimated Total Annual Burden Hours: 45,000.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the collection of information displays a valid OMB control number. Books or records relating to a collection of information must be retained as long as their contents may become material in the administration of any internal revenue law. Generally, tax returns and tax return information are confidential, as required by 26 U.S.C. 6103.

Request for Comments: Comments submitted in response to this notice will be summarized and/or included in the request for OMB approval. All comments will become a matter of public record. 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 collection of information; (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 respondents, including through the use of automated collection techniques or other forms of information technology; and (e) estimates of capital or start-up costs and costs of operation, maintenance, and purchase of services to provide information.

Approved: October 27, 2016.

Tuawana Pinkston,

IRS Reports Clearance Officer.

[FR Doc. 2016–27102 Filed 11–9–16; 8:45 am]

BILLING CODE 4830–01–P

DEPARTMENT OF VETERANS AFFAIRS

Notice of Availability of a Final Environmental Impact Statement (EIS) for the Reconfiguration of VA Black Hills Health Care System (BHHCS)

AGENCY: Department of Veterans Affairs (VA).

ACTION: Notice of Availability.

SUMMARY: VA announces the availability of the Final EIS for the Reconfiguration of the VA Black Hills Health Care System (BHHCS). Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S.C. 4321, *et seq.*), the Council on Environmental Quality's (CEQ's) regulations for implementing the procedural provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500–1508), VA's NEPA regulations titled ''Environmental Effects of the Department of Veterans Affairs Actions'' (38 CFR part 26), and VA's ''NEPA Interim Guidance for Projects'' (VA 2010), VA has considered comments received on the Draft EIS, which was issued in October 2015 and identifies VA's preferred alternative in the Final EIS. The Final EIS uses the substitution approach for integrating compliance with Section 106 of the National Historic Preservation Act (NHPA) into the EIS process.

DATES: VA will publish a Record of Decision no sooner than 30 days after publication of the U.S. Environmental Protection Agency's Notice of Availability in the **Federal Register**.

ADDRESSES: The 2016 Final EIS is available for viewing on the Web site *www.blackhills.va.gov/vablackhillsfuture/*. Copies of the Final EIS are also available in the following locations: Hot Springs; Rapid City Downtown; Sturgis; Chadron; Alliance; Lied Scottsbluff; and Pierre (Rawlins Municipal) public libraries, as well as in Pine Ridge at the Oglala Lakota College Pine Ridge Center library on the high school campus.

FOR FURTHER INFORMATION CONTACT: Staff Assistant to the Director, VA Black Hills Health Care System, 113 Comanche Road, Fort Meade, SD 57741, or by email to *vablackhillsfuture@va.gov.*

Information related to the EIS process is also available for viewing on the VA BHHCS Web site *www.blackhills.va.gov/vablackhillsfuture/.*

SUPPLEMENTARY INFORMATION: VA BHHCS provides health care to approximately 19,000 Veterans over 100,000 square miles in western South Dakota (SD), northwestern Nebraska (NE), and eastern Wyoming (WY). VA BHHCS consists of two medical centers at Fort Meade and Hot Springs, 11 community-based outpatient clinics (CBOCs), and six Compensated Work Therapy locations. VA BHHCS has identified a need to reconfigure the health care services to ensure it continues to provide high quality, safe, and accessible health care services across its service area. The existing locations and facilities constrain the quality of care, range of services, and access to care that VA offers in the catchment area. The Hot Springs campus includes buildings constructed in 1907 as part of the Battle Mountain Branch of the National Home for Disabled Volunteer Soldiers. The Battle Mountain Sanitarium was recognized as a National Historic Landmark in 2011.

Pursuant to NEPA, VA has identified and analyzed potential environmental impacts for a range of alternatives to the Proposed Action. These include seven alternatives, including the No Action Alternative, as well as a supplement to five of the alternatives for re-use of part or all of the existing Hot Springs campus. The alternatives propose

different locations and combinations of facilities serving as a community-based outpatient clinic (CBOC), a multi-specialty outpatient clinic (MSOC), and a residential rehabilitation treatment program (RRTP) facility; expanding, renovating, or vacating existing facilities; and taking no action. The new preferred Alternative, referred to as A–2 in the Final EIS, is a hybrid of Alternatives A and C evaluated in the Draft EIS. It was identified by consulting parties during the public comment period on the Draft EIS and includes renovating Building 12 on the existing Hot Springs campus to operate as a CBOC a new MSOC (replacing the existing leased CBOC), and a 100-bed RRTP in Rapid City.

VA is substituting the implementation and review procedures of Section 102 of NEPA for consultation under Section 106 of the NHPA. This process meets the integration intent of the NEPA regulations (40 CFR 1500.2(c) and 1502.25(a)) and the substitution intent of the NHPA regulations (36 CFR 800.8(c)). This process follows the joint CEQ–ACHP guidance for integrating NEPA and Section 106 compliance (CEQ–ACHP 2013). The EIS includes identification and evaluation of impacts to historic properties. Formal consultation and identification and resolution of effects to historic properties are documented throughout the Final EIS.

In the Final EIS, VA has analyzed the environmental impacts of the Proposed Action/Preferred Alternative, a reasonable range of alternatives, and a No Action Alternative.

The Final EIS considers comments on the Draft EIS, including those submitted during the public comment period that officially began on November 6, 2015, and ended on June 20, 2016, following three comment period extensions. The extensions were provided in response to requests from the public and other stakeholders, including consulting parties participating in the NEPA/NHPA substitution and consultation process.

As indicated above, VA's purpose and need is to improve the availability of high quality, safe and accessible health care services for Veterans residing in the VA BHHCS service area.

While developing the Final EIS, VA considered the alternatives analyzed in the Draft EIS, the comparisons of impacts for each resource area, and input received on the Draft EIS, including the identification of a new hybrid alternative A–2. Based on the information presented in the Final EIS, VA has identified Alternative A–2—operation of a CBOC in a renovated Building 12 on the existing Hot Springs campus and a new MSOC and RRTP in Rapid City—as its preferred alternative in the Final EIS.

Signing Authority

The Secretary of Veterans Affairs, or designee, approved this document and authorized the undersigned to sign and submit the document to the Office of the Federal Register for publication electronically as an official document of the Department of Veterans Affairs. Gina S. Farrisee, Deputy Chief of Staff, Department of Veterans Affairs, approved this document on November 4, 2016, for publication.

Dated: November 4, 2016.

Jeffrey Martin,

Office Program Manager, Office of Regulation Policy & Management, Office of the Secretary, Department of Veterans Affairs.

[FR Doc. 2016–27207 Filed 11–9–16; 8:45 am]

BILLING CODE 8320–01–P

DEPARTMENT OF VETERANS AFFAIRS

Advisory Committee on Minority Veterans, Notice of Meeting

The Department of Veterans Affairs (VA) gives notice under the Federal Advisory Committee Act, 5 U.S.C. App. 2 that the Advisory Committee on Minority Veterans will meet on December 6–8, 2016, at the Department of Veterans Affairs, 810 Vermont Avenue NW., Conference Room 230, Washington, DC. On December 6th and 7th, the sessions will begin at 8:00 a.m. and end at 5:00 p.m. On December 8th, the session will reconvene at 8:00 a.m. and adjourn at 1:00 p.m. This meeting is open to the public.

The purposes of the Committee are to: Advise the Secretary on the administration of VA benefits and services to minority Veterans; assess the needs of minority Veterans; and evaluate whether VA compensation, medical and rehabilitation services, outreach, and other programs are meeting those needs. The Committee makes recommendations to the Secretary regarding such activities.

On December 6, the Committee will receive briefings and updates from the Center for Minority Veterans, National Cemetery Administration, National Center for Veterans Analysis, Office of Tribal Government Relations, MyVA Initiatives, and Veterans Benefits Administration. On December 7, the Committee will receive briefings and updates on the Office of Health Equity, Center for Women Veterans, Veterans Health Administration, Board of Veterans Appeals, Community Veterans Engagement Boards, Office of Rural Health, and Women's Health Services. On December 8, the Committee will receive a briefing and update on Office of Diversity & Inclusion, Ex-Officios Update and hold an exit briefing with VBA, VHA and NCA. The Committee will receive public comments from 10:00 a.m. to 10:15 a.m. After the Leadership Exit Briefing, the Committee will continue to work on their report.

A sign-in sheet for those who want to give comments will be available at the meeting. Individuals who speak are invited to submit a 1–2 page summaries of their comments at the time of the meeting for inclusion in the official meeting record. Members of the public may also submit written statements for the Committee's review to Ms. Juanita Mullen, Department of Veterans Affairs, Center for Minority Veterans (00M), 810 Vermont Avenue NW, Washington, DC 20420, or email at *Juanita.Mullen@va.gov.* Because the meeting will be in a Government building, anyone attending must be prepared to show a valid photo ID for checking in. Please allow 15 minutes before the meeting begins for this process. Any member of the public wishing to attend or seeking additional information should contact Ms. Mullen or Ms. Denise Wright at (202) 461–6191 or by fax at (202) 273–7092.

Dated: November 7, 2016.

Jelessa M. Burney,

Federal Advisory Committee Management Officer.

[FR Doc. 2016–27198 Filed 11–9–16; 8:45 am]

BILLING CODE P

FEDERAL REGISTER

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No. 218 November 10, 2016

Part II

Securities and Exchange Commission

17 CFR Part 240
Universal Proxy; Proposed Rule

SECURITIES AND EXCHANGE COMMISSION

17 CFR Part 240

[Release No. 34–79164; IC–32339; File No. S7–24–16]

RIN 3235–AL84

Universal Proxy

AGENCY: Securities and Exchange Commission.

ACTION: Proposed rule.

SUMMARY: We are proposing amendments to the federal proxy rules to require the use of universal proxies in all non-exempt solicitations in connection with contested elections of directors other than those involving registered investment companies and business development companies. Our proposal would require the use of universal proxies that include the names of both registrant and dissident nominees and thus allow shareholders to vote by proxy in a manner that more closely resembles how they can vote in person at a shareholder meeting. We further propose amendments to the form of proxy and proxy statement disclosure requirements to specify clearly the applicable voting options and voting standards in all director elections.

DATES: Comments should be received on or before January 9, 2017.

ADDRESSES: Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's Internet comment form (*http://www.sec.gov/rules/proposed.shtml*);
- Send an email to *rule-comments@sec.gov*. Please include File Number S7–24–16 on the subject line; or
- Use the Federal eRulemaking Portal (*http://www.regulations.gov*). Follow the instructions for submitting comments.

Paper Comments

- Send paper comments to Brent J. Fields, Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549–1090.

All submissions should refer to File Number S7–24–16. This file number should be included on the subject line if email is used. To help us 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/proposed.shtml*). Comments are also available for Web site viewing and printing in the Commission's Public Reference Room, 100 F Street NE., Washington, DC 20549–1090 on official business days between the hours of 10:00 a.m. and 3:00 p.m. All comments received will be posted without change; we do not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly.

Studies, memoranda or other substantive items may be added by the Commission or staff to the comment file during this rulemaking. A notification of the inclusion in the comment file of any such materials will be made available on the SEC's Web site. To ensure direct electronic receipt of such notifications, sign up through the ''Stay Connected'' option at *www.sec.gov* to receive notifications by email.

FOR FURTHER INFORMATION CONTACT: Tiffany Posil, Special Counsel, or Christina Chalk, Senior Special Counsel, in the Office of Mergers and Acquisitions, at (202) 551–3440, or Steven G. Hearne, Senior Special Counsel, in the Office of Rulemaking, at (202) 551–3430, Division of Corporation Finance, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549.

SUPPLEMENTARY INFORMATION: We are proposing new Rule 14a–19 and amendments to Rules 14a–2,[1] 14a–3,[2] 14a–4,[3] 14a–5,[4] 14a–6,[5] 14a–101[6] under the Securities Exchange Act of 1934 (''Exchange Act'').[7]

Table of Contents

I. Introduction

A. Background

A shareholder's ability to participate in the election of directors has been recognized as a fundamental part of state corporate law.[8] State statutes require corporations to hold an annual meeting of shareholders for the purpose of electing directors.[9] Today, few shareholders of companies with a class of securities registered under the Exchange Act attend a registrant's meeting to vote in person. Rather, the primary way for shareholders to learn

[1] 17 CFR 240.14a–2.
[2] 17 CFR 240.14a–3.
[3] 17 CFR 240.14a–4.
[4] 17 CFR 240.14a–5.
[5] 17 CFR 240.14a–6.
[6] 17 CFR 240.14a–101.
[7] 15 U.S.C. 78a *et seq.*

[8] *See Preston* v. *Allison,* 650 A.2d 646, 649 (Del. 1994); *see also Blasius Indus., Inc.* v. *Atlas Corp.,* 564 A.2d 651, 659 (Del. Ch. 1988) (''The shareholder franchise is the ideological underpinning upon which the legitimacy of directorial power rests.'').

[9] *See, e.g.,* Model Bus. Corp. Act § 7.01 (2008); Cal. Corp. Code § 600(b) (2009); Del. Code. Ann. tit. 8, § 211(b) (2009); N.Y. Bus. Corp. Law § 602(b) (2009).

about matters to be decided on at a meeting and to vote on the election of directors is through the proxy process.

While state law typically authorizes the use of proxies to permit shares to be voted without shareholders attending the meeting,[10] parties soliciting proxy authority to vote Exchange Act-registered securities must comply with the federal proxy rules pursuant to Section 14 of the Exchange Act.[11] Section 14 of the Exchange Act authorizes the Commission to establish rules and regulations governing the solicitation of any proxy or consent or authorization in respect of any security registered pursuant to Section 12 of the Exchange Act. Registrants with reporting obligations only under Exchange Act Section 15(d) and foreign private issuers are not subject to the federal proxy rules. The congressional report accompanying the Exchange Act stated that ''[f]air corporate suffrage is an important right that should attach to every equity security bought on a public exchange.'' [12] The congressional committees recommending passage of Section 14(a) proposed that ''the solicitation and issuance of proxies be left to regulation by the Commission'' [13] and explained that Section 14(a) would give the Commission the ''power to control the conditions under which proxies may be solicited with a view to preventing the recurrence of abuses which have frustrated the free exercise of the voting rights of stockholders.'' [14] Regulation of the proxy process has been a core function of the Commission since its inception. In discussing the regulation of the proxy process, Chairman Ganson Purcell explained to a committee of the House of Representatives in 1943: ''The rights that we are endeavoring to assure to the stockholders are those rights that he has traditionally had under State law. . . .'' [15]

Enhancing the ability of shareholders to exercise their right to elect directors through the proxy process has been the focus of numerous rule proposals, staff reports and comment letters over the years.[16] In the 1990s, the Commission conducted an extensive examination of the effectiveness of the proxy voting process and its effect on corporate governance. This review resulted in amendments to the federal proxy rules that sought to reduce regulatory constraints on communication among shareholders and the effective exercise of shareholder voting rights.[17] In the 2000s, the Commission focused on the shareholder franchise by seeking public input through roundtables [18] and engaging in rulemaking relating to the inclusion of shareholder nominees for director in the registrant's proxy materials.[19] The current approach to shareholder proposals under Rule 14a–8 permits proposals relating to bylaw amendments that would allow shareholder director nominees to be included in a registrant's proxy materials alongside the registrant's slate of director nominees.

Despite these initiatives, under the current proxy rules, shareholders voting by proxy in a contested election [20] may not be able to replicate the vote they could cast if they voted in person at a shareholder meeting because the choices available to shareholders voting for directors through the proxy process are not the same as those available to shareholders voting in person at a shareholder meeting. Shareholders voting in person at a meeting may select among all of the duly nominated [21] director candidates proposed for election by any party and vote for any combination of those candidates. Shareholders voting by proxy, however, are limited to the selection of candidates provided by the party soliciting the shareholder's proxy. Although the current proxy rules allow a soliciting party to provide shareholders with the full selection of nominees if all such

[10] *See, e.g.,* Del. Code Ann. tit. 8, § 212.

[11] 15 U.S.C. 78n(a).

[12] H. R. Rep. No. 73–1383, 2d Sess., at 13 (1934). *See also Mills* v. *Elec. Auto-Lite Co.,* 396 U.S. 375, 381 (1970); *J. I. Case Co.* v. *Borak,* 377 U.S. 426, 431 (1964). The congressional report accompanying the Exchange Act further indicated that ''[i]nasmuch as only the exchanges make it possible for securities to be widely distributed among the investing public, it follows as a corollary that the use of the exchanges should involve a corresponding duty of according to shareholders fair suffrage.'' H. R. Rep. No. 73–1383, 2d Sess., at 14 (1934).

[13] S. Rep. No. 73–792, 2d Sess., at 12 (1934).

[14] H.R. Rep. No. 73–1383, 2d Sess., at 14 (1934). Courts have found that the relevant legislative history also demonstrates an ''intent to bolster the intelligent exercise of shareholder rights granted by state corporate law.'' *Roosevelt* v. *E.I. Du Pont de Nemours & Co.,* 958 F.2d 416, 421 (D.C. Cir. 1992); *see also Borak,* 377 U.S. at 431.

[15] *Securit[ies] and Exchange Commission Proxy Rules: Hearings on H.R. 1493, H.R. 1821, and H.R. 2019 before the House Comm. on Interstate and Foreign Commerce,* 78th Cong., 1st Sess. 172 (1943) (statement of SEC Chairman Ganson Purcell).

[16] *See, e.g., Reexamination of Rules Relating to Shareholder Communications, Shareholder Participation in the Corporate Electoral Process, and Corporate Governance Generally,* Release No. 34–13482 (Apr. 28, 1977) [42 FR 23901 (May 11, 1977)]. *See also Reexamination of Rules Relating to Shareholder Communications, Shareholder Participation in the Corporate Electoral Process, and Corporate Governance Generally,* Release No. 34–13901 (Aug. 29, 1977) [42 FR 44860 (Sept. 7, 1977)]; *Staff Report: Review of the Proxy Process Regarding the Nomination and Election of Directors,* U.S. Securities and Exchange Commission (July 15, 2003), available at *https://www.sec.gov/news/studies/proxyrpt.htm*, *Security Holder Director Nominations;* Release No. 34–48626 (Oct. 14, 2003) [68 FR 60784 (Oct. 23, 2003)] (proposing rules to require companies to include shareholder nominees in their proxy materials in the event a director receives over 35 percent withhold votes or a shareholder proposal requesting access receives more than 50 percent of the votes); *Shareholder Proposals,* Release No. 34–56160 (July 27, 2007) [72 FR 43466 (Aug. 3, 2007)] (proposing rules relating to the inclusion of bylaw amendments regarding nomination procedures and the inclusion of shareholder nominees in the registrant's proxy materials); and *Proxy Disclosure and Solicitation Enhancements,* Release No. 34–60280 (July 10, 2009) [74 FR 35076 (July 17, 2009)] (proposing to modify the short slate rule to make it available to a non-management soliciting person seeking authority to vote for nominees named in the registrant's or in any other person's proxy statement).

[17] *See Regulation of Communications Among Shareholders,* Release No. 34–30849 (June 23, 1992) [57 FR 29564 (July 2, 1992)] (''Short Slate Rule Revised Proposing Release'') and *Regulation of Communications Among Shareholders,* Release No. 34–31326 (Oct. 16, 1992) [57 FR 48276 (Oct. 22, 1992)] (''Short Slate Rule Adopting Release''). The amendments sought to address some of these concerns by establishing an exemption for persons not seeking proxy authority, establishing a safe harbor from the definition of solicitation for certain types of shareholder communications, and allowing dissident shareholders to seek proxy authority to vote for some of management's nominees when seeking minority representation on the board of directors.

[18] *See, e.g., Roundtable on the Federal Proxy Rules and State Corporation Law* (May 7, 2007) and *Roundtable on Proxy Voting Mechanics* (May 24, 2007). Materials related to the 2007 roundtables, including an archived broadcast and a transcript of the roundtable, are available online at *https://www.sec.gov/spotlight/proxyprocess.htm.*

[19] *See, e.g., Facilitating Shareholder Director Nominations,* Release No. 33–9046 (June 10, 2009) [74 FR 29024 (Jun. 18, 2009)] (proposing rules to require registrants to include shareholder nominees in a registrant's proxy materials); *Facilitating Shareholder Director Nominations,* Release. No. 33–9136 (Aug. 25, 2010) [75 FR 56668 (Sept. 16, 2010)] (adopting rules to require, under certain circumstances, a registrant's proxy materials to provide shareholders with information about, and the ability to vote for, shareholder nominees for director). In 2011, the U.S. Court of Appeals for the District of Columbia vacated the part of the 2010 rules that required, in certain circumstances, a registrant's proxy materials to provide shareholders with information about, and the ability to vote for, a shareholder's nominees for director. *See Bus. Roundtable* v. *SEC,* 647 F.3d 1144 (D.C. Cir. 2011) (vacating Exchange Act Rule 14a–11). Contemporaneous amendments to Exchange Act Rule 14a–8 (17 CFR 240.14a–8) that permit bylaw amendments allowing shareholder nominees to be included in registrant proxy materials were not challenged in the litigation and remain in effect.

[20] As used in this release, the term ''contested election'' refers to an election of directors where a registrant is soliciting proxies in support of nominees and a person or group of persons is soliciting proxies in support of director nominees other than the registrant's nominees. We recognize that a contested election can be defined in broader terms.

[21] A duly nominated director candidate is a candidate whose nomination satisfies the requirements of any applicable state or foreign law provision or a registrant's governing documents as they relate to director nominations.

nominees have consented to being named on its proxy card, aspects of the current proxy rules [22] and the parties' strategic interests typically result in limiting shareholders' choice to the slates of nominees chosen by the soliciting parties. Thus, shareholders voting by proxy are unable to make selections based solely on their preferences for particular candidates. As discussed in Section I.C. below, some shareholders have recently highlighted this limitation and requested Commission action.[23]

The changes to the federal proxy rules we propose today would allow a shareholder voting by proxy to choose among director nominees in an election contest in a manner that reflects as closely as possible the choice that could be made by voting in person at a shareholder meeting. To this end, we are proposing to require the use of a ''universal proxy,'' or a proxy card that includes the names of all duly nominated director candidates for whom proxies are solicited, for all non-exempt solicitations in contested elections.[24] We believe that shareholders should be afforded the opportunity to fully exercise their vote for the director nominees they prefer. This concept—that the proxy voting process should mirror to the greatest extent possible the vote that a shareholder could achieve by attending the shareholders' meeting and voting in person—has guided our efforts in proposing these changes.[25] We have looked to this concept because we believe that replicating the vote that could be achieved at a shareholder meeting is the most appropriate means to ensure that shareholders using the proxy process are able to fully and consistently exercise the ''fair corporate suffrage'' available to them under state corporate law and that Congress intended our proxy rules to effectuate.[26]

B. Current Proxy Voting Process in Contested Elections

Shareholders that attend a meeting in person generally vote by casting a written ballot provided at the meeting that includes the names of all duly nominated candidates for the board of directors.[27] Thus, in a contested election, shareholders attending the meeting in person and casting a written ballot can vote for the nominees of their choice from each party's slate of nominees, up to the specified number of board seats up for election. In contrast, in the proxy solicitation process for an election contest, the registrant's director nominees [28] are typically presented as one slate in the registrant's proxy statement and proxy card, and the dissident's [29] full or partial slate [30] of nominees is presented in the dissident's proxy statement and proxy card. Unlike submitting ballots when a shareholder attends a meeting in person, a shareholder generally may not validly submit two separate proxy cards, even when the total number of nominees for which the two cards are marked does not exceed the number of directors being elected. In general, under state law, a later-dated proxy card revokes any earlier-dated one and invalidates the votes on the earlier-dated card.[31] Shareholders voting by proxy are therefore effectively required to submit their votes on either the registrant's or the dissident's proxy card and cannot pick and choose from nominees on both cards.

Additionally, shareholders voting by proxy are generally limited in their choice of nominees by Exchange Act Rule 14a–4(d)(1), the ''bona fide nominee rule,'' [32] which provides that no proxy shall confer authority to vote for any person to any office for which a ''bona fide nominee is not named in the proxy statement.'' The term ''bona fide nominee'' is defined as a nominee who has ''consented to being named in the proxy statement and to serve if elected.'' [33] Thus, in an election contest, one party may not include the other party's nominees on its proxy card unless the other party's nominees consent. In the staff's experience, such consent is rarely provided. Because contested elections are usually contentious, the nominees may refuse to consent to being included on the opposing party's card because of a perceived advantage to forcing shareholders to choose between the competing slates of nominees. A party's nominees may also refuse to consent to being named on the opposing party's proxy card because the nominees do not want to appear to support the opposing party's position or director nominees. As a result, shareholders are limited in their ability to vote for directors from both the registrant's and the dissident's slate.

Moreover, since neither party is required to include the other party's nominees, even if a nominee consents to being named on the other party's proxy card, that other party can determine whether to include the nominee for strategic or other reasons. In the staff's experience, a party will seek to have its nominees included on the opposing party's proxy card when the party

[22] *See infra* Section I.B for a discussion of Rule 14a–4(d)(1), the bona fide nominee rule, and the definition of a bona fide nominee in Rule 14a–4(d)(4).

[23] *See* Letter from the Council of Institutional Investors (Jan. 8, 2014), available at *https://www.sec.gov/rules/petitions/2014/petn4-672.pdf* (requesting that the Commission eliminate the requirement to obtain a nominee's consent to be named on a proxy card in a contested election and allow shareholders to vote for their preferred combination of nominees on a single proxy card). *See also* Letter from the California Public Employees' Retirement System (Apr. 6, 2015), available at *https://www.sec.gov/comments/4-681/4681-10.pdf* (''We strongly believe that shareowners should have the ability to vote for any combination of director candidates in contested elections. . . . We believe that achieving this ideal requires the Commission to adopt necessary technical fixes to the bona fide nominee rule and adopt a mandatory universal proxy card.'').

[24] Although investment companies are subject to the federal proxy rules, the amendments that we are proposing today would not apply to investment companies registered under Section 8 of the Investment Company Act of 1940 or business development companies as defined by Section 2(a)(48) of the Investment Company Act of 1940. *See infra* Section II.D.

[25] We recognize that the proxy process may not be able to perfectly replicate the vote in a director election that can be achieved by attending a meeting and voting in person. For example, the proposed mandatory universal proxy system would not enable shareholders to vote by proxy on a director nomination presented from the floor of the meeting and not included in a proxy statement. However, this is a rare occurrence due to the prevalence of advance notice bylaw provisions and the low chance for success of nominations from the floor without soliciting proxies. We further note that the proposed universal proxy system does not seek to replicate the voting choices a shareholder would have on non-election proposals if voting in person at a shareholder meeting. The current proxy rules do not limit shareholders' exercise of their voting rights on non-election proposals to the same extent they limit the exercise of shareholders' rights on election proposals because parties can include another party's non-election proposal on the proxy card without such party's consent. As a result, our rulemaking efforts have focused on director election proposals.

[26] *See supra* notes 12 and 15.

[27] Based on the staff's conversations with parties frequently engaged in the tabulation of ballots for contested elections.

[28] We recognize that a registrant's board of directors (or a nominating committee it creates) commonly nominates directors for election to the board. For ease of reference, we refer to those nominees as ''registrant nominees'' throughout this release.

[29] The term ''dissident'' as used in this release refers to a soliciting person other than the registrant who is soliciting proxies in support of director nominees other than the registrant's nominees.

[30] ''Partial slate'' as used in this release refers to the nomination of a number of director candidates that is less than the number of directors being elected at the meeting. ''Full slate'' as used in this release refers to the nomination of a number of director candidates that is equal to the number of directors being elected at the meeting.

[31] *See, e.g., Standard Power & Light Corp.* v. *Inv. Assocs.,* 51 A.2d 572, 608 (Del. 1947); *Parshalle* v. *Roy,* 567 A.2d 19, 23 (Del. Ch. 1989). *See also* R. Franklin Balotti, et al., *Delaware Law of Corporations and Business Organizations,* § 7.20 (3d ed. 2015) (''Except in the case of irrevocable proxies, a subsequent proxy revokes a former proxy. In determining whether a proxy is subsequent, the date of execution controls.'').

[32] 17 CFR 240.14a–4(d)(1).

[33] 17 CFR 240.14a–4(d)(4).

believes its slate is at a disadvantage in the election contest. The party that appears to have an advantage in the contest then has no strategic incentive to include the other party's nominees on its proxy card.[34] Thus, even though a mechanism exists where shareholders could receive a proxy card listing all of the nominees in a contested election, because competing parties rarely have an incentive to include the other party's nominees on their card, shareholders today are almost always required to choose between competing proxy cards.

Currently, for shareholders to be assured that they can vote for the mix of registrant and dissident nominees that they choose (*i.e.,* to ''split their vote''), they generally must attend the meeting in person and vote. Shareholders that hold their securities in street name are required to take the additional step of obtaining a legal proxy from their broker before they are permitted to vote at the meeting. We understand that in some close elections, proxy solicitors and parties to the contest have helped shareholders who hold a large stake in the registrant split their votes by arranging for an in-person representative to vote their shares at the meeting on the ballots used for in-person voting. Since the ballots provided at the meeting include the names of both registrant and dissident nominees, this arrangement allows those shareholders to choose from all duly nominated candidates.[35] However, these options for splitting votes are either not made available to or are impractical for most other shareholders who are, therefore, more limited in their ability to vote for their preferred combination of director nominees.

Rule 14a–4(d)(4), the ''short slate rule,'' was adopted in 1992 to permit a dissident seeking to elect a minority of the board to ''round out its slate'' by soliciting proxy authority to vote for some registrant nominees on the dissident's card. Prior to adopting this rule, shareholders voting using the proxy card of a dissident seeking to elect a partial slate were disenfranchised with respect to the remaining seats on the board, which served as a disincentive for shareholders to grant proxies to that dissident.[36] As the Commission noted in adopting the short slate rule, the bona fide nominee rule ''has acted to prevent the form of proxy from being used to allow shareholders to exercise their state law right through the proxy process, and as a result, has both cut off shareholder rights and greatly disadvantaged shareholder nominees seeking minority representation on the board of directors.'' The Commission adopted the short slate rule to mitigate the disadvantage that dissidents faced when putting forth a partial slate of nominees.[37]

The short slate rule permits a dissident to indicate on its card that it intends to use its proxy authority to vote for the registrant nominees other than the nominees named on the card and thereby allows shareholders to vote for the registrant nominees other than those specified. The shareholder also is provided an opportunity to write in the names of any other registrant nominees with respect to which the shareholder withholds voting authority, although to do so, the shareholder must consult the registrant's soliciting materials in order to obtain the names of all registrant nominees. The short slate rule is available only in election contests in which the dissident is seeking to elect nominees that would constitute a minority of the board and it applies only to the dissident.[38] In addition, the short slate rule permits the dissident, not the shareholder, to select which, if any, of the registrant nominees to vote for using the short slate proxy card.

As originally proposed, Rule 14a–4(d) would have permitted proponents to include the names of registrant nominees on the proponent proxy card.[39] Commenters from the registrant community opposed the amendment, suggesting that including registrant nominees on the dissident's card could imply that the registrant nominees supported the dissident's position, that it would confuse shareholders, and that minority representation on the board would cause the board to be less effective. The Commission responded by adopting the current version of the short slate rule that permits the dissident to name the registrant nominees for whom the dissident will *not* vote. The Commission also stated that commenters' concerns that the election of dissident nominees to the board could hinder the board's effectiveness are arguments best made to the shareholders and determined in an election.[40] In taking this measured step of adopting a modified short slate rule, the Commission noted the appeal of a universal proxy in permitting shareholders to exercise their vote in the same manner as at a shareholder meeting.[41]

While the short slate rule provides the opportunity, in a contested election where a dissident is seeking election of a minority of the board, for a shareholder to use a proxy card to vote for all seats up for election, it does not provide that shareholder the opportunity to choose among all registrant and dissident nominees. To address this limitation, in recent years, proxy solicitors for registrants and dissidents have facilitated vote splitting to allow a few large shareholders to choose among all registrant and dissident nominees in a contested election. In addition, some commentators have suggested the possibility of requiring both parties to include each other's nominees on their own proxy cards.[42] We believe it is

[34] For example, when a proxy advisory firm recommends a vote for some, but not all, dissident nominees, in the absence of a universal proxy shareholders seeking to cast a vote for the recommended dissident nominees must use the dissident's proxy card. In that circumstance, a registrant may want to use a universal proxy to allow shareholders to vote for some registrant nominees while voting for some dissident nominees in accordance with the proxy advisory firm's recommendation. The dissident nominees, however, may have no incentive to consent to their inclusion on a universal proxy if they believe it is strategically advantageous to have shareholders choose between the two cards because it may result in shareholders voting on the dissident card and, as a result, more dissident nominees being elected.

[35] In those instances, the proxy solicitor creates a provisional ballot to reflect the split vote. We are also aware of instances where proxy solicitors have sought to facilitate vote splitting for some shareholders who hold a large stake in the registrant by instructing them to obtain a legal proxy and modify the registrant's proxy card to indicate their preferred combination of nominees by striking any registrant nominee they do not support and indicating the dissident nominee they wish to support. Parties to contested elections have questioned whether this approach is consistent with the current definition of a bona fide nominee in Rule 14a–4(d)(4).

[36] *See* Short Slate Rule Revised Proposing Release, at 29573 (noting that ''shareholders may be unwilling to execute a proxy that does not contain authority to vote for all seats up for election, absent cumulative voting, since the shareholder would not be exercising its full voting power.'')

[37] *See* Short Slate Rule Adopting Release.

[38] Registrants are not permitted to rely on the short slate rule to solicit authority to vote for some of the dissident's nominees. Theoretically, a registrant might wish to rely on the short slate rule if it was proposing a partial slate of nominees that would constitute a minority of the board. However, as a practical matter, such solicitations very rarely occur.

[39] *See* Short Slate Rule Revised Proposing Release.

[40] *See* Short Slate Rule Adopting Release, at 48288.

[41] *Id.* While neither proposing nor adopting a universal proxy, the Commission acknowledged that requiring a registrant to include dissident nominees in the registrant's proxy statement ''would represent a substantial change in the Commission's proxy rules.''

[42] *See, e.g.,* Richard J. Grossman & J. Russel Denton, *Never Mind Equal Access: Just Let Shareholders ''Split Their Ticket'',* The M&A Lawyer (Jan. 2009) (discussing the issue of shareholders seeking to split their votes and recommending requiring the use of a universal proxy card in bona fide election contests); Tom

Continued

appropriate to now consider a more direct route for shareholders to exercise the same vote as they could if voting in person at a shareholder meeting. Revising our rules to facilitate the full exercise of the shareholder franchise would reduce the costs for shareholders to vote for their choice of director nominees and provide all shareholders of the company the same voting opportunities currently available to only certain shareholders.

C. Recent Feedback on the Proxy Voting Process

In 2013, the Commission's Investor Advisory Committee (''IAC'') [43] recommended that we explore revising our proxy rules to provide proxy contestants with the option to use a universal proxy card in connection with short slate director nominations.[44] In early 2014, we received a rulemaking petition (''Rulemaking Petition'') requesting that we require the use of a universal proxy that would allow shareholders to vote for their preferred combination of registrant and dissident nominees in contested director elections.[45] In response to this feedback, the Commission staff undertook a review of the proxy rules and the Commission held a roundtable in February 2015 to explore ways to improve proxy voting, including through the adoption of universal proxies.[46]

The IAC has observed that many retail and institutional investors do not have the practical ability to attend shareholder meetings in person and vote by ballot, which would permit them to choose among all of the candidates who are duly nominated.[47] The IAC recommended that the Commission explore revising the bona fide nominee rule to permit the use of universal proxies. In reaching this recommendation, the IAC noted that the effect of the bona fide nominee rule, in conjunction with state corporate law voting provisions, is that shareholders voting by proxy have no practical ability to vote for a combination of dissident nominees and registrant nominees, in contrast to shareholders' ability to pick among all of the duly nominated candidates when they vote in person at a meeting.[48]

The Rulemaking Petition requested that the Commission amend the proxy rules to remove the requirement to obtain the consent of the opposition's nominees prior to including those nominees on a proxy card and require the use of a universal proxy that would allow shareholders to vote for their preferred combination of registrant and dissident nominees. The Rulemaking Petition contended that such amendments are necessary to fully enfranchise shareholders. It also noted that universal proxy cards would be less likely to confuse shareholders and less complex than proxy cards under the short slate rule, thus resulting in a less cumbersome voting process.

At the February 2015 proxy voting roundtable,[49] one panel addressed the current state of contested elections and whether changes should be made to the federal proxy rules to facilitate the use of universal proxy cards. The discussion focused on, among other things, whether universal proxies would increase the frequency of election contests or provide an advantage to one party or the other in a contested election. Some panelists stated that universal proxies would result in more contests; [50] others stated that they could facilitate settlements or accommodations with dissidents before a contest arose resulting in fewer contests.[51] Several panelists asserted that adopting universal proxy would more closely replicate the vote that could be made by voting in person at a shareholder meeting,[52] while another asserted that such a change should not be made in a vacuum without more broadly addressing the proxy voting process.[53] While panelists differed on many aspects of the universal proxy card, the fundamental concept that the proxy system should allow shareholders to vote by proxy as closely as possible to how they could vote in person at a shareholder meeting was generally acknowledged.[54]

D. Need for Proposed Amendments

We believe the proxy system should allow shareholders to achieve by proxy the vote they could cast in person at a shareholder meeting. We believe that the right to vote is of particular importance when shareholders are deciding among candidates in a contested election. While the Commission has taken some steps in the past to facilitate shareholders' ability to choose among the nominees in competing slates, such as through the adoption of the short slate rule, we are

Ball, *The Quest for Universal Ballots: Might Boards Benefit Too?,* Deal Lawyers (Nov.–Dec. 2014), available at *http://www.morrowco.com/wp-content/uploads/2015/01/Deal-Lawyers-article-on-Universal-Ballots-Nov-Dec-20141.pdf* (suggesting universal proxy could have strategic benefits for registrants in certain situations).

[43] The IAC was established in April 2012 pursuant to Section 911 of the Wall Street Reform and Consumer Protection Act [Pub. L. 111–203, sec. 911, 124 Stat. 1376, 1822 (2010)] (''Dodd-Frank Act'') to advise the Commission on regulatory priorities, the regulation of securities products, trading strategies, fee structures, the effectiveness of disclosure, initiatives to protect investor interests and to promote investor confidence and the integrity of the securities marketplace. The Dodd-Frank Act authorizes the Investor Advisory Committee to submit findings and recommendations for review and consideration by the Commission. The IAC made its universal proxy card recommendation at its July 25, 2013 meeting. *See* Recommendations of the Investor Advisory Committee Regarding SEC Rulemaking to Explore Universal Proxy Ballots (Jul. 25, 2013), available at *https://www.sec.gov/spotlight/investor-advisory-committee-2012/universal-proxy-recommendation-072613.pdf* (''IAC Recommendation'').

[44] A ''short slate director nomination'' occurs where dissident nominees, if elected, would constitute a minority of the board of directors. *See* Rule 14a–4(d).

[45] *See* Letter from the Council of Institutional Investors (Jan. 8, 2014), available at *http://www.sec.gov/rules/petitions/2014/petn4-672.pdf.* The Rulemaking Petition requested that the Commission eliminate the requirement to obtain a nominee's consent to be named on a proxy card in a contested election and to allow shareholders to vote for their preferred combination of nominees on a single proxy card.

[46] *See Proxy Voting Roundtable,* U.S. Securities and Exchange Commission (Feb. 19, 2015), available at *http://www.sec.gov/spotlight/proxy-voting-roundtable.shtml.*

[47] *See* IAC Recommendation, at 1.

[48] *See* IAC Recommendation. In addition, the IAC recommended that the Commission explore whether all or only a portion of duly nominated candidates must or may appear on a universal proxy card.

[49] *See supra* note 46.

[50] *See, e.g.,* Unofficial Transcript of the Proxy Voting Roundtable (Feb. 19, 2015) (''Roundtable Transcript''), comments of David A. Katz, Partner, Wachtell, Lipton, Rosen & Katz LLP, at 41, Anne Simpson, Senior Portfolio Manager and Director of Global Governance, CalPERS, at 43 and Steve Wolosky, Partner, Olshan Frome & Wolosky, LLP, at 48–49, available at *http://www.sec.gov/spotlight/proxy-voting-roundtable/proxy-voting-roundtable-transcript.txt.*

[51] *See, e.g.,* Roundtable Transcript, comments of Michelle Lowry, Professor, Drexel University, at 60 and Lisa M. Fairfax, Professor, George Washington University Law School, at 48.

[52] *See, e.g.,* Roundtable Transcript, comments of Lisa M. Fairfax, Professor, George Washington University Law School, at 30 and Anne Simpson, Senior Portfolio Manager and Director of Global Governance, CalPERS, at 35–36, 73.

[53] *See, e.g.,* Roundtable Transcript, comments of David A. Katz, Partner, Wachtell, Lipton, Rosen & Katz LLP, at 74. We note, however, that the panelist did not specify what other parts of the proxy system should be addressed.

[54] In a comment letter following the roundtable, one commenter reiterated its recommendation that the Commission propose rules to facilitate the use of universal proxies for contested elections, contending that such a change would enfranchise shareholders by permitting them to vote for the combination of nominees that they believe best serves their economic interest, lessen shareholder confusion concerning the proxy and lower shareholders' costs to vote. *See* Letter from the Council of Institutional Investors (Mar. 5, 2015), available at *http://www.sec.gov/comments/4-681/4681-7.pdf.* In contrast, another commenter suggested that mandating universal proxies would facilitate election contests that are disruptive to public companies and instead encouraged more robust communications between management and shareholders. *See* Letter from the Center for Capital Markets Competitiveness (Feb. 18, 2015), available at *http://www.sec.gov/comments/4-681/4681-6.pdf.*

concerned that the current proxy rules may not allow shareholders to fully exercise their voting rights. In particular, our rules may not permit shareholders to select their preferred combination of nominees through the proxy process, even though they could do so if they were to attend a shareholder meeting. In its review of proxy contests, the staff has become aware of parties engaging in practices to facilitate split voting for certain, typically large, shareholders.[55] The staff has also observed other ''self-help'' measures intended to facilitate split voting, such as attempting to allow shareholders to ''write in'' their candidate of choice on a proxy card, or in the case of registrants that are at risk of losing a majority of the seats on the board, nominating less than the total number of directors up for election to effectively assure the election of some dissident nominees. We believe a universal proxy card would better enable shareholders to have their shares voted by proxy for their preferred candidates and eliminate the need for special accommodations to be made for shareholders outside the federal proxy process in order to be able to make such selections. We further believe that a universal proxy system would help to ensure that all shareholders of the company are consistently and uniformly afforded the ability to select the director candidates of their choice in contested elections.

As a result, we are proposing to require the use of universal proxies in all non-exempt solicitations in connection with contested elections where a person or group of persons is soliciting proxies in support of director nominees other than the registrant's nominees. We are proposing this approach because our rationale for requiring the use of universal proxies—that the proxy voting process should allow as much as possible the voting choices that a shareholder would have when attending the meeting and voting in person—applies equally to all contested elections. We believe our rules should allow shareholders to select the combination of nominees that best aligns with their interests in any contested election.

In proposing these changes, we are cognizant of concerns that have been raised that including one party's nominees on the other party's proxy card could cause shareholder confusion or imply that the soliciting party supports the other party's nominees. We believe that some of these concerns would be mitigated by the amendments we propose today, including the proposed requirement to clearly distinguish between the registrant and dissident nominees on the proxy card.[56] To the extent that the proposed amendments do not fully alleviate these concerns, we believe they can be addressed through disclosure in the proxy statement.

We are also mindful that some have expressed that dissident representation on a board could lead to a less effective board of directors due to dissension, loss of collegiality and fewer qualified persons being willing to serve. As explained in more detail in Section IV.D below, while the proposed amendments are expected to result in reduced costs for shareholders seeking to split their votes, it is unclear whether the amendments would affect the number of dissident nominees elected to the board.[57] Similarly, it is unclear whether registrants would necessarily face an increased incidence of changes in board dynamics. If the proposed amendments result in additional dissident representation, it is difficult to predict whether such additional dissident representation would enhance or detract from board effectiveness and shareholder value.[58] Similar concerns were expressed at the time the Commission adopted the short slate rule.[59] As the Commission stated in adopting the short slate rule, arguments that the election of dissident nominees will hinder the board's effectiveness are best made to the shareholders for their consideration when making voting decisions and ''should not be a basis for imposing . . . regulatory barriers to the full exercise of the shareholder franchise.'' [60] Nevertheless, we solicit comment on the possible positive or negative impact the amendments could have on board performance. In particular, we solicit data on the effect of the proposed amendments on both the number of proxy contests and the resulting effect, if any, on dissident or incumbent director representation on boards. For the reasons discussed throughout this release, we preliminarily believe that facilitating the full exercise of the shareholder franchise by a broader group of shareholders may justify mandating the use of universal proxies in contested elections.

II. Proposed Amendments

Section 14 of the Exchange Act authorizes the Commission to establish rules and regulations governing the solicitation of any proxy or consent or authorization in respect of any security registered pursuant to the Exchange Act. In regulating the proxy process, we have sought to facilitate the rights shareholders have traditionally had under state law. We believe the current proxy rules could be improved to allow shareholders to more efficiently and fully exercise these rights in contested elections. To that end, we are proposing amendments to our proxy rules that would permit shareholders to vote by proxy for any combination of candidates for the board of directors, as they could if they attended the shareholder meeting in person and cast a written ballot.[61]

In order to provide for the use of universal proxy cards in contested elections, we are proposing to amend the proxy rules to establish new procedures for the solicitation of proxies, the preparation and use of proxy cards and the dissemination of information about all director nominees in contested elections. Specifically, we are proposing amendments that would:

- Revise the consent required of a bona fide nominee;
- Eliminate the short slate rule;
- Require the use of universal proxy cards in all non-exempt solicitations in connection with contested elections;
- Require dissidents to provide registrants with notice of intent to solicit proxies in support of nominees other than the registrant's nominees and the names of those nominees;
- Require registrants to provide dissidents with notice of the names of the registrant's nominees;
- Prescribe a filing deadline for dissidents' definitive proxy statement;
- Require dissidents to solicit the holders of shares representing at least a majority of the voting power of shares entitled to vote on the election of directors; and
- Prescribe requirements for universal proxy cards.

We also are proposing additional improvements to the proxy voting process by making changes to the form of proxy. Consistent with our goal of facilitating shareholder voting in

[55] *See supra* note 35 and accompanying text.

[56] *See* proposed Rule 14a–19(e)(3).

[57] *See infra* Section IV.D.3 (discussing potential economic effects on outcomes of contested elections).

[58] *See infra* Section IV.C (discussing broad economic considerations).

[59] *See* Short Slate Rule Adopting Release.

[60] *See* Short Slate Rule Adopting Release, at 48288.

[61] As discussed in Section II.D, the amendments we are proposing today to implement a mandatory universal proxy system would not apply to investment companies registered under Section 8 of the Investment Company Act of 1940 or business development companies as defined by Section 2(a)(48) of the Investment Company Act of 1940.

director elections, we are proposing additional amendments that would apply to all director elections. First, we are proposing to amend Rule 14a–4(b) to mandate that proxy cards include an ''against'' voting option when applicable state laws give effect to a vote against. We are similarly proposing amendments to require proxy cards to give shareholders the ability to ''abstain'' in an election where a majority voting standard is in effect. Finally, we are also proposing amendments to the proxy statement disclosure requirements to mandate disclosure about the effect of a ''withhold'' vote in an election.

A. Bona Fide Nominees and the Short Slate Rule

The current proxy rules limit the ability of parties in a contested election to include the names of all nominees on their proxy card. Exchange Act Rules 14a–4(d)(1) and 14a–4(d)(4) provide that no proxy may confer authority to vote for any nominee unless that nominee has consented to being named in the proxy statement and to serve if elected. As a result, a party in a contested election cannot include on its proxy card a nominee from the opposing party without the express authorization of that nominee, which is rarely provided. These proxy rules, along with state law rules regarding the effect of later-dated proxy cards, effectively create a system in which parties to a contested election distribute their own proxy cards that include only a subset of all director nominees. Ultimately, these limitations restrict the voting choices available to shareholders using the proxy process, as these shareholders are unable to use a proxy to vote for a combination of nominees of their choice.

The Commission sought to address some of the concerns about shareholders' inability to split their vote between the registrant's and the dissident's proxy cards through the adoption of the short slate rule.[62] The short slate rule permits a dissident seeking to elect a minority of the board to solicit authority to vote for some of the registrant's nominees on its proxy card. However, to comply with Rule 14a–4(d)(4), the dissident is only permitted to include on its proxy card the names of the registrant's nominees for whom it will not vote. While this rule provides shareholders with some additional choices in the proxy voting process, shareholders wishing to vote for nominees for all of the board seats up for election are still limited to voting by proxy for the combination of nominees that either the dissident or registrant chooses. Moreover, the short slate rule does not contemplate a registrant proposing a partial slate of nominees (or nominating less than the total number of directors to be elected), a tactic that may be advantageous for some registrants.[63]

1. Revision to the Consent Required of a Bona Fide Nominee

To allow for proxy cards that reflect the complete choice of candidates for election, we are proposing amendments to Rule 14a–4(d) to change the definition of ''bona fide nominee'' [64] for registrants other than investment companies registered under Section 8 of the Investment Company Act of 1940 (''funds'') and business development companies as defined by Section 2(a)(48) of the Investment Company Act of 1940 (''BDCs'').[65] Proposed Rule 14a–4(d)(1)(i) would define a bona fide nominee as a person who has consented to being named in a proxy statement relating to the registrant's next meeting of shareholders at which directors are to be elected. This would effectively expand the scope of a nominee's consent to include consent to being named in any proxy statement for the applicable meeting. By changing the requirement that a person consent to being named in ''a'' proxy statement instead of being named in ''the'' proxy statement,[66] parties in a contested election will be able to include all director nominees on their proxy cards, rather than only those nominees who have consented to being named on that particular party's proxy card.[67] This change would remove a current impediment to a registrant or a dissident including the other party's nominees on its proxy card.

We are cognizant of the concerns that have been raised about allowing the parties in an election contest to include the other party's nominees on their proxy card. These include concerns that listing registrant nominees on a dissident's proxy card could imply that registrant nominees support the dissident and would serve with dissident nominees, if elected, and objections about nominees being forced to lend their name, stature and reputation to the election campaign of a person with whom the nominee did not choose to run.[68] Similarly, there may be a question as to whether listing dissident nominees on a registrant's proxy card could lend credibility to the dissident nominees or imply that the registrant supports the dissident nominees. We believe, however, that these concerns would be mitigated by the proposed requirement to clearly distinguish between the registrant and dissident nominees on the proxy card [69] and through disclosure in each party's proxy statement. We also believe the proposed presentation and formatting requirements coupled with the fact that all nominees would be included on the card help to minimize these concerns. In contrast to the presentation of nominees on a dissident's proxy card under the short slate rule where the dissident's partial slate of nominees is presented together with certain registrant nominees (albeit in an indirect manner), the nominees of each party would be grouped together and presented on a universal proxy card as a separate slate of the nominating party. As a result, we believe it would be less likely under a universal proxy system

[62] *See* Short Slate Rule Adopting Release.

[63] *See* Ronald Barusch, *Dealpolitick: Management Takes Page from Activist Playbook with ''Short Slates,''* Wall St. J. (July 31, 2014), available at *http://blogs.wsj.com/moneybeat/2014/07/31/dealpolitik-management-takes-page-from-activists-playbook-with-short-slates/* (referencing a new trend among registrants that are at risk of losing a majority of the seats on the board in which the registrant nominates less than the total number of directors up for election to effectively assure the election of some dissident nominees).

[64] *See* proposed Rule 14a–4(d)(1)(i).

[65] As discussed in Section II.D, the amendments we are proposing today to implement a mandatory universal proxy system would not apply to funds or BDCs. For purposes of the rules that apply to funds and BDCs, the definition of a bona fide nominee and the short slate rule in current Rule 14a–4(d)(4) would be retained in proposed Rule 14a–4(d)(1)(ii).

[66] We also are proposing a corresponding change from ''the'' proxy statement to ''a'' proxy statement in Rule 14a–4(c)(5).

[67] We are proposing these amendments at the same time we propose Rule 14a–19 that would require the use of universal proxies in non-exempt solicitations in all contested elections, assuming certain conditions are met. *See infra* Section II.B. We note, however, that the proposed amendments to the bona fide nominee rule could operate independently from the proposed requirement to use universal proxies. The proposed amendments to the bona fide nominee rule, standing alone, essentially would allow parties the option of providing a universal proxy or alternatively providing a proxy with just some of the opposing party's nominees. We request comment below about this approach, including whether there are additional changes we should make to our rules to better enable the amendments to Rule 14a–4(d) to operate independently.

[68] The Commission noted these and other concerns when adopting the short slate rule in 1992. *See* Short Slate Rule Adopting Release, at 48288. We believe these concerns would be especially acute if we were to amend only Rule 14a–4(d) to change the consent required of a bona fide nominee, because such an amendment would allow the parties to choose which of the other party's nominees to include on their proxy card. We recognize that such concerns could be mitigated by the proposed requirement to clearly distinguish between each party's nominees, and registrants could further mitigate these concerns through disclosures in their soliciting materials. We request comment below regarding other ways to address them.

[69] *See* proposed Rule 14a–19(e)(3).

that shareholders would reasonably conclude that the registrant's nominees support the dissident simply because the registrant's nominees are included on the dissident's proxy card.

We also believe that some of these issues would be less acute with the implementation of a mandatory system for universal proxies in all contested elections. If mandatory use of universal proxies is implemented, we believe it would be increasingly unlikely that shareholders would conclude that the registrant's nominees support a dissident's campaign simply because the registrant's nominees are included on the dissident's proxy card. We also believe that these concerns can be addressed through disclosure in the proxy statement.

Proposed Rule 14a–4(d)(1)(i) would retain the requirement that a nominee consent to serve, if elected. The consent requirement would continue to help ensure that a registrant or dissident does not nominate a person who has not consented to serve as a director of the registrant.[70] As the Commission indicated when adopting the short slate rule, a proxy statement should disclose if any nominee has determined to serve only if its nominating party's slate is elected or to resign if one or more of the opposing party's nominees were elected to the board of directors.[71]

Request for Comment

1. We are proposing to amend Rule 14a–4(d)(1) to change the requirement that a nominee consent to being named in ''the'' proxy statement to require that the nominee consent to being named in ''a'' proxy statement for the next meeting at which directors are to be elected. This change would enable parties in a contested election to include all director nominees on their proxy card, including nominees of an opposing party. Should we amend the requirement as proposed? Why or why not? Could there be potential concerns with opposing parties naming nominees of the other party on their proxy card? Please explain. How can we address or mitigate any such concerns?

2. Should the proposed amendments to Rule 14a–4(d)(1) be adopted without proposed Rule 14a–19, which would require the mandatory use of universal proxies? [72] Why or why not? If only the proposed amendments to Rule 14a–4(d)(1) were adopted and a party in a contested election had the option, but was not required, to include all director nominees on its proxy card, would proposed Rule 14a–4(d)(1) further the goal of effectively facilitating shareholders' ability to vote by proxy for director nominees as they could vote in person at a meeting? Why or why not?

3. If we were to adopt the proposed amendments to Rule 14a–4(d)(1) to permit the parties in an election contest to include the other party's nominees on their proxy card without mandating the use of universal proxies for all parties, are there other amendments that would need to be adopted to facilitate the operation of proposed Rule 14a–4(d)(1)? For example, should we permit parties to decide whether to include some or all of the opposing party's nominees? Should we instead require a party seeking to include names of an opposing party's nominees on its proxy card to include the names of all of the opposing party's nominees? Should we consider rules that would require a party opting to use a universal proxy to provide notice of its intent to use a universal proxy and the names of its nominees or require the other party to provide a list of its nominees to the party seeking to use a universal proxy? Would other amendments be necessary, such as the proposed amendments concerning the form and format of the proxy card or additional disclosure requirements?

4. Do the proposed amendments allow the soliciting parties in a contested election to adequately address the concerns raised about possible voter confusion arising from nominees of one party being placed on the proxy card of an opposing party or creating an implication that a party's nominees support the opposing party and would serve with the opposing party's nominees, if elected? Are there other ways that the amendments could address these concerns? For example, should we require a statement that inclusion of an opposing party's nominees on the proxy card should not be construed as an endorsement of the opposing party's views or nominees?

5. When adopting the short slate rule, the Commission indicated that the possibility that nominees may not serve if elected with one or more of the opposing party's nominees is best addressed through disclosure. Should we adopt an amendment requiring disclosure about the possibility that nominees may refuse to serve if elected with any of the opposing party's nominees? Should we require disclosure describing how the resulting vacancy can be filled under the registrant's governing documents and applicable state law?

6. Are there any additional disclosures that we should require in the proxy materials or on the proxy card or other steps we should take to address concerns with the proposed amendments to Rule 14a–4(d)(1) to permit opposing parties to name each other's director nominees on their proxy cards?

2. Elimination of the Short Slate Rule

We are proposing revisions to Rule 14a–4(d) to eliminate the short slate rule for registrants other than funds and BDCs.[73] The short slate rule was adopted to mitigate concerns about a dissident's inability to allow shareholders to vote on its proxy card for all board seats up for election when soliciting in support of a partial slate of nominees.[74] Proposed Rule 14a–4(d)(1)(i) would permit a proxy to confer authority to vote for a nominee named on a proxy card if that nominee consented to being named in any proxy statement for the applicable meeting. Additionally, each party in a contested election would be required to include on its proxy card all candidates that have consented to being named on a proxy card for the applicable meeting.[75] Thus, if a dissident solicits proxies in support of a partial slate of nominees, our proposed rules would permit shareholders to vote for any combination of registrant and dissident nominees in order to cast a vote for a full slate of directors.

As a result, the short slate rule would no longer be necessary to accomplish its intended purpose. While the elimination of the short slate rule would take away the ability of a dissident to select the registrant nominees it prefers to round out its slate of nominees, the dissident still would have the ability to include recommendations for its preferred registrant nominees in its proxy materials. If the short slate rule is eliminated and mandatory universal proxy is adopted, shareholders would be able to select their preferred combination of nominees, including the registrant nominees, if any, when voting for directors using the dissident's proxy card.

[70] While the proposed amendments to Rule 14a–4(d)(1) to change the consent required of a bona fide nominee could operate independently from proposed Rule 14a–19, which would require the use of a universal proxy card, we are not proposing a change to the consent requirement without mandatory use of universal proxy cards in contested elections. *See infra* Section II.B for a discussion of mandatory use of universal proxies.

[71] *See* Short Slate Rule Adopting Release, at 48289 n.78.

[72] *See infra* Section II.B for a discussion of proposed Rule 14a–19 and the proposed mandatory universal proxy system.

[73] *See supra* note 65.

[74] *See* Short Slate Rule Adopting Release, at 48288.

[75] *See infra* Section II.B for a discussion of proposed Rule 14a–19.

Request for Comment

7. If we change the consent required of a bona fide nominee, as proposed, is there any reason the short slate rule, or a modified version of the rule, should be retained? If so, what circumstances would warrant the continued use of the short slate rule and should it be modified to enhance its utility?

8. While the short slate rule permits a dissident seeking to elect a minority of the board to solicit authority to vote for some of the registrant's nominees on its proxy card, the dissident is only permitted to include on its proxy card the names of the registrant's nominees for whom it will *not* vote. Should we consider modifying the short slate rule to enable a dissident soliciting in support of a slate that would constitute a minority of the board to round out its slate by soliciting authority to vote for the dissident's choice of registrant nominees whose names are included on the dissident's card instead of the current system of soliciting authority to vote for registrant nominees who are not named?

9. Should we retain the short slate rule but modify it to make it available to dissidents soliciting authority to vote for a slate of nominees that, if elected, would constitute a majority of the board of directors?

10. Should we retain the short slate rule but modify it to make it available to registrants as well as dissidents? A registrant can nominate less than the total number of directors up for election to ensure that some dissident nominees are elected. Should we make a modified short slate rule available to the registrant in that scenario?

11. Should we consider any modified version of the short slate rule instead of a universal proxy system? Would a modified version of the short slate rule further the goal of effectively facilitating shareholders' ability to vote by proxy for director nominees as they could vote in person at a meeting? Please explain.

3. Solicitation Without a Competing Slate

While the impetus for proposing amendments to Rule 14a–4(d), as described above, is to address situations in which there are competing slates for the board of directors, we note that the proposed amendments would affect the conduct of proxy contests even when a proponent is not nominating its own candidates for the board of directors. A proponent might, for example, seek authority to vote ''against'' one or more (but fewer than all) of the registrant nominees. In that situation, the bona fide nominee rule currently would prevent the proponent from naming, and soliciting votes ''for,'' any of the other registrant nominees because they have not consented to being named in the proponent's proxy statement. Furthermore, the short slate rule is not available for a proponent's solicitation of authority to vote ''against'' one or more of the registrant nominees.[76]

Another situation in which a proponent might seek to solicit proxies without nominating its own candidates would be where a proponent wants to solicit votes for its own proposal that is unrelated to director elections (*e.g.,* a corporate governance proposal). While a proponent in that case might want to include the registrant nominees on its proxy card so that shareholders supporting its proposal would be able to use the proponent's proxy card also to vote in the election of directors, the bona fide nominee rule currently would not permit the proponent to include the names of registrant nominees and solicit votes ''for'' those individuals.[77]

In cases such as those described above, the proposed amendments to Rule 14a–4(d) would permit a proponent to solicit authority to vote on some or all of the named registrant nominees by providing that a person is a bona fide nominee as long as he or she consents to being named in ''a'' proxy statement for the next meeting at which directors are to be elected. We are not proposing to require proponents conducting a solicitation without a competing slate to include the names of all registrant nominees on their proxy cards. These campaigns do not implicate our rationale for requiring the use of universal proxy cards in contested elections since shareholders can fully exercise their vote for the director nominees they prefer by using the registrant's proxy card. In addition, we believe that permitting proponents to solicit authority to vote on some, but not all, of the registrant nominees is appropriate because such campaigns do not implicate concerns that have been raised about allowing the parties in an election contest to include the other party's nominees on their proxy card. Commenters on the short slate rule proposed in 1992 raised concerns that modification of the bona fide nominee rule to permit inclusion of registrant nominees on a dissident's proxy card would force a registrant nominee to lend his or her name, stature, or reputation to the election campaign of a person with whom he or she does not choose to run; create an implication that the registrant nominees support a proponent's solicitation and would serve alongside proponent nominees if elected; and potentially confuse shareholders.[78] These concerns do not arise in the context of solicitations without a competing slate.[79] In this situation, there is no solicitation that will result in a registrant nominee serving alongside proponent nominees and shareholders can fully exercise their vote for the director nominees that they prefer by using the registrant's proxy card. We also do not believe that there is a potential for shareholder confusion in this situation because there is only one set of names for persons nominated to the board of directors; however, we solicit comment on this point below.[80]

Request for Comment

12. The proposed amendments to the bona fide nominee definition would permit proponents to include the names of some or all of the registrant's nominees on its proxy card even when the proponent is not nominating its own candidates. Should this be permitted? Why or why not? Are there additional or different changes that we should make to our rules that apply to a situation in which the proponent is not nominating its own candidates? For example, should we instead require those proponents to include the names of all registrant nominees? Why or why not?

13. Would the inclusion of registrant nominees on a proponent's proxy card when the proponent is not nominating its own candidates imply that the

[76] While the short slate rule currently permits a proponent to seek authority to vote for registrant nominees when the proponent is nominating at least one candidate (so long as the proponent's candidate or candidates would constitute a minority of the board of directors), the rule does not address a situation where a proponent is seeking votes solely with respect to registrant nominees. *See* Rule 14a–4(d)(4).

[77] While the proponent currently could include a proposal for the election of all of the registrant's nominees as a group without naming such nominees, the proponent still would have limited options in the way it could present this group on its proxy card without running afoul of the bona fide nominee rule (*e.g.,* the proponent would not have the ability to present individual voting boxes for each of the registrant's nominees).

[78] *See* Short Slate Rule Adopting Release, at 48288.

[79] *But see supra* Section II.A.1 and *infra* Section II.B.6 for a discussion of these concerns in the context of contested elections that would trigger proposed Rule 14a–19 and mandatory universal proxies.

[80] We also believe that these concerns could be less acute with the implementation of our proposed rules for mandatory use of universal proxies in all contested elections. If mandatory use of universal proxies is implemented, we believe it would be increasingly unlikely that shareholders could reasonably draw any implication that a registrant nominee supports a proponent's campaign with respect to the proponent's non-election proposal simply because the names of registrant nominees appear on the proponent's proxy card.

registrant nominees support the proponent's proposal? Would the inclusion cause shareholder confusion? If so, does the ability to provide disclosure in a party's soliciting materials sufficiently address this implication or possible confusion? Are there additional disclosures or are there other changes that would avoid or mitigate this implication or confusion? Please provide specific suggestions.

B. Use of Universal Proxies

To update our proxy system to better facilitate shareholders' ability to vote for their choice of nominees, we also are proposing amendments to the federal proxy rules that would require each soliciting party in a contested election to distribute a universal proxy that includes the names of all candidates for election to the board of directors. The dissident in a contested election would be required to provide notice to the registrant of its intent to solicit proxies in support of director nominees, other than the registrant's nominees, and the names of those nominees, no later than 60 calendar days prior to the anniversary of the previous year's annual meeting date.[81] Similarly, the registrant in a contested election would be required to notify the dissident of the names of the registrant's nominees no later than 50 calendar days prior to the anniversary of the previous year's annual meeting date.[82]

In a contested election, after the dissident provides the above notice, it would be required to solicit the holders of shares representing at least a majority of the voting power of shares entitled to vote on the election of directors.[83] We are additionally proposing that the dissident be required to file its definitive proxy statement with the Commission by the later of 25 calendar days prior to the meeting date or five calendar days after the date the registrant files its definitive proxy statement.[84] To ensure that each party's nominees are presented in a clear and impartial manner, the proposed rules also would impose specific presentation and formatting requirements for all director election proposals on universal proxy cards.[85]

1. Mandatory Use of Universal Proxies in Non-Exempt Solicitations in Contested Elections

We are proposing new Rule 14a–19(e) to require that proxy cards used in a non-exempt solicitation in connection with a contested election include the names of all duly nominated candidates for election to the board.[86] Rule 14a–4(b)(2) currently requires that a form of proxy providing for the election of directors shall set forth the names of the persons nominated for election as directors, including certain shareholder nominees. Proposed Rule 14a–19(e), in conjunction with the proposed change to the consent required of a bona fide nominee discussed above, would require proxy cards used in contested elections to include the names of all nominees of the registrant, certain shareholders, and any dissident that has complied with proposed Rule 14a–19. We believe this change would better enable shareholders to vote for their preferred combination of nominees in a contested election of directors and would allow the proxy process to more closely replicate the voting choices available at a shareholder meeting.

a. Mandatory Use of Universal Proxies

We considered whether to propose the mandatory use of universal proxies or to allow each party to decide whether to use a universal proxy. We have received divergent recommendations on this issue and, as discussed below, in order to more effectively address the problem of shareholders' inability to vote by proxy for the combination of nominees of their choice, we have decided to propose a mandatory rule.

The Rulemaking Petition recommended that the Commission require all duly nominated candidates be named in the universal proxy, noting that such requirement would ensure shareholders' ability to use either party's proxy card to vote for the combination of board candidates they prefer. The Rulemaking Petition also contended that simply repealing the consent required of a bona fide nominee might encourage parties to circulate semi-universal proxy cards featuring more, but not all, candidates.[87]

In contrast, the IAC recommended a rule in which proxy contestants would have the option (but not the obligation) to use a universal proxy,[88] allowing one or both parties in an election contest to choose whether to use a universal proxy card that includes the names of the other party's nominees. The IAC noted that such a rule could allow a party to decide which bona fide nominees to include on its proxy card to accompany its own nominees, particularly when parties found all or certain individuals on a competing slate to be particularly objectionable. The approach recommended by the IAC could also give the parties in an election contest latitude to use a universal proxy card if and when it suits their strategic needs.[89]

We are proposing a mandatory system for universal proxies in contested elections because it best replicates how a shareholder could vote by attending a shareholder meeting in person and leaves all discretion in the voting decision to the shareholder. Requiring universal proxies in contested elections would permit shareholders to select the combination of nominees that best aligns with their interests instead of limiting shareholders' choice to a slate of candidates chosen by a party in the contest.

A mandatory system for universal proxies also would mitigate potential shareholder confusion and logistical issues that may result from allowing the parties in a contested election to choose whether to use a universal proxy. For example, under the proposed mandatory system, shareholders would receive proxy cards that include the names of all nominees rather than proxy cards

[81] *See* proposed Rule 14a–19(a) and (b); *infra* Section II.B.2. In order to make shareholders aware of the notice deadline, we also are proposing to require registrants to disclose in their proxy statement the deadline for providing such notice for the registrant's next annual meeting. *See* proposed Rule 14a–5(e)(4).

[82] *See* proposed Rule 14a–19(d); *infra* Section II.B.3.

[83] *See* proposed Rule 14a–19(a)(3); *infra* Section II.B.4.

[84] *See* proposed Rule 14a–19(a)(2); *infra* Section II.B.5.

[85] *See* proposed Rule 14a–19(e); *infra* Section II.B.6.

[86] Proposed Rule 14a–19(e) would require that the proxy card include the names of all persons nominated for election by the registrant, any person or group of persons that has complied with Rule 14a–19, and any person whose nomination by a shareholder or shareholder group satisfies the requirements of an applicable state or foreign law provision or a registrant's governing documents as they relate to the inclusion of shareholder director nominees in the registrant's proxy materials.

[87] *See* Rulemaking Petition.

[88] *See* IAC Recommendation.

[89] For example, if the registrant is concerned about a possible split recommendation from a proxy advisory firm, the registrant may opt to use a universal proxy to avoid the unintended consequences of a split vote recommendation. If a dissident is soliciting proxies in support of a full slate of nominees, a proxy advisory firm may decide that change is necessary on the board of directors, but not a change in the majority of directors, and recommend a split vote on the dissident's proxy card (*e.g.,* vote ''for'' three of the dissident nominees and ''withhold'' on six). Since shareholders following this recommendation would use the dissident proxy card to cast their votes on the election of directors, this could result in more dissident nominees being elected, a consequence the registrant might seek to avoid by opting to use a universal proxy. Additionally, if a registrant is at risk of losing a majority of the seats on the board of directors, the registrant might opt to use a universal proxy to garner more votes for the registrant's nominees than would have been achieved if the shareholders were forced to choose between voting for the dissident's slate on the dissident's proxy card or the registrant's slate on the registrant's proxy card.

with only some of the nominees from which to choose. The inclusion of all nominees on all proxy cards should reduce the confusion of competing and differing cards and mitigate concerns that including one party's nominees on an opposing party's card could imply that those nominees support the opposing party.

Further, a mandatory system would reduce the likelihood that the proxy card would be used as a tactical tool in the proxy contest. In contrast, under an optional system, if a soliciting person believed that it could receive more support for its slate by adding just one or two nominees from the other slate, it might solicit with a proxy card that only included those nominees. Similarly, a soliciting person under an optional system might decide not to use a universal card if it perceived an advantage in forcing a choice between the two competing slates. Both of these situations would limit shareholder voting options, which would be counter to the intended purpose of this rulemaking to facilitate shareholders' ability to vote for their preferred combination of director nominees as they could in person at a meeting. The mandatory system we are proposing would apply uniformly to all soliciting parties and to all election contests [90] to prevent soliciting parties from selectively using universal proxies for tactical purposes.

Shareholders seeking to have director nominees included in a registrant's proxy materials pursuant to state or foreign law provisions or a registrant's governing documents, such as the ''proxy access'' bylaws that some registrants have recently adopted,[91] must comply with those requirements. Nominees included in a registrant's proxy materials in this way are commonly referred to as ''proxy access nominees.'' Because a mandatory universal proxy system may provide a less costly means for shareholders or their nominees to gain a form of access to a registrant's proxy card, some may view a universal proxy system as a substitute for proxy access bylaw provisions. However, we believe that the proposed mandatory universal proxy system differs in significant respects from proxy access because it would not provide shareholders or their nominees with access to a registrant's proxy materials in the same manner and extent provided by proxy access bylaws.

Proxy access bylaws commonly require the registrant to include in its proxy statement the names of the nominating shareholder's nominees, disclosure required by Schedule 14A about the nominating shareholder and its nominees, and a statement provided by the nominating shareholder in support of its nominees' election to the board.[92] Nominating shareholders complying with proxy access bylaws are not required to prepare and file their own preliminary and definitive proxy statements, disseminate any proxy material or solicit any shareholders, while information about their nominees, including in many cases the nominating shareholder's own statement about its nominees, is included in the registrant's proxy materials and provided to shareholders along with the registrant's proxy card listing the names of the nominating shareholder's nominees.

In contrast, the proposed mandatory universal proxy system would require only that the registrant include the names of the dissident nominees on its proxy card.[93] The registrant's proxy card would clearly distinguish those nominees from the registrant's nominees.[94] No other disclosure about the dissident's nominees would be required by the registrant. For example, the registrant's proxy materials would not be required to include detailed information about the dissident or its nominees. Nor would the registrant be required to include any statements by the dissident in support of its nominees' election. Rather, the registrant would only be required to include a statement in its proxy statement directing shareholders to refer to the dissident's proxy statement for information required by Schedule 14A about the dissident's nominees.[95] The dissident would be wholly responsible for disseminating information about its nominees to shareholders and soliciting proxies in support of its nominees. As a result, the dissident would need to undertake the time, effort and cost of preparing and filing a preliminary proxy statement, completing the staff review process, preparing and filing a definitive proxy statement by the deadline imposed by proposed Rule 14a–19,[96] and soliciting the holders of shares representing at least a majority of the voting power of shares entitled to vote on the election of directors.[97] Thus, the dissident's ''access'' in the proposed mandatory universal proxy system would be limited to the listing of nominee names on the proxy card and would be accompanied by the obligation to solicit on behalf of its own nominees.

Request for Comment

14. Should we mandate the use of universal proxies in contested elections, as proposed? Does such a requirement more effectively replicate in-person attendance at a shareholder meeting than the current proxy system? Are there additional changes we should make to our proxy rules to facilitate shareholders' ability to vote by proxy in the same manner they could vote in person at a meeting?

15. Our proposal applies to all companies with a class of securities registered under Section 12 of the

[90] As discussed in Section II.D *infra,* the amendments we are proposing today to implement a mandatory universal proxy system would not apply to funds or BDCs.

[91] *See* Sullivan & Cromwell LLP, *Proxy Access: Developments in Market Practice,* at 2 (Apr. 8, 2016), available at *https://www.sullcrom.com/siteFiles/Publications/SC_Publication_Proxy_Access__Developments_in_Market_Practice.pdf* (''S&C April Report'') (stating that 200 public companies had adopted some form of proxy access since the 2015 proxy season, compared to 15 companies prior to 2015).

[92] *See, e.g.,* S&C April Report, at A–1 to A–8 (including a sample form of proxy access bylaw that reflects recent developments in market practice). If a registrant is required to include a proxy access nominee in its proxy materials pursuant to a proxy access bylaw, Item 7(f) of Schedule 14A would require the registrant to include in its proxy statement the disclosure required from the nominating shareholder under Item 6 of Schedule 14N about the nominating shareholder and the proxy access nominee. Nominating shareholders complying with proxy access bylaws must provide notice to the registrant on a Schedule 14N of their intent to have a nominee included in the registrant's proxy materials pursuant to the registrant's proxy access bylaw by the deadline set forth in Rule 14a–18 and file that notice with the Commission on the date first transmitted to the registrant. 17 CFR 240.14a–18.

[93] *See* proposed Rule 14a–19(e)(1); *infra* Section II.B.6.

[94] *See* proposed Rule 14a–19(e)(3); *infra* Section II.B.6.

[95] *See* proposed Item 7(h) of Regulation 14A. As discussed in more detail in Section II.B.5.b *infra,* to provide shareholders with access to information about all nominees when they receive a universal proxy card, we are proposing a requirement that each party in a contested election refer shareholders to the other party's proxy statement for information about the other party's nominees and explain that shareholders can access the other party's proxy statement for free on the Commission's Web site. Registrants subject to election contests today routinely refer to the dissident, the dissident's nominees and the dissident's proxy materials in their proxy statements likely on the basis that the existence of alternative nominees is a material fact. *See* 17 CFR 240.14a–9. For example, based on a review of 72 proxy contests that the staff identified as involving competing slates of director nominees in calendar years 2014 and 2015, *see infra* note 115, the staff found that in 68 contests (or 94 percent of the contests), registrants identified the dissident in their proxy statements. As for the four contests where the registrants did not identify the dissidents, either the parties reached a settlement before the annual meeting or the registrant did not file a proxy statement for the annual meeting because it was acquired in an intervening transaction. As a result, we do not expect the proposed requirement to result in meaningfully new disclosure for registrants.

[96] *See* proposed Rule 14a–19(a)(2); *infra* Section II.B.5.a.

[97] *See* proposed Rule 14a–19(a)(3); *infra* Section II.B.4.

Exchange Act but would not apply to funds and BDCs. Should we exclude any other types of registrants, such as smaller reporting companies and/or emerging growth companies? Why or why not?

16. Would mandatory use of universal proxies impose additional costs on dissidents and/or registrants? If yes, please identify the costs and quantify them to the extent practicable. Would some of these costs be avoided under an optional system? If so, which ones and why? Would some of the benefits attributable to a mandatory system be reduced or eliminated under an optional system? If so, which ones and why?

17. Would a mandatory universal proxy system result in investor confusion, such as confusion regarding which party a nominee supports? Would the proposed requirement to clearly distinguish between registrant and dissident nominees on the proxy card avoid or mitigate that confusion? Are there additional rule changes that we should make in this regard?

18. Should we make the use of universal proxies optional rather than mandatory? Why or why not? Would an optional system further the goal of effectively facilitating shareholders' ability to vote by proxy for director nominees as they could vote in person at a meeting? If universal proxies were optional, we are interested in the views of both registrants and dissidents as to how frequently they would choose to use a universal proxy and why. Under what circumstances would one party choose to include the names of an opponent's nominees? Under an optional system, if one party opts to use a universal proxy, is the other party likely to follow suit? Would allowing for optional use of universal proxies result in confusion?

19. If we were to adopt an optional system, should we require a party opting to use a universal proxy to include all of the other party's nominees on its card or should we allow each party to select which nominees to include? If we do not require all nominees to be listed, would shareholders be confused by the contrasting proxy cards? Would such a system lead to the parties utilizing universal proxies only when it offers them a strategic advantage?

20. If we were to adopt an optional system, should both parties be permitted to decide whether to use a universal proxy card? If so, should this decision be made at the beginning of the contest before any proxy cards are distributed, or should a party be able to opt to use a universal proxy in the midst of a contest after it or the other party has distributed a conventional (non-universal) card? What, if any, of the other proposed amendments should we maintain in an optional system? For example, should we retain the proposed notice requirements and the dissident's definitive proxy statement filing deadline for universal proxy or some other variation of these proposed requirements? Should we retain the proposed amendments to the form of the universal proxy card?

21. Should we instead adopt a hybrid system in which the use of universal proxies in contested elections is mandatory for one party but optional for the other? Would such a system effectively facilitate shareholders' ability to vote by proxy for director nominees as they could vote in person at a meeting? Under a hybrid system, which party should be required to use the universal proxy? For example, should we require the use of a universal proxy by dissidents but make it optional for registrants? This type of hybrid system would permit shareholders to select their preferred combination of dissident and registrant nominees on the dissident's proxy card while still requiring a dissident to conduct an independent solicitation. However, only those shareholders that a dissident elects to solicit would receive a universal proxy unless the registrant opted to use a universal proxy. Should we require the party using the universal proxy in a hybrid system to furnish a proxy statement to all shareholders to ensure that every shareholder receives a universal proxy and can vote for their preferred combination of nominees as they could if attending the shareholder meeting in person? In a hybrid system, would it be necessary or helpful to require dissidents to provide notice of the names of their nominees to registrants as we have proposed for the mandatory universal proxy system? What other requirements would be needed in a hybrid system? Under a hybrid system in which one party is required to use a universal proxy, is the other party likely to follow suit and elect to provide a universal proxy as well? Would a hybrid system provide advantages to one party or the other in an election contest? If so, which party would it benefit and why?

22. If we do not adopt a mandatory system for universal proxies, how else could we enable shareholders to vote by proxy for their choice of nominees in a contested election?

23. Would mandatory use of universal proxies increase the frequency of contested elections? Why or why not? Would the optional use of universal proxies have a similar impact? Why or why not?

24. Would shareholders use mandatory universal proxy instead of a registrant's proxy access bylaw? Why or why not? What would be the implications of such use and should any additional rule changes be made in this regard?

b. Use in Contested Elections

We are proposing to apply the requirement to use universal proxies to all non-exempt solicitations in connection with contested elections where a person or group of persons is soliciting proxies in support of director nominees other than the registrant's nominees.[98] We are proposing this approach because our rationale for requiring the use of universal proxies—that the proxy voting process should mirror as much as possible the vote that a shareholder could make by attending the meeting and voting in person—applies equally to all types of contested elections. We believe our rules should permit shareholders to select the combination of nominees that best aligns with their interests in any contested election, whether a dissident is soliciting proxies in support of a number of nominees that would constitute a minority or a majority of the board of directors.

We recognize that there are differing views on the types of contests that warrant the use of universal proxies. For example, the IAC recommended the use of universal proxies only in connection with short slate director nominations, while the Rulemaking Petition recommended the use of universal proxies in all contested elections.[99] We considered limiting the requirement to use universal proxies to contests where the election could not result in a change in a majority of the board of directors. We are aware that where a contest results in a change in a majority or all of the directors, there may be consequences beyond the resulting change in the board of directors. These may include triggering provisions in debt covenants and other material contracts and agreements. We also recognize that those who believe the use of universal proxies would increase the success of dissidents may contend that requiring universal proxies in all contests (including contests in which the election of a dissident's nominees would result in a change in a majority

[98] As discussed in Section II.D *infra,* the amendments we are proposing today to implement a mandatory universal proxy system would not apply to funds or BDCs.

[99] *See* IAC Recommendation; Rulemaking Petition.

of the directors) would likely increase the occurrence of these change-in-control consequences. However, we believe these change-in-control implications and any associated risks are better addressed through disclosure in the proxy statement (as is currently the case) rather than through federal proxy rules applicable to the solicitation process.[100]

The mandatory universal proxy system, as proposed, would not apply to an election of directors involving only registrant and proxy access nominees. Where proxy access nominees are included on the registrant's proxy card and there is no competing slate of dissident nominees, shareholders will already have access to a proxy that reflects all of their voting options for the election of directors. Therefore, we are not proposing that the requirements of the proposed universal proxy system would apply to such nominating shareholders.[101]

We are proposing to apply the requirement to use a universal proxy only to solicitations that involve a contested election. In solicitations that do not involve a contested election, such as a ''vote no'' campaign (*i.e.,* where a soliciting person is only soliciting ''withhold'' or ''against'' votes with respect to one or more of the registrant's nominees) or where a shareholder is only soliciting proxies in support of a shareholder proposal, there are no alternative director nominees. Those solicitations would not raise the same concerns that mandatory universal proxy is intended to address because the registrant's proxy card already provides shareholders with the ability to select their choice of nominees from all director candidates. Where the solicitation does not involve a contested election, a proponent's form of proxy would be governed by Rule 14a–4(b)(2), as it is today. We note, however, that Rule 14a–4(b)(2), in conjunction with the proposed change to the consent required of a bona fide nominee discussed above,[102] would allow a proponent to include the names of some or all registrant nominees on the proponent's proxy card, which is not explicitly contemplated by the current proxy rules.

Similarly, the mandatory universal proxy system, as proposed, would not apply to a dissident's consent solicitation [103] to remove existing registrant directors and replace them with dissident nominees.[104] We do not believe that universal proxy is needed for consent solicitations because a registrant contesting such a solicitation typically does so by soliciting revocations of the consents and not by presenting a competing slate.[105] These solicitations, although related to the election of directors, do not raise the same concerns that mandatory universal proxy is intended to address because shareholders would have access to a consent card that reflects all of their voting options for the removal and appointment of directors to fill the vacancies, if any, created by the removal of directors.

Request for Comment

25. Should we require the use of universal proxies in all contested elections, as proposed? Should we instead limit the use of universal proxies to contested elections in which a dissident is soliciting proxies in support of a slate that, if elected, would constitute a minority of the board of directors? If so, why should we differentiate between such contests? Should we instead limit the use of universal proxies in a different way?

26. As proposed, a universal proxy would be permitted, but not required, for other types of solicitations. Should we instead require the use of a universal proxy in solicitations that do not involve a contested election, such as a ''vote no'' campaign or where a shareholder is only soliciting proxies in support of a shareholder proposal? Why or why not?

27. Should we expressly exclude consent solicitations from the application of Rule 14a–19, as proposed? Are there any reasons why a universal proxy requirement should apply to consent solicitations? If so, please describe.

c. Exempt Solicitations

We are proposing that universal proxies be required only in non-exempt solicitations. Current Rule 14a–2(b) provides that certain provisions of Regulation 14A, including Rules 14a–3, 14a–4, 14a–5 and 14a–6,[106] do not apply to the exempt solicitations described in Rule 14a–2(b).[107] Our proposed amendments would revise Rule 14a–2(b) to specify that the requirements of proposed Rule 14a–19 similarly do not apply to exempt solicitations under Rule 14a–2(b).

We propose that universal proxies be required only in contested elections where the dissident conducts a non–exempt solicitation that is subject to Rule 14a–12(c) [108] through the use of a proxy statement and proxy card pursuant to Regulation 14A. Thus, the proposed amendments would not apply to solicitations in which a person does not seek authority to act as proxy and does not furnish or request a form of revocation, abstention, consent or revocation, which are exempt under Rule 14a–2(b)(1). Similarly, the proposed amendments would not apply to solicitations in which the person is not acting on behalf of the registrant and the aggregate number of persons solicited is not more than ten, which are exempt under Rule 14a–2(b)(2).

We are not proposing to require universal proxies in exempt solicitations because we do not believe exempt solicitations are an appropriate context for the universal proxy process. In a non-exempt solicitation in connection with a contested election, the parties may expend considerable time and effort and incur significant costs. This includes filing a proxy statement with the Commission that contains all required information about the director nominees and obtaining consent of the nominees to be named in the proxy statement and to serve if elected. In contrast, soliciting persons

[100] We are unaware of any empirical studies providing direct evidence that requiring universal proxy cards would increase the incidence of the change-in-control consequences discussed here.

[101] We are, however, proposing to require that the form of universal proxy to be used by registrants and dissidents also include any proxy access nominees. *See* proposed Rule 14a–19(e); *infra* Section II.B.6.

[102] *See* proposed Rule 14a–4(d)(1)(i).

[103] A consent solicitation involves the solicitation of written consents from shareholders to take action without a meeting.

[104] *See* proposed Rule 14a–19(g).

[105] We acknowledge that a registrant could solicit consents for a competing slate of nominees (*e.g.,* the incumbent directors) when soliciting for revocations of consents in the event the dissident's removal proposal is successful. Based on the staff's observations, registrants rarely, if ever, do so.

[106] Rules 14a–3 through 14a–6 set forth the filing, delivery, information and presentation requirements for the proxy statement and form of proxy for solicitations subject to Regulation 14A. 17 CFR 240.14a–3—14a–6.

[107] Rule 14a–2(b) exempts certain solicitations from most of the proxy rules other than the antifraud provisions. 17 CFR 240.14a–2(b). For example, Rule 14a–2(b)(1) exempts solicitations by any person who does not directly or indirectly seek authority to act as proxy and does not furnish or request a form of revocation, abstention, consent or revocation. Rule 14a–2(b)(2) exempts solicitations, other than on behalf of the registrant, where the aggregate number of persons solicited is not more than ten. These solicitations are exempted from the proxy rules because ''the best protection for shareholders and the marketplace is to identify those classes of solicitations that warrant application of the proxy statement disclosure requirement, and to foster the free and unrestrained expression of views by all other parties.'' *See* Short Slate Rule Adopting Release, at 48280.

[108] Rule 14a–12(c) applies to ''[s]olicitations by any person or group of persons for the purpose of opposing a solicitation subject to this regulation by any other person or group of persons with respect to the election or removal of directors at any annual or special meeting of security holders.''

conducting exempt solicitations are not required to file their proxy materials with the Commission and may expend little time and effort and incur limited costs. Accordingly, if we were to mandate the use of universal proxies when a dissident is conducting an exempt solicitation, the dissident could potentially capitalize on the registrant's solicitation while expending very little time and effort and incurring no costs itself. Moreover, shareholders would not be assured of having the benefit of the robust disclosure required under Regulation 14A, including disclosure about the dissident's nominees, when casting their vote using a universal proxy.

Request for Comment

28. Should we limit the requirement to use universal proxies to non-exempt solicitations, as proposed? Should we instead require that universal proxies also be used in some or all exempt solicitations? For example, should universal proxies be required in contested elections where a dissident is conducting an exempt solicitation under Rule 14a–2(b)(2)? If so, should the proposed rules be applied differently in the context of an exempt solicitation, such as requiring the dissident to use a universal proxy in its exempt solicitation while giving the registrant the option to use a universal proxy in its non-exempt solicitation?

2. Dissident's Notice of Intent To Solicit Proxies in Support of Nominees Other Than the Registrant's Nominees

We are proposing to require the dissident to provide notice to the registrant of its intent to solicit proxies in support of director nominees other than the registrant's nominees.[109] We believe that establishing a notice requirement is necessary to provide a definitive date by which the parties in a contested election will know that use of universal proxies has been triggered. For that reason, we are proposing a new notice requirement that would apply to any dissident who intends to conduct a non-exempt solicitation and solicit proxies in support of director nominees other than the registrant's nominees using its own proxy card.

Proposed Rule 14a–19 would require a dissident to provide the registrant with the names of the nominees for whom it intends to solicit proxies no later than 60 calendar days prior to the anniversary of the previous year's annual meeting date.[110] If the registrant did not hold an annual meeting during the previous year, or if the date of the meeting has changed by more than 30 calendar days from the previous year, proposed Rule 14a–19 would require that the dissident provide notice by the later of 60 calendar days prior to the date of the annual meeting or the tenth calendar day following the day on which public announcement of the date of the annual meeting is first made by the registrant. Proposed Rule 14a–19 would also require a dissident to indicate its intent to comply with the minimum solicitation threshold in proposed Rule 14a–19[111] by including in this notice a statement that it intends to solicit the holders of shares representing at least a majority of the voting power of shares entitled to vote on the election of directors.[112] This statement would also serve to distinguish the notice under Rule 14a–19 from advance notice provided pursuant to the registrant's governing documents and to put the registrant on notice that the dissident intends to comply with the requirements of Rule 14a–19. Proposed Rule 14a–19 would not require a dissident to provide this notice to the registrant if the information required in the notice has been provided in a preliminary or definitive proxy statement filed by the dissident by the deadline imposed by proposed Rule 14a–19. Proposed Rule 14a–19 also would not require a dissident to file the notice with the Commission.

We are proposing 60 calendar days prior to the anniversary of the previous year's annual meeting date as the notice deadline because we believe it provides a definitive date far enough in advance of the meeting to give the parties sufficient time after the notice is provided to prepare a proxy statement and form of proxy in accordance with the universal proxy requirements.[113] In addition, we believe 60 calendar days prior to the anniversary of the previous year's annual meeting date is not too far in advance of the meeting so as to impose a significant additional burden for most dissidents. Our proposed deadline for the notice is 30 calendar days later than the deadline found in most advance notice bylaws, which typically require notice to be delivered no earlier than 120 days and no later than 90 days prior to the first anniversary of the prior year's annual meeting.[114] In fact, based on a review of the filings for the 72 contested elections initiated in 2014 and 2015, we estimate that dissidents provided some form of notice of their intent to nominate candidates for election to the board of directors 60 or more calendar days prior to the shareholder meeting date in 89 percent of the contests.[115]

A dissident's obligation to comply with the notice requirement under proposed Rule 14a–19 would be in addition to its obligation to comply with any applicable advance notice provision in the registrant's governing documents. In most cases, we do not anticipate that proposed Rule 14a–19 would impose a meaningful additional burden on a dissident since a dissident would generally have provided the names of its nominees by the proposed deadline to comply with a typical advance notice provision in a registrant's governing documents.[116] While we acknowledge that proposed Rule 14a–19 would impose a notice requirement even in the case of registrants that do not have an advance notice provision in their governing documents, we believe the requirement is necessary so those

[109] *See* proposed Rule 14a–19(a) and (b).

[110] The proposed rule also would require that a dissident promptly notify the registrant if any change occurs with respect to its intent to solicit proxies in support of its director nominees. *See* proposed Rule 14a–19(c).

[111] *See infra* Section II.B.4 for a discussion of the minimum solicitation requirement in proposed Rule 14a–19.

[112] We are also proposing to require similar disclosure in a dissident's proxy statement, which would be subject to the antifraud provisions in Rule 14a–9. *See infra* Section II.B.4.

[113] For many registrants, the record date for determining shareholders entitled to notice of the meeting cannot be more than 60 days before the date of such meeting. *See, e.g.,* Del. Code Ann. tit. 8, § 213. Thus, as a practical matter, registrants very rarely file their definitive proxy statement prior to such date.

[114] *See* Sullivan & Cromwell LLP, *Proxy Access Bylaw Developments and Trends,* at 4 (Aug. 18, 2015), available at *https://www.sullcrom.com/siteFiles/Publications/SC_Publication_Proxy_Access_Bylaw_Developments_and_Trends.pdf* (''S&C August Report''); Wachtell, Lipton, Rosen & Katz, *Nominating and Corporate Governance Committee Guide,* at 22 (2015), available at *http://www.wlrk.com/files/2015/NominatingandCorporateGovernanceCommitteeGuide2015.pdf.*

[115] The sample (''contested elections sample'') is based on staff analysis of EDGAR filings for election contests with preliminary proxy statements filed in calendar years 2014 and 2015 other than election contests involving funds or BDCs. Staff has identified 72 proxy contests involving competing slates of director nominees during this time period. For calculations in relation to the meeting date, the data is based on 70 out of 72 identified proxy contests since the registrant did not hold an annual meeting for the election of directors in two cases. For purposes of determining the earliest date the dissident provided some form of notice of its intent to nominate candidates for election to the board, staff considered disclosure in the dissident's definitive additional soliciting materials filed under Rule 14a–12, disclosure in amendments to the dissident's Schedule 13D and disclosure in both the registrant's and dissident's proxy statements.

[116] According to a law firm report, 95 percent of the S&P 500 and 90 percent of the Russell 3000 had advance notice provisions at 2014 year-end. *See* WilmerHale, *2015 M&A Report,* at 5 (2015), available at *https://www.wilmerhale.com/uploadedFiles/Shared_Content/Editorial/Publications/Documents/2015-WilmerHale-MA-Report.pdf* (*citing www.SharkRepellent.net*).

registrants receive notice of the names of a dissident's nominees in time to prepare a universal proxy card and file it with their preliminary proxy statement.

In most instances,[117] Rule 14a–19 would effectively preclude a dissident from launching an election contest less than 60 calendar days prior to the annual meeting even if the registrant's governing documents do not require advance notice by that date.[118] We believe such late-breaking contests are infrequent [119] and usually precluded by the prevalence of advance notice requirements in registrants' governing documents. Proposed Rule 14a–19 would not, however, preclude dissidents who are unable to meet the notice deadline from taking other actions to attempt to effectuate changes to the board, such as initiating a ''vote no'' campaign, conducting an exempt solicitation, or calling a special meeting (to the extent permitted under the registrant's bylaws) to remove existing directors and appoint their own nominees to fill the vacancies.

It is possible that a dissident will provide notice of the names of its nominees under proposed Rule 14a–19 and later change its nominees. It is also possible that a dissident will provide the notice required under proposed Rule 14a–19 but take no further steps in the solicitation of proxies in support of director nominees, or take some additional steps but later change or abandon its solicitation efforts. As proposed, Rule 14a–19 would require a dissident to promptly notify the registrant of any change to the dissident's intent to comply with the minimum solicitation threshold in proposed Rule 14a–19 or with respect to the names of the dissident's nominees.[120] Because a registrant may have disseminated a universal proxy card before discovering that the dissident has abandoned its solicitation,[121] we are proposing to require the registrant to include disclosure in its proxy statement advising shareholders how it intends to treat proxy authority granted in favor of a dissident's nominees in the event the dissident abandons its solicitation or fails to comply with proposed Rule 14a–19.[122] In those instances, the registrant could elect to disseminate a new, non-universal proxy card including only the names of the registrant's nominees. If there is a change in the dissident's nominees after the registrant has disseminated a universal proxy card, the registrant could elect, but would not be required, to disseminate a new universal proxy card reflecting the change in dissident nominees.

Request for Comment

29. Should we require a dissident to provide notice of its intent to solicit in advance of a shareholder meeting, as proposed? Would this requirement significantly hinder a dissident's ability to initiate a proxy contest? Why or why not? Does proposed Rule 14a–19 create logistical or timing issues not addressed in this release?

30. What percentage of companies with Section 12 registered securities have an advance notice provision in their governing documents today? What percentage of those companies that have an advance notice provision have a deadline of, or a submission window that ends, 90 days, 60 days, or another specified number of days prior to the upcoming annual meeting date or the first anniversary of the prior year's annual meeting?

31. Does the proposed requirement to identify a dissident's nominees 60 days in advance of a meeting sufficiently accommodate the interests of both dissidents and registrants? Should the notice be required more or fewer days in advance? Alternatively, would some other triggering event for filing the notice, such as within five days of the registrant filing its preliminary proxy statement, better provide appropriate notice? Would some other period of time be more appropriate?

32. If a registrant did not hold an annual meeting during the previous year, or if the date of the meeting has changed by more than 30 calendar days from the previous year, should we require a dissident to provide notice by the later of 60 calendar days prior to the date of the annual meeting or the tenth calendar day following the day on which public announcement of the date of such meeting is first made by the registrant, as proposed? Should we instead require registrants to file a Form 8–K within four business days of determining the anticipated meeting date to disclose the date by which a dissident must submit the required notice and require that such date be a reasonable time or a specified number of days before the registrant first files proxy materials with the Commission? Is there a more appropriate notice deadline we should use in situations in which a registrant did not hold an annual meeting during the previous year or the date of the meeting has changed by more than 30 calendar days from the previous year?

33. The proposed notice requirement would effectively prevent a dissident from launching an election contest less than 60 days before a meeting. Would some shorter or longer period be preferable? Should the proposed rule include an exception mechanism similar to Rule 14a–6(a) to allow a dissident to provide the notice required by proposed Rule 14a–19 after the 60 calendar day deadline in exceptional circumstances (*e.g.,* where a court of competent jurisdiction enjoins the advance notice bylaws of the registrant)? Should we instead have the notice requirement be a condition of the use of universal proxies but also permit dissidents to launch a contest as they could today, without the ability to use universal proxy if they do not comply with the notice requirements? Why or why not?

34. What information should be required in a dissident's notice? Should any other information besides the names of a dissident's nominees and a dissident's statement that it intends to solicit the holders of shares representing at least a majority of the voting power of shares entitled to vote on the election of directors be required? For example, should a dissident be required to include biographical or other information that is required of director nominees under Regulation 14A for its nominees in the notice?

[117] Proposed Rule 14a–19 would not operate to preclude a dissident from launching an election contest less than 60 calendar days prior to the annual meeting date if the registrant did not hold an annual meeting during the previous year and announced the date of the upcoming annual meeting fewer than 70 calendar days prior to the meeting date. In that instance, a dissident could launch an election contest at any time prior to the tenth calendar day following the registrant's public announcement of the meeting date (*e.g.,* if the registrant announced the date of the upcoming annual meeting 65 calendar days prior to the meeting date, the dissident could launch an election contest as late as the 55th calendar day prior to the meeting date). *See* proposed Rule 14a–19(b)(1).

[118] Proposed Rule 14a–19 would also effectively preclude a dissident from launching an election contest less than 60 calendar days prior to the annual meeting even if the registrant's board of directors has waived the advance notice deadline in the registrant's governing documents.

[119] Based on a review of the contested elections sample, *see supra* note 115, the staff found that dissidents provided notice of their intent to nominate director candidates fewer than 60 calendar days prior to the shareholder meeting date in 11 percent of the contests.

[120] *See* proposed Rule 14a–19(c).

[121] This could occur because a dissident is required to provide notice of its intent to solicit proxies to the registrant 60 days prior to the anniversary date of the previous year's annual meeting. If a registrant disseminates its proxy statement during the period of time between receiving the dissident's Rule 14a–19 notice and the dissident filing a preliminary proxy statement, a registrant would be required to include the names of the dissident's nominees on a universal proxy card.

[122] *See* proposed Item 21(c) to Schedule 14A.

35. Should we require a dissident to file the notice with the Commission? Should we require a dissident to file the notice with each national securities exchange upon which any class of securities of the registrant is listed and registered? Why or why not?

3. Registrant's Notice of Its Nominees

We are proposing to require the registrant to notify the dissident of the names of its nominees unless the names have already been provided in a preliminary or definitive proxy statement filed by the registrant.[123] Proposed Rule 14a–19(d) would require a registrant to provide the dissident with the names of the nominees for whom the registrant intends to solicit proxies no later than 50 calendar days prior to the anniversary of the previous year's annual meeting date. If the registrant did not hold an annual meeting during the previous year, or if the date of the meeting has changed by more than 30 calendar days from the previous year, proposed Rule 14a–19(d) would require that the registrant provide notice no later than 50 calendar days prior to the date of the meeting. Proposed Rule 14a–19 would not require a registrant to file the notice with the Commission.

We believe it is appropriate to include notification deadlines in a mandatory universal proxy system to provide the parties with a definitive date by which they will have the names of all nominees to be included on the universal proxy card. Without the names of all nominees, the parties could not file their definitive proxy statements and universal proxy cards to begin soliciting shareholders. Absent such a requirement for registrants, dissidents could face an informational and timing disadvantage in the proposed universal proxy system. Registrants would know the names of dissident nominees no later than 60 days prior to the meeting[124] while dissidents would not necessarily know the names of the registrant nominees until the registrant files its preliminary proxy statement, which is only required to be filed at least 10 calendar days prior to the date the definitive proxy statement is first sent to shareholders and may be filed much closer to the meeting date.[125] In that case, dissidents would have to wait to file their definitive proxy statement and proxy card until the registrant filed its preliminary proxy statement with the names of the registrant nominees.

We believe a deadline that is 10 calendar days after the latest date the registrant would have received dissident's notice of nominees is appropriate because it provides a sufficient period of time for the registrant to consider the dissident's notice, finalize its nominees and respond with its own notice of nominees. Moreover, we believe the 50 calendar day deadline is appropriate for providing dissidents with timely access to the names of registrant nominees for purposes of preparing a universal proxy card.

We acknowledge that a dissident could not file its definitive proxy statement and universal proxy card until the registrant has provided notice of the names of its nominees or otherwise filed a preliminary or definitive proxy statement including such names. Given the filing practices of soliciting parties in contested elections today, we do not believe this will be a practical hardship for dissidents because dissidents almost always file their definitive proxy statement after the registrant has filed a preliminary proxy statement and usually after the registrant has filed a definitive proxy statement.[126] If the names of the registrant's nominees are not known when a dissident plans to file its preliminary proxy statement, the dissident could file its preliminary proxy statement, as planned, and include blank spaces for the names of the registrant's nominees on its preliminary universal proxy card. The dissident could not file its definitive proxy statement until at least 10 calendar days elapsed after the preliminary proxy statement filing.[127] If the names of the registrant's nominees were still not known at that time, the dissident would have to wait until the names of the registrant's nominees were known before finalizing and filing its definitive proxy statement and universal proxy card. Based on a review of recent contested elections and the staff's experience, dissidents rarely file their definitive proxy statement more than 50 calendar days prior to the meeting date, which approximates the latest date on which registrants would be required to notify the dissident of the names of the registrant's nominees under the proposed rules.[128] Thus, unless soliciting parties in contested elections alter their filing practices as a result of using the proposed universal proxy system, we would expect those circumstances to arise infrequently. We solicit comment on this point below.

It is possible that a registrant could provide notice of the names of its nominees under proposed Rule 14a–19 and later change its nominees. As with the notice requirement for dissidents, proposed Rule 14a–19(d) would require a registrant to promptly notify the dissident of any change with respect to the names of the registrant's nominees. If there is a change in the registrant's nominees after the dissident has disseminated a universal proxy card, the dissident could elect, but would not be required, to disseminate a new universal proxy card reflecting the change in registrant nominees.

Request for Comment

36. Should we require a registrant to notify the dissident of the names of registrant nominees, as proposed? Would the proposed notice requirement for registrants affect the process by which a board of directors nominates candidates? If so, how? Is the proposed notice requirement for registrants inconsistent with any state or foreign law provision?

37. Should any other information besides the names of the registrant's nominees be required?

38. Is 50 calendar days prior to the anniversary of the previous year's annual meeting date an appropriate deadline for the notice of the registrant's director nominees? Should we require a longer or shorter period of time? Why or why not? Should the deadline for registrants be tied to the registrant's receipt of the dissident's notice? For example, should we instead adopt a deadline for registrants that is the later of 60 calendar days prior to the meeting or 10 calendar days following

[123] *See* proposed Rule 14a–19(d).

[124] Because the deadline under proposed Rule 14a–19(b)(1) is tied to the anniversary of the previous year's annual meeting date, 60 calendar days prior to the meeting date approximates the latest date on which registrants would know the names of dissident nominees.

[125] *See* proposed Rule 14a–19(b)(1); 17 CFR 240.14a–6(a).

[126] Based on the staff's review of the contested elections sample, *see supra* note 115, we estimate that dissidents filed their definitive proxy statement before the registrant filed its definitive proxy statement in 11 percent of the contests. We also estimate that a dissident filed its definitive proxy statement before the registrant filed its preliminary proxy statement (or definitive proxy statement in the instances where the registrant did not file a preliminary proxy statement) in just one instance (or 1 percent of the contests).

[127] *See* Rule 14a–6(a). In the staff's experience, a soliciting party will typically wait until it receives notice that the staff has no comments on the preliminary proxy statement before filing its definitive proxy statement.

[128] Because the deadline under proposed Rule 14a–19(d) is tied to the anniversary of the previous year's annual meeting date, 50 calendar days prior to the meeting date approximates the latest date on which registrants would be required to notify the dissident of the names of the registrant's nominees. Based on a review of the contested elections sample, *see supra* note 115, we estimate that dissidents filed their definitive proxy statement more than 50 calendar days prior to the shareholder meeting date in 7 percent of the contests.

registrant's receipt of dissident's notice pursuant to proposed Rule 14a–19? Why or why not?

39. Would the proposed mandatory universal proxy system alter the filing practices of soliciting parties in contested elections? If so, how? Are there any changes that we should make to the proposed rules as a result?

40. Should we require registrants to file the notice with the Commission? For example, should a registrant be required to file a Form 8–K to disclose the names of its nominees when they are determined? Should we require registrants to file the notice with each national securities exchange upon which any class of securities of the registrant is listed and registered? Why or why not?

4. Minimum Solicitation Requirement for Dissidents

Our current rules do not require a registrant or a dissident to solicit, or furnish a proxy statement to, a certain number or percentage of shareholders. Instead, our rules only require the parties to furnish a proxy statement to each person solicited.[129] Proposed Rule 14a–19 would require dissidents in a contested election subject to Rule 14a–19 to solicit the holders of shares representing at least a majority of the voting power of shares entitled to vote on the election of directors.[130] We estimate that in approximately 97 percent of recent proxy contests the dissident solicited a number of shareholders greater than would be required under the proposed minimum solicitation requirement.[131]

Without a minimum solicitation requirement, mandatory universal proxy could enable dissidents to capitalize on the registrant's solicitation efforts and relieve dissidents of the time and expense necessary to solicit sufficient support for its nominees to win a seat on the board of directors. The minimum solicitation requirement would preclude a dissident from triggering mandatory universal proxy for both parties unless the dissident intends to conduct an independent solicitation by distributing its own proxy statement and form of proxy. We are mindful of concerns that have been raised about the possibility that universal proxies would allow dissidents to have their nominees included on registrants' proxy cards, which would likely be disseminated to all shareholders of the company, without expending any of their own resources to get the names of their nominees in front of all shareholders of the company. We believe that the proposed minimum solicitation requirement would help address these concerns. We also believe that the nature of contested elections today, particularly when share ownership is widely dispersed, is such that dissidents would still need to engage in meaningful solicitation efforts in order to actually win a seat on the board of directors.

We determined to propose a minimum solicitation requirement for dissidents to ensure that the registrant is required to include dissident nominees on its proxy card only when the dissident engages in a meaningful, non-exempt solicitation. We believe the threshold we are proposing—a majority of the voting power entitled to vote on the election of directors—strikes an appropriate balance of providing the utility of the mandatory universal proxy system for shareholders while precluding dissidents from capitalizing on the inclusion of dissident nominees on the registrant's universal proxy card without undertaking meaningful solicitation efforts. We also believe the threshold we are proposing would be easily measurable regardless of the applicable voting standard.[132]

Proposed Rule 14a–19 would also require a dissident to state in its proxy materials that it will solicit the holders of shares representing at least a majority of the voting power of shares entitled to vote on the election of directors.[133] Like any other statement made in the dissident's proxy materials, this statement would be subject to Rule 14a–9.

A registrant is not required to solicit, or furnish a proxy statement to, a certain number or percentage of shareholders under our current rules. Consistent with our current rules, a registrant would be required only to furnish a proxy statement to each person solicited. Because Rule 14c–2 requires registrants to provide to all shareholders not solicited in connection with a shareholder meeting an information statement with the same information required in a proxy statement, registrants routinely satisfy their obligation under Rule 14c–2 by furnishing a proxy statement to all shareholders.[134] For that reason, we are not proposing a minimum solicitation requirement for registrants in a contested election subject to proposed Rule 14a–19.

Request for Comment

41. Should we require a dissident to solicit the holders of shares representing at least a majority of the voting power of shares entitled to vote on the election of directors, as proposed? Should we instead require a dissident to solicit the holders of shares representing at least a majority of the outstanding voting power? Why or why not? Should we instead require a dissident to solicit all shareholders? Why or why not? Should we consider alternative solicitation or other requirements for dissidents? If so, what other requirements should we consider? For example, should dissidents be required to make all proxy materials publicly accessible, free of charge, at an Internet Web site other than the Commission's EDGAR system?

42. We are not proposing amendments that would require a registrant to solicit a certain number or percentage of shareholders when a solicitation in connection with a contested election is made in accordance with proposed Rule 14a–19 because we understand that currently registrants generally disseminate the proxy statement to all shareholders. Would mandatory universal proxy alter a registrant's practice of generally disseminating the proxy statement to all shareholders? Should we include a minimum solicitation requirement for registrants? If so, what should the solicitation requirement be for registrants?

43. Should we include any additional requirements in the rules for dissidents concerning compliance with the minimum solicitation requirement? If so, what requirements should we include? For example, should we require a dissident to provide the registrant with a statement from the solicitor or other person with knowledge indicating that the dissident has taken the steps necessary to solicit

[129] *See* 17 CFR 240.14a–3.

[130] We understand that proxy service providers can provide sufficient information for a dissident to determine how to meet the minimum threshold. The notion that a proponent's solicitation of a certain percentage of shareholders impacts the treatment of a proponent's proposal in the proxy voting process is not new. Rule 14a–4(c)(1) addresses a registrant's ability to exercise discretionary voting authority after it has received notice of a non-Rule 14a–8 proposal within the timeframe established by Rule 14a–4(c)(1). Rule 14a–4(c)(2) precludes a registrant from exercising discretionary authority on matters as to which it has received timely advance notice if the proponent provides the registrant, as part of that notice, with a statement that it intends to solicit the percentage of shareholder votes required to carry the proposal, followed with specified evidence that the stated percentage had actually been solicited.

[131] *See infra* Section IV.D.2.a.

[132] While a plurality voting standard would apply in almost all contested elections, we understand that for a small percentage of registrants, a majority voting standard would apply in contested elections.

[133] *See* proposed Rule 14a–19(a)(3).

[134] 17 CFR 240.14c–2. Other requirements may result in a registrant's decision to furnish a proxy statement to all shareholders, such as national securities exchange listing requirements and meeting notice requirements under state law.

the holders of at least a majority of the voting power of shares entitled to vote on the election of directors? [135] Why or why not?

44. Would dissidents have access to sufficient information to determine how to meet the minimum solicitation threshold? Why or why not? Could proxy service providers provide sufficient information for dissidents to determine how to meet the minimum threshold? Why or why not?

45. Under the proposed rules, a dissident could provide notice to the registrant pursuant to Rule 14a–19 intending to conduct a non-exempt solicitation under Regulation 14A and later determine to instead proceed with an exempt solicitation in support of the nominee(s) named in the Rule 14a–19 notice. Should we consider preventing a dissident that has provided notice to a registrant pursuant to proposed Rule 14a–19 from later relying on the exemption set forth in Rule 14a–2(b)(2) to solicit in support of the nominee(s) named in the Rule 14a–19 notice? Why or why not?

5. Dissemination of Proxy Materials

Under current proxy rules, the soliciting parties in a contested election are required to provide information about their nominees in a proxy statement on Schedule 14A. For example, Item 7 of Schedule 14A requires detailed disclosure about director nominees, including their names, ages, business experience for the last five years, and involvement during the past 10 years in certain types of judicial and administrative proceedings.[136] Rule 14a–5(c) permits one soliciting party to refer to information in the other party's proxy statement to satisfy its own disclosure obligations under Schedule 14A, including those set forth in Item 7. With universal proxies, shareholders would have the ability to vote for their preferred nominees among all of the director candidates in a contested election upon receiving one party's proxy materials. In these circumstances, we believe it is important that shareholders have the ability to access disclosure about all nominees for whom they are asked to make a voting decision at that time.

a. Dissident's Requirement To File Definitive Proxy Statement 25 Calendar Days Prior to Meeting

Proposed Rule 14a–19 would require a dissident in a contested election to file its definitive proxy statement with the Commission by the later of 25 calendar days prior to the meeting date or five calendar days after the registrant files its definitive proxy statement, regardless of the proxy delivery method. As proposed, the five calendar day deadline would be triggered if the registrant files its definitive proxy statement fewer than 30 calendar days prior to the meeting date, in which case the dissident would be required to file its definitive proxy statement no later than five calendar days after the registrant files its definitive proxy statement.

Proposed Rule 14a–19(e) would require the registrant and the dissident to include all director nominees on their proxy cards.[137] Because shareholders may not otherwise have access to information about the dissident's nominees when they receive a universal proxy card from the registrant, we believe requiring the dissident to file its definitive proxy statement by the later of 25 calendar days prior to the meeting or five calendar days after the registrant files its definitive proxy statement is appropriate to help ensure that shareholders who receive a universal proxy will have access to information about all nominees a sufficient amount of time prior to the meeting.[138] We recognize, however, that some shareholders could receive the registrant's proxy statement and submit their votes on the registrant's universal proxy card before the dissident's proxy statement is available. We believe the 25 calendar day deadline would provide those shareholders with sufficient time to access the dissident's proxy statement, once available, and submit a later-dated proxy to change their votes if preferred.

We acknowledge that dissidents that elect full set delivery in a contested election are not currently subject to a filing deadline for their proxy statement, and thus the proposed requirement would impose a new filing deadline for all such dissidents.[139] While we do not believe the proposed filing deadline would impose a significant additional burden for most dissidents, some dissidents may be required to prepare their proxy statements earlier than they would otherwise. Based on a review of the contested elections initiated in 2014 and 2015, the staff found that dissidents filed their definitive proxy statement 25 or more calendar days prior to the shareholder meeting date in 75 percent of the contests.[140]

We are not proposing to require registrants to file definitive proxy statements by a specified deadline, because unlike dissidents, registrants have an incentive to file the definitive proxy statement and proxy card [141] well in advance of the meeting date to ensure there is sufficient time to obtain proxies from the requisite number of shares to achieve a quorum for the meeting. We also note that where the registrant nominees are incumbent directors, shareholders will have access to information about those nominees from prior Commission filings before the registrant files and disseminates its definitive proxy statement. In addition, we note that based on a review of the 72 contested elections initiated in 2014 and 2015, the staff found that registrants filed their definitive proxy statement 25 or more calendar days prior to the

[135] *See, e.g.,* 17 CFR 240.14a–4(c)(2)(iii) (providing for notification to the registrant that the proponent took the steps necessary to deliver proxy materials to a sufficient number of holders to carry the proposal.).

[136] *See* 17 CFR 240.14a–101, Item 7.

[137] *See supra* Section II.B.1.

[138] Since the dissident would only be required to solicit a majority of the voting power of shares entitled to vote on the election of directors, it is possible that some shareholders would not receive the dissident's proxy materials containing information about the dissident's nominees. However, as discussed in Section II.B.5.b *infra,* we are proposing to require that each party in a contested election include a statement in its proxy materials referring shareholders to the other party's proxy statement for information about the other party's nominees and explaining that shareholders can access the other party's proxy statement on the Commission's Web site. Because this required disclosure would be included in the registrant's proxy materials, which all shareholders would likely receive, the proposed rules would ensure that even those shareholders that do not receive the dissident's proxy materials would have access to information about the dissident's nominees.

[139] We understand from a proxy services provider that in the 35 proxy contests from June 30, 2015 through April 15, 2016, dissidents sent full sets of proxy materials to each of the shareholders solicited. Dissidents that elect notice-only delivery are currently required to make their proxy statement available by the later of 40 calendar days prior to the meeting date or 10 calendar days after the registrant files its definitive proxy statement. For such dissidents, the proposed filing deadline would provide five fewer days to furnish a proxy statement in cases in which the registrant files its definitive proxy statement within fewer than 30 calendar days of the meeting date, which we estimate occurred in 18 percent of recent contested elections. Based on the information provided by, and conversations with, a proxy services provider, we would not expect a dissident to elect notice-only delivery in a contested election.

[140] Based on staff analysis of the contested elections sample. *See supra* note 115. The data is based on 57 out of 72 identified proxy contests since the dissident did not file a definitive proxy statement in 15 cases.

[141] The definitive proxy statement, form of proxy and all other soliciting materials must be filed with the Commission no later than the date they are first sent or given to shareholders. 17 CFR 240.14a–6(b).

shareholder meeting date in over 95 percent of the contests.[142]

We recognize that it is possible that a registrant would have prepared and disseminated its definitive proxy statement, including a universal proxy card, prior to the 25th calendar day before the meeting (*i.e.,* the general deadline under proposed Rule 14a–19 for a dissident to file its definitive proxy statement with the Commission). If a registrant discovers after disseminating its definitive proxy statement with a universal proxy card that a dissident failed to file its definitive proxy statement 25 calendar days prior to the meeting (or five calendar days after the registrant files its definitive proxy statement),[143] the registrant could elect to disseminate a new, non-universal proxy card including only the names of the registrant's nominees. Where a dissident fails to comply with Rule 14a–19, the proposed rules would not permit the dissident to continue with its solicitation under Regulation 14A. Because a registrant may disseminate a universal proxy card before discovering that a dissident is not proceeding with its solicitation, we are proposing to require the registrant to include disclosure in its proxy statement advising shareholders how it intends to treat proxy authority granted in favor of a dissident's nominees in the event the dissident abandons its solicitation or fails to comply with Regulation 14A.[144]

Request for Comment

46. Should we require dissidents to file their definitive proxy statement by the later of the 25th calendar day before the meeting or five calendar days after the registrant files its definitive proxy statement where the registrant files its definitive proxy statement fewer than 30 calendar days prior to the meeting date, as proposed? Why or why not? Does the proposed deadline provide sufficient time before the meeting for shareholders who are not solicited by the dissident to access information about the dissident's nominees in the dissident's definitive proxy statement through the Commission's Web site?

47. We are not proposing to require registrants to file definitive proxy statements by a specified deadline because we understand that, unlike dissidents, registrants have an incentive to file their definitive proxy statements well in advance of the meeting date to allow sufficient time to obtain proxies from the requisite number of shares to achieve a quorum for the meeting. Would mandatory universal proxy alter a registrant's practice regarding the timing of the filing of its definitive proxy statement? If so, how? Should we impose a definitive proxy statement filing deadline for registrants in contested elections? If so, what filing deadline would be appropriate for registrants?

b. Access to Information About All Nominees

Under our current rules, a registrant's or dissident's proxy statement on Schedule 14A is generally not required to include information about the other party's nominees and may be disseminated before the other party disseminates its proxy statement. As a result, shareholders presented with a universal proxy card would be asked to vote for nominees without necessarily having access to disclosure about those nominees. Mindful of the potential lack of information upon which shareholders may make a voting decision in such circumstances, we have considered how and from whom shareholders should receive information about the other party's nominees when faced with a voting decision in a contested election subject to mandatory universal proxy.

We believe that each party should provide the information required by Schedule 14A for its nominees in its proxy materials as is done today. We also believe that Rule 14a–5(c) should continue to operate to permit parties to refer to the other party's proxy statement to satisfy its disclosure obligations about the other party's nominees. We are proposing changes to the proxy rules to require dissidents in a contested election to file a definitive proxy statement by the later of 25 calendar days prior to the meeting date or five calendar days after the registrant files its definitive proxy statement and to solicit at least a majority of the voting power of shares entitled to vote on the election of directors.[145] Since the dissident would not be required to solicit all shareholders, it is possible that some shareholders would not receive the dissident's proxy materials containing information about the dissident's nominees. As a result, we are proposing a new Item 7(h) of Schedule 14A to require that each party in a contested election refer shareholders to the other party's proxy statement for information about the other party's nominees and explain that shareholders can access the other party's proxy statement for free on the Commission's Web site. Because this required disclosure would be included in the registrant's proxy materials, which all shareholders would likely receive, even those shareholders that do not receive the dissident's proxy materials would have access to information about the dissident's nominees. We are also proposing to revise Rule 14a–5(c) to permit the parties to refer to information that would be furnished in a filing of the other party to satisfy their disclosure obligations.[146] Taken together, these proposed changes are intended to enable shareholders to access information with respect to all nominees when they receive a universal proxy card.

We are also proposing changes to the definition of ''participant'' in Instruction 3 to Items 4 and 5 of Schedule 14A. Currently, Instruction 3(a)(ii) to Items 4 and 5 of Schedule 14A provides that any director nominee ''for whose election as a director proxies are solicited'' is a ''participant'' for purposes of the disclosure requirements of Schedule 14A. Without a revision, the Instruction would require that the nominees on a universal proxy card be considered ''participants'' in the opposing party's solicitation. As proposed, revised Instruction 3 would define ''participant'' separately for solicitations made by registrants and solicitations made by dissidents. As a result, even though all nominees would be included on the form of proxy, only the party's nominees would be considered ''participants'' in that party's solicitation.

We are proposing this change because Item 5 of Schedule 14A requires specific disclosure about all ''participants'' in a contested election, including information about the existence of a criminal record, employment history, and securities holdings, information

[142] Based on staff analysis of the contested elections sample. *See supra* note 115.

[143] A dissident could meet the deadline for director nominations under the company's governing documents and the deadline for providing notice to the registrant under proposed Rule 14a–19 but fail to proceed with or later abandon its solicitation. This could happen for a number of reasons. For example, the dissident and the registrant may enter into a settlement agreement, the dissident may elect to discontinue its solicitation for another reason or the dissident may fail to comply with some aspect of proposed Rule 14a–19.

[144] *See* proposed Item 21(c) to Schedule 14A.

[145] *See supra* Sections II.B.4 and II.B.5.a.

[146] Currently, Rule 14a–5(c) permits parties to refer to information that has already been furnished in a filing of another party. We recognize one concern with permitting a future filing to satisfy a disclosure obligation is that it is possible that the information to be provided in the future filing would never be made available to shareholders. However, the definitive proxy statement filing deadline for dissidents in proposed Rule 14a–19 and the practical considerations that incentivize registrants to file their definitive proxy statements well in advance of the meeting date should help ensure that appropriate information about both parties' nominees is available to shareholders in a timely manner.

which the opposing party in a proxy contest is unlikely to have. In addition, revising the definition of ''participant'' as proposed may help avoid the implication that nominees are responsible for information contained in the opposing party's proxy materials.

Request for Comment

48. Should we adopt proposed Item 7(h) of Regulation 14A to require that each soliciting person in a contested election refer shareholders to the other party's proxy statement for information about the other party's nominees and explain that shareholders can access the other party's proxy statement for free on the Commission's Web site, as proposed? Is this statement sufficient to inform shareholders how to access information about the parties' nominees such that shareholders can make an informed voting decision when they have only received a proxy statement and universal proxy card from one party? Should we require any additional information, such as instructions as to how to access proxy statements on the Commission's Web site or a hyperlink to that Web site?

49. Should we amend Rule 14a–5(c) to permit soliciting parties to refer to information that would be furnished in a filing of another soliciting party in order to satisfy their disclosure obligations, as proposed? Should we limit the ability to refer to a future filing of another soliciting person to solicitations in connection with contested elections?

50. Should we amend Instruction 3 to define ''participant,'' as proposed? Are there additional categories of people that should be included in the definition of ''participant'' for registrants or dissidents? Would the amendment to Instruction 3, as proposed, make it sufficiently clear that nominees are not responsible for information contained in the opposing party's proxy materials? Are there other steps we should take to make this clear?

6. Form of the Universal Proxy

We are proposing the use of separate universal proxy cards in which each party in a contested election distributes its own proxy card that includes the names of both parties' nominees and designates its own representatives as proxy holders to exercise the vote pursuant to the proxy.[147] The use of separate proxy cards would not represent a change from how proxies are solicited in contested elections today. We are proposing to retain this aspect of the proxy rules and process because we believe parties prefer to design their own proxy cards (subject to the proposed presentation and formatting requirements in proposed Rule 14a–19) in a manner they deem appropriate. Additionally, separate proxy cards also give each party control over the dissemination of its proxy card and insight into the preliminary results of the solicitation before the meeting.[148] Finally, permitting each party to control its own proxies avoids empowering only one party to exercise discretionary authority on those matters for which a choice is not specified and on any of the matters specified in Rule 14a–4(c).[149] The proposed presentation and formatting requirements would require that universal proxy cards provide clear instructions to permit shareholders to effectively vote their shares for the director nominees they prefer through the proxy process and to help ensure that proxies are exercised in accordance with the choices specified by the shareholders on the proxy cards.

Rule 14a–4 governs the form of the proxy card and requires, among other things, that the proxy card:

- Indicate in bold-face type whether or not it is solicited on behalf of the registrant's board of directors or, if solicited on behalf of some other person, the identity of such person; [150]
- provide a basis for shareholders to instruct separately [151] and with specificity how the proxy holders must vote on the election of directors [152] and on non-election proposals; [153] and
- if providing for the election of directors, set forth the names of the nominees [154] and permit shareholders to withhold voting authority from each nominee.[155]

The proxy card may confer discretionary proxy voting authority on matters as to which the shareholder does not specify a choice provided that the card states in bold-face type how the proxy holder intends to vote the shares represented by the proxy in each such case.[156] The proxy card may also confer discretionary proxy voting authority on matters not included on the registrant's proxy card.[157]

To help ensure that universal proxies clearly and fairly present information so that shareholders can effectively exercise their voting rights, proposed Rule 14a–19(e) would include the following presentation and formatting requirements for all universal proxy cards used in contested elections:

- The proxy card must clearly distinguish between registrant nominees, dissident nominees, and any proxy access nominees; [158]
- Within each group of nominees, the nominees must be listed in alphabetical order by last name on the proxy card; [159]
- The same font type, style and size must be used to present all nominees on the proxy card; [160]
- The proxy card must prominently disclose the maximum number of nominees for which authority to vote can be granted; [161] and
- The proxy card must prominently disclose the treatment and effect of a proxy executed in a manner that grants authority to vote for more nominees than the number of directors being elected, in a manner that grants authority to vote for fewer nominees than the number of directors being elected, or in a manner that does not grant authority to vote with respect to any nominees.[162]

Where both parties have proposed a full slate of nominees and there are no proxy access nominees, we are also proposing that the proxy card may provide the ability to vote for all dissident nominees as a group and all registrant nominees as a group.[163] Where proxy access nominees will be included on the proxy card or where a dissident or a registrant is proposing a partial slate, neither

[147] The Rulemaking Petition recommended that we preserve the current practice of each party circulating its own proxy card and proxy statement. *See supra* note 45.

[148] When each party disseminates its own proxy card, each party has insight into the preliminary results of the solicitation prior to the meeting, as each party is in possession of the proxies it has received from shareholders solicited.

[149] Discretionary voting authority may be conferred under Rule 14a–4(c) for certain ministerial acts such as approving the minutes of a prior meeting, voting on certain shareholder proposals unknown to the registrant before circulation of the proxy statement, and voting on shareholder proposals properly omitted from the proxy statement.

[150] *See* 17 CFR 240.14a–4(a)(1).

[151] *See* 17 CFR 240.14a–4(a)(3).

[152] *See* 17 CFR 240.14a–4(b)(2)

[153] *See* 17 CFR 240.14a–4(b)(1).

[154] *See supra* Section II.A and discussion of the bona fide nominee rule for an explanation as to why the named nominees rarely include the dissident nominees.

[155] *See* 17 CFR 240.14a–4(b)(2).

[156] *See* 17 CFR 240.14a–4(b)(1).

[157] *See* 17 CFR 240.14a–4(c).

[158] *See* proposed Rule 14a–19(e)(3).

[159] *See* proposed Rule 14a–19(e)(4). Although the order must be alphabetical by last name, the format need not be last name first.

[160] *See* proposed Rule 14a–19(e)(5).

[161] *See* proposed Rule 14a–19(e)(6).

[162] *See* proposed Rule 14a–19(e)(7). The requirements we are proposing would not limit a party's ability to include its voting recommendation with respect to some or all of the nominees on the proxy card. Any such language would, however, be subject to Rule 14a–9.

[163] *See* proposed Rule 14a–19(f). We anticipate, and the proposed rules would not prohibit, that registrants and dissidents will continue the practice of distinguishing their respective proxy cards by distributing them with a distinctive color.

proxy card would be permitted to provide the option to vote for any nominees as a group.[164] When there are proxy access nominees included on the card, we believe it is not appropriate to provide the ability to vote for nominees as a group because it may make it easier to vote for all registrant nominees or for all dissident nominees than to vote for the proxy access nominee in addition to some registrant or some dissident nominees.[165] When the dissident or the registrant is nominating anything less than a full slate of candidates, we also believe it is not appropriate to provide the ability to vote for nominees as a group because providing the ability to vote for a partial slate of nominees as a group could result in shareholders inadvertently voting for less than the number of seats up for election or in possible over voting. Finally, proposed Rule 14a–19 would require that universal proxy cards provide a means for shareholders to grant authority to vote ''for'' the nominees set forth on the card.[166]

A proxy card must present the names so that shareholders are able to distinguish the registrant's and the dissident's nominees on the face of the proxy card. For example, a proxy card could list each party's nominees in a separate column. In that circumstance, a proxy access nominee also would have to be clearly distinguished, such as by listing in a separate column. Similarly, if multiple dissidents are soliciting proxies in support of separate slates of director nominees, each slate must be clearly distinguished, such as by having its own designated column. While we are proposing to require that the nominees are clearly distinguished, we are not proposing to direct where to place the groups of nominees on the card or to prohibit the parties from listing their group of nominees first.

We considered providing more flexibility in the proposed rule about font type, style and size and the order in which nominees should be listed. However, we were concerned that without specific guidance, some presentations of nominees on a universal proxy card could be confusing or misleading. We also are sensitive to concerns that have been raised about the possibility that a universal proxy card would cause shareholders to be confused as to whether a particular nominee supports the opposing party.[167] In order to address these concerns, we are proposing certain limitations on the presentation and format of the card and requiring that certain information be prominently disclosed.

We considered proposing that the registrant distribute a single universal proxy card that would include the names of the registrant's nominees and the dissident's nominees, as well as all other proposals to be considered at the meeting. However, a single universal proxy card would grant proxy authority solely to representatives designated by the registrant. While a single universal proxy card could result in a more streamlined and potentially less confusing process, a universal proxy card solely in the control of the registrant could potentially provide the registrant with an advantage over procedural issues surrounding the vote.[168] Additionally, the distribution of a proxy statement by a dissident without an associated proxy card could place the dissident at a disadvantage.

Finally, we considered proposing that the registrant and dissident distribute an identical card, with the only difference being the persons given proxy authority on the card. An identical card providing proxy authority to different parties could be confusing to shareholders, who might think it did not matter which card was signed and returned. Additionally, the practical issue of having a dissident and a registrant agree on the presentation of nominees on a single card could make this alternative problematic. For example, the parties may disagree on whose nominees should be listed first. This disagreement could be addressed by simply requiring that all nominees be placed in alphabetical order, but that approach would make it more difficult for a shareholder who wished to vote for the entire slate of one party. Based on these considerations, we determined to propose the use of separate universal proxy cards subject to the additional proposed rules on the form of proxy discussed above.

Request for Comment

51. We are proposing presentation and formatting requirements for all universal proxy cards used in contested elections, including requiring that the card clearly distinguish between registrant, dissident and proxy access nominees, that such nominees be listed alphabetically by last name, and that the same font type, style and size be used. Are these requirements for the proxy card appropriate or should we permit greater flexibility for parties to tailor the format of the card as they choose? Should we impose additional presentation and formatting requirements, such as requiring that nominees be grouped in columns to more clearly distinguish between groups of nominees? Is it sufficient to simply require that the proxy card clearly distinguish between nominees without specifying additional requirements? Should we permit, within the proposed categories of nominees, further sub-categorization of nominees?

52. Should we require that nominees be listed alphabetically by last name, as proposed? Why or why not? Should we instead permit or require nominees to be listed in a random order within the groups of nominees? Should we instead permit or require the parties to specify in their notice of nominees to the other party how they prefer their own nominees to be listed within their group of nominees?

53. Should we require that the proxy card prominently disclose the maximum number of nominees that can be voted upon and the effect of over-voting or under-voting, as proposed? Is this disclosure sufficient for shareholders to understand the implications? How else can we address these issues, including mitigating any risk of over-voting with universal proxies?

54. Should the universal proxy card provide the ability for a shareholder to vote for all of a soliciting person's nominees as a group only where both parties have proposed a full slate of nominees, as proposed? Should group voting be permitted where one party has proposed a partial slate? Should we additionally permit group voting where a shareholder director nominee is

[164] *See* proposed Rule 14a–19(f).

[165] *See also Facilitating Shareholder Director Nominations,* Release No. 33–9046 (June 10, 2009)[74 FR 29024 (June 18, 2009)] at 29049 (proposing the group voting provision in Rule 14a–4(b) and stating that providing shareholders with the option to vote for the registrant's nominees as a group where the registrant's proxy card includes shareholder nominees ''would not be appropriate . . . as grouping the company's nominees may make it easier to vote for all of the company's nominees than to vote for the shareholder nominees in addition to some of the company nominees.''); *Facilitating Shareholder Director Nominations,* Release No. 33–9136 (Aug. 25, 2010) [75 FR 56668 (Sept. 16, 2010)] at 56724 (indicating that doing so ''would result in an advantage to the management nominees and would be inconsistent with an impartial approach'').

[166] *See* proposed Rule 14a–19(e)(2). Currently, Rule 14a–4(b) does not require that a soliciting person include a means to vote ''for'' director nominees on the proxy card.

[167] *See* Short Slate Rule Adopting Release, at 48288.

[168] Rule 14a–4(e) provides that the proxy statement or form of proxy shall provide that the shares represented by the proxy will be voted in accordance with the specifications made by the person solicited. As a result of the grant of proxy authority, the registrant-designated proxy holders would be entitled to exercise any discretionary authority conferred with respect to matters for which a choice is not specified by the shareholders pursuant to Rule 14a–4(b)(1) and with respect to the matters specified in Rule 14a–4(c).

included in the registrant's proxy material pursuant to proxy access provisions in the registrant's governing documents or applicable state or foreign law? Would group voting in such circumstances create an unfair advantage for the registrant or other party providing a full slate?

55. Could the use of a universal proxy card lead to shareholder confusion? If so, do the proposed formatting requirements help to reduce any shareholder confusion? Are there other requirements the proxy rules should include or other steps we should take to help reduce such confusion?

56. Are there any concerns with the ability of proxy service providers to effectively implement the choices made on universal proxies? Are there any concerns with the ability of proxy service providers to prepare and distribute universal proxy cards or the associated voting instruction forms? For example, would the proposed rules lengthen proxy cards in contested elections such that placing all nominees on one card would be impracticable? Are there ways that our proxy rules can address such concerns? For example, should the proxy rules require that director nominees be listed in columns on universal proxies?

57. Should the proposed rules be more prescriptive? For example, should we require both parties' universal proxy cards to be mirror images of each other, except for the individuals to whom proxy authority is granted?

58. Should we instead mandate the use of a single universal proxy card? If so, who should be responsible for compiling and disseminating the single proxy card?

59. Under the current proxy rules, each party in a contested election determines whether and how to include the other party's non-election proposal(s) on its proxy card and the proposed amendments would not change this practice. Should we make any changes in how matters other than the election of directors are presented on a universal proxy card? For example, should the revised rules address how shareholder proposals and other matters to be voted on at the meeting should be presented on a universal proxy card as well? If a universal proxy card is used for the election of directors, should the parties be permitted to exclude other proposals to be voted on at the meeting?

60. Would it be helpful if we included a sample universal proxy card in the adopting release? Why or why not?

7. Timing of Universal Proxy Solicitation Process

The timing of the process for soliciting universal proxies generally would operate as follows:

Due date	Action required
No later than 60 calendar days before the anniversary of the previous year's annual meeting date or, if the registrant did not hold an annual meeting during the previous year, or if the date of the meeting has changed by more than 30 calendar days from the previous year, by the later of 60 calendar days prior to the date of the annual meeting or the tenth calendar day following the day on which public announcement of the date of the annual meeting is first made by the registrant. [proposed Rule 14a–19(b)(1)].	Dissident must provide notice to the registrant of its intent to solicit the holders of at least a majority of the voting power of shares entitled to vote on the election of directors in support of director nominees other than the registrant's nominees and include the names of those nominees.
No later than 50 calendar days before the anniversary of the previous year's annual meeting date or, if the registrant did not hold an annual meeting during the previous year, or if the date of the meeting has changed by more than 30 calendar days from the previous year, no later than 50 calendar days prior to the date of the annual meeting. [proposed Rule 14a–19(d)].	Registrant must notify the dissident of the names of the registrant's nominees.
No later than 20 business days before the record date for the meeting. [current Rule 14a–13].	Registrant must conduct broker searches to determine the number of copies of proxy materials necessary to supply such material to beneficial owners.
By the later of 25 calendar days before the meeting date or five calendar days after the registrant files its definitive proxy statement. [proposed Rule 14a–19(a)(2)].	Dissident must file its definitive proxy statement with the Commission.

C. Additional Revisions

1. Director Election Voting Standards Disclosure and Voting Options

We are proposing additional amendments to the form of proxy and disclosure requirements with respect to voting options and voting standards that would apply to all director elections.[169] First, we are proposing to amend Rule 14a–4(b) to: (1) Mandate the inclusion of an ''against'' voting option in lieu of a ''withhold authority to vote'' option on the form of proxy for the election of directors where there is a legal effect to such a vote; and (2) provide shareholders that neither support nor oppose a director nominee an opportunity to ''abstain'' (rather than ''withhold authority to vote'') in a director election governed by a majority voting standard.[170] Second, we are proposing amendments to Item 21(b) of Schedule 14A to expressly require the disclosure of the effect of a ''withhold'' vote.

The voting standard for director elections is established under state law and a registrant's governing documents. Director nominees are generally elected under either a plurality voting standard or a majority voting standard. Under the plurality voting standard, the director nominee receiving the highest number of votes for a given seat is elected. As a result, a director nominee in an uncontested election only needs a single vote in favor of his or her election to be elected. In recent years, however, many public companies have moved toward two other voting standards in director elections—''plurality plus'' and majority voting.[171] Under a ''plurality plus'' voting standard, an incumbent director agrees in advance to resign if he or she receives more votes withheld than votes in favor of his or her re-election. The remaining directors then determine, in

[169] The proposed amendments to the form of proxy and disclosure requirements with respect to voting options discussed in this section would apply to funds and BDCs.

[170] *See* proposed Rule 14a–4(b)(4).

[171] *See, e.g.,* Institutional Shareholder Services, *Preliminary 2015 U.S. Postseason Review,* at 4 (July 30, 2015), available at *http://www.issgovernance.com/file/publications/1_preliminary-2015-proxy-season-review-united-states.pdf* (noting that only seven percent of S&P 500 firms had a majority voting standard in 2004, as compared to almost 90 percent of S&P 500 firms having a majority voting standard for uncontested director elections in 2015).

their discretion, whether to accept or reject an incumbent director's resignation. Under a majority voting standard, director nominees are elected only if, depending on the specific version of the standard used by the registrant, they receive affirmative votes from: (i) A majority of the votes cast; or (ii) a majority of shares present and entitled to vote.[172]

While the federal proxy rules do not govern the voting standard used in director elections, they do set forth the requirements for the form of proxy used in the election and the disclosure of the voting procedures for the election. Notably, Rule 14a–4(b)(2) requires the form of proxy to provide a means to withhold authority to vote for each nominee. Accordingly, the voting options under a plurality voting standard are ''for'' and ''withhold,'' with no ''against'' voting option. If applicable state law gives legal effect to votes cast against a director nominee (*i.e.,* under a majority voting standard), then the rule currently provides that the registrant should provide a means for shareholders to vote against a nominee ''in lieu of, or in addition to,'' providing a means to withhold authority to vote. Item 21(b) of Schedule 14A currently calls for disclosure of the ''method'' by which votes will be counted, including ''the treatment and effect of abstentions and broker non-votes'' [173] under applicable state law and the registrant's governing documents.[174]

Recently, the Commission became aware of concerns that some company proxy statements had ambiguities and inaccuracies in their disclosures about voting standards in director elections.[175] In light of these concerns, staff in the Division of Corporation Finance and the Division of Economic and Risk Analysis assessed the proxy statement voting standard disclosure provided by a broad set of companies. The staff found some ambiguities or inaccuracies, including:

- The failure to include an ''against'' option on the form of proxy when a majority voting standard is used;
- the mistaken use of the ''against'' option on a form of proxy when there was a plurality voting standard, where the only appropriate alternative for voting was ''withhold''; and
- incorrect statements that ''withhold'' votes are counted in determining election outcomes.

In light of these observations, we are proposing to amend Rule 14a–4(b) to mandate the inclusion of an ''against'' voting option on the form of proxy used in elections where such votes have a legal effect.[176] Under the proposal, if state law gives legal effect to votes cast against a nominee (which is the case under a majority voting standard), the form of proxy must include the options to vote ''against'' the nominee and to ''abstain'' from voting. As these voting options would be ''in lieu'' of a ''withhold'' voting option, the proposed amendment would eliminate the current ability to provide a ''withhold'' voting option on the form of proxy when an ''against'' vote has legal effect. Further, we are proposing to amend Item 21(b) of Schedule 14A so that it expressly requires disclosure in the proxy statement about the treatment and effect of a ''withhold'' vote in a director election. We believe that these proposed changes, if adopted, would provide shareholders with a better understanding of the effect of their ''withhold'' votes on the outcome of the election. In addition, some have recommended that the Commission amend Rule 14a–4(b)(2) to eliminate the ''withhold'' option under a plurality voting standard and replace it with an ''abstain'' option so that shareholders are aware that such votes do not legally affect the outcome of the election.[177] While we are not proposing such a change, we are soliciting comment on this recommendation.

Finally, we are proposing to delete the phrase ''the method by which votes will be counted'' from Item 21(b) of Schedule 14A. In light of the existing language contained in the Item, combined with the proposed amendment discussed above, we believe such phrase would be superfluous as the effect and treatment of all the possible voting options presented to shareholders for each matter would be disclosed in the proxy statement. However, we are soliciting comment as to whether such language is still needed for a specific purpose or scenario not covered by the proposed changes to Item 21(b).

Request for Comment

61. We are proposing to amend Rule 14a–4(b) to require the form of proxy for a director election governed by a majority voting standard to include a means for shareholders to vote ''against'' each nominee and a means for shareholders to ''abstain'' from voting in lieu of providing a means to ''withhold authority to vote.'' Should we eliminate the ''withhold'' voting option under a majority voting standard for director elections, as proposed? Should we eliminate the ''withhold'' voting option for contested elections subject to proposed Rule 14a–19 (*i.e.,* where universal proxies are required)? Why or why not? If we do not adopt a mandatory system for universal proxies, as proposed, should we prohibit the ''withhold'' voting option for contested elections? Why or why not?

62. Some commenters have expressed concerns that shareholders may not understand that a ''withhold'' vote has no legal effect under a plurality voting standard. Should the Commission replace the ''withhold'' voting option under a plurality voting standard with ''abstain?'' Do parties view an ''abstention'' differently than a ''withhold'' vote? Is there any relevant legal effect under state law of an abstention as compared to a vote withholding proxy authority when directors are elected by plurality vote? Would there be other consequences under state law or a registrant's governing documents if we were to implement such a change (*e.g.,* would this change affect quorum requirements)?

63. We are proposing to delete the phrase ''the method by which votes will be counted'' from Item 21 of Schedule 14A. Is the language needed for a specific purpose or scenario that is not covered by the proposed amendment to Item 21(b)? Is there any other reason to retain it?

D. Investment Companies

Investment companies registered under Section 8 of the Investment Company Act of 1940 (''funds'') and business development companies (''BDCs'') [178] are typically organized as

[172] Companies often couple the use of a majority voting standard with a director resignation policy to address the ''holdover'' director rule found in state law. Under that rule, an incumbent director who does not receive the requisite votes may remain in office until the earlier of the successor's election or the incumbent director's resignation or removal. *See e.g.,* Del. Code Ann. tit. 8, § 141(b).

[173] A ''broker non-vote'' occurs when a broker, bank, or another intermediary holding shares in ''street name'' for a client returns a proxy card, but provides no instructions as to how the shares should be voted on a particular matter due to the lack of voting instructions from the client and the inability to exercise discretionary voting authority on the matter.

[174] *See* 17 CFR 240.14a–101, Item 21(b).

[175] The Commission received two rulemaking petitions in which, among other things, the petitioners expressed concerns about the voting options in director elections and suggested that the Commission revise Rule 14a–4(b)(2) to reflect the growing use of majority voting standards in director elections. *See* Letter from United Brotherhood of Carpenters and Joiners of America (Mar. 10, 2015), available at *https://www.sec.gov/rules/petitions/2015/petn4-630-supp.pdf (''Carpenters letter'');* Letter from the Council of Institutional Investors (June 12, 2015), available at *https://www.sec.gov/rules/petitions/2015/petn4-686.pdf* (''CII letter'').

[176] *See* proposed Rule 14a–4(b)(4).

[177] *See* Carpenters letter, *supra* note 175.

[178] BDCs are a category of closed-end investment companies that are not registered under the

trusts, corporations or limited partnerships under state laws, and like operating companies, have boards of directors that are elected by shareholders.[179] Although these entities are subject to the federal proxy rules,[180] the amendments that we are proposing today relating to the use of a universal proxy would not apply to funds and BDCs. Rather, funds and BDCs would remain subject to the federal proxy rules currently in effect.[181]

Based upon information available to us, shareholders generally have not sought split-ticket voting in contested elections involving funds and BDCs.[182] Most investment companies are structured as open-end management investment companies, or ''open-end funds,''[183] and contested elections at open-end funds are rare.[184] Open-end funds are generally not required to hold annual shareholder meetings pursuant to the state laws under which they are organized.[185] Furthermore, there is no opportunity to potentially profit from a difference in the market price of open-end fund shares and net asset value (''NAV'') because open-end fund shares (other than those issued by exchange-traded funds) are not traded (*i.e.,* there is no market price) and may be redeemed at NAV.[186] Shares issued by exchange-traded funds organized as open-end funds generally trade at or near NAV due to the arbitrage activities of market participants.[187]

Registered closed-end management investment companies (''closed-end funds'') [188] and BDCs, on the other hand, are typically required by the rules of the securities exchanges on which their shares are listed to hold annual shareholder meetings.[189] Contested director elections are more common for exchange-listed closed-end funds and BDCs (compared to open-end funds) because their shares often trade at prices that are less than, or at a ''discount'' to, the fund or BDC's NAV per share, thereby providing an incentive for dissidents to pursue actions that reduce or eliminate this difference.[190] Historically, dissidents in election contests for exchange-listed closed-end funds and BDCs generally have not sought split-ticket voting.[191] Instead, they have sought to reduce or eliminate the discount to NAV either by gaining control of the board of directors or terminating the fund's advisory contract and subsequently replacing the fund's investment adviser.[192]

The Investment Company Act supplements state law by providing specific rights to shareholders to approve certain fundamental features of the fund, which also could impact shareholders' current use of split-ticket voting and the potential impact of the proposed amendments if required for funds and BDCs. For example, the Investment Company Act requires that shareholders approve certain operational matters relating to funds and BDCs.[193] Shareholders of funds and BDCs also must approve advisory contracts and material amendments to such contracts,[194] and ratify or reject the

Investment Company Act, but are subject to certain provisions of that Act. *See* Sections 2(a)(48) and 54–65 of the Investment Company Act.

[179] In addition to state law provisions applicable to funds, BDCs and operating companies, the Investment Company Act provides a number of requirements with respect to the election, composition, and duties of a fund's and BDC's board of directors. For example, Section 16(a) provides that at least a majority of a fund's board must have been elected by shareholders at any given time and that existing directors may fill a vacancy without calling a shareholders' meeting, provided that immediately after the vacancy is filled at least two-thirds of the directors have been elected by shareholders. *See also* Sections 10(a) and 56(a) of the Investment Company Act (requiring at least 40 percent of a fund's (and a majority of a BDC's) board to not be ''interested persons'' as such term is defined in Section 2(a)(19) of the Investment Company Act).

[180] Funds are required to comply with the proxy rules under the Exchange Act when soliciting proxies, including proxies relating to the election of directors. *See* 17 CFR 270.20a–1 (requiring funds to comply with regulations adopted pursuant to Section 14(a) of the Exchange Act that would be applicable to a proxy solicitation if it were made in respect of a security registered pursuant to Section 12 of the Exchange Act). *See also* Section 20(a) of the Investment Company Act. BDCs are subject to the federal proxy rules because such companies have a class of securities registered under Section 12 of Exchange Act. *See* Section 14(a) of the Exchange Act and Section 54(a) of the Investment Company Act.

[181] For purposes of the rules that apply to funds and BDCs, the definition of a bona fide nominee and the short slate rule in current Rule 14a–4(d)(4) would be retained in proposed Rule 14a–4(d)(1)(ii).

[182] We note that to date only operating company shareholders, and not fund or BDC shareholders, have called for the use of a universal proxy. *See supra* Section I.C. (describing recent feedback regarding the proxy voting process, particularly the Rulemaking Petition and Commission roundtable). As we discuss below in the Economic Analysis, staff is not aware of any director election contests involving open-end management investment companies since the year 2000. Of the 11 director election contests identified by staff that involved closed-end management investment companies and BDCs in calendar years 2014 and 2015, 10 involved dissidents who sought a majority of the board or ran a full slate of nominees, while the remaining contest was a short-slate contest. *See infra* Section IV, notes 366–367 and accompanying text.

[183] At the end of 2015, over 98 percent of investment company aggregate net assets were held by mutual funds and exchange-traded funds (''ETFs''), the two predominant forms of open-end funds. *See* Investment Company Institute, *2016 Investment Company Institute Fact Book,* at 9, Fig. 1.1 (56th ed. 2016) (''2016 ICI Fact Book''), available at *https://www.ici.org/pdf/2016_factbook.pdf.* An open-end management investment company is an investment company, other than a unit investment trust or face-amount certificate company, that offers for sale or has outstanding any redeemable security of which it is the issuer. *See* Sections 4 and 5(a)(1) of the Investment Company Act.

[184] *See supra* note 182.

[185] The three most common forms of organization for investment companies are Delaware statutory trusts, Massachusetts business trusts, and Maryland corporations. *See* 2016 ICI Fact Book, at 246, Fig. A.1 (finding that 91 percent of mutual funds use one of these three forms of organization). The respective Delaware and Maryland state statutes, and Massachusetts common law relating to business trusts, do not require annual shareholder meetings. *See, e.g.,* Delaware Statutory Trust Act, Del. Code Ann. title 12, §§ 3801–3826.

[186] *See* Section 2(a)(32) of the Investment Company Act (defining ''redeemable security'' as ''any security, other than short-term paper, under the terms of which the holder, upon its presentation to the issuer or to a person designated by the issuer, is entitled (whether absolutely or only out of surplus) to receive approximately his proportionate share of the issuer's current net assets, or the cash equivalent thereof'').

[187] These market participants include authorized participants, market makers and institutional investors.

[188] A closed-end management investment company is a management company other than an open-end management company. *See* Sections 4 and 5(a)(2) of the Investment Company Act.

[189] *See, e.g.,* NYSE Listed Company Manual § 302.00, available at *http://nysemanual.nyse.com/LCM/Sections/.*

[190] *See* Matthew E. Souther, *The Effects of Takeover Defenses: Evidence from Closed-End Funds,* J. of Fin. Econ., at 4 (forthcoming), available at *http://ssrn.com/abstract=2729874* (discussing recent closed-end fund proxy contests); Michael Bradley et al., *Activist Arbitrage: A Study of Open-Ending Attempts of Closed-End Funds,* 95 J. Fin. Econ. 1, 2 (2010).

[191] *See supra* note 182.

[192] A dissident can profit from the discount if the fund or BDC is converted to an open-end format or liquidated, or if the fund or BDC purchases the dissident's shares at a price equal to or near NAV.

[193] Fund shareholders are required to approve: (1) A change to the fund's sub-classification as an open-end or closed-end fund, or a change from a diversified company to a non-diversified company; (2) a change in policies contained in the registration statement related to borrowing money, issuing senior securities, underwriting securities issued by other persons, purchasing or selling real estate or commodities or making loans to other persons, except in accordance with the policy in its registration statement; (3) a deviation from a stated policy with respect to concentration of investments in an industry or industries, from any investment policy which is changeable only by shareholder vote, or from any stated fundamental policy pursuant to Section 8(b)(3) of the Investment Company Act; and (4) a change in the nature of the fund's business so as to cease to be an investment company. *See* Sections 8(b)(3) and 13(a) of the Investment Company Act. BDC shareholders are required to approve a change in the nature of the BDC's business that would cause it to cease to be, or withdraw its election as, a BDC. *See* Section 58 of the Investment Company Act. In addition, a BDC may issue shares priced below NAV if such sale is approved by both holders of a majority of its voting securities and holders of a majority of its voting securities who are not affiliated persons of the BDC. *See* Section 63(2) of the Investment Company Act.

[194] *See* Sections 15(a) and 59 of the Investment Company Act. A shareholder may also bring an action against the fund's investment adviser for breach of fiduciary duty with respect to receipt of compensation for services or payments of a material nature paid by such company. *See* Section 36(b) of the Investment Company Act.

selection of the independent public accountant.[195]

We also acknowledge that investment companies that are part of larger complexes generally have board governance structures that may be disrupted by split-ticket voting. Investment companies sharing the same investment adviser and other service providers are typically part of complexes that utilize either a ''unitary'' board structure where a single board oversees every fund in the complex, or ''cluster'' boards consisting of two or more separate boards that each oversee a different set of funds in the complex.[196] This structure enables a set of directors to, for example, oversee common operational matters across multiple funds in the complex (*e.g.,* hiring and retention of service providers, valuation of portfolio investments, and general compliance).[197] To the extent that split-ticket voting results in a disruption to a complex's unitary or cluster board structure (*i.e.,* a dissident nominee is elected to a particular board but would not also serve on other boards in the complex), the efficiencies of such board structure may be reduced.

We recognize, however, that the boards of such entities, like the boards of operating companies, have significant responsibilities in protecting shareholder interests, such as the approval of advisory contracts and fees, and that shareholders have an interest in the governance of these entities. We also recognize that the considerations discussed above do not diminish the importance of the rights that are granted to fund and BDC shareholders under state law and the Investment Company Act, which generally distinguish them from operating companies.[198] Nevertheless, we are not proposing to extend the universal proxy requirements to funds and BDCs at this time. We are, instead, requesting comment and data in this release to further inform us as we consider whether the use of universal proxies should be required in proxy contests for the election of directors at funds or BDCs in the future.

Request for Comment

64. To what extent do investment companies generally, and open-end funds, closed-end funds and BDCs in particular, experience contested elections under the current proxy rules? Please provide any data to the extent available. To what extent do shareholders of investment companies engage in split-ticket voting? To what extent is split-ticket voting by certain shareholders facilitated by proxy solicitors and parties to the contested election? Please provide any data to the extent available.

65. We are not proposing to require investment companies to use universal proxies at this time. Should the use of universal proxies be mandatory as applied to investment companies generally, or should their use be mandatory only with respect to certain types of investment companies (*e.g.,* only to open-end funds or only to closed-end funds or only BDCs)? Why or why not? Should any aspects of the proposed universal proxy system be modified to account for the unique characteristics of investment companies? If so, what modifications should be made? Would a universal proxy system affect funds and BDCs differently than operating companies? If so, how? How would a universal proxy system affect unitary or cluster boards?

66. Alternatively, should the use of universal proxies be optional as applied to investment companies generally, or should their use be optional only with respect to certain types of investment companies (*e.g.,* only to open-end funds or only to closed-end funds or only BDCs)? Why or why not? Instead, should a hybrid system be applied to investment companies generally, or only with respect to certain types of investment companies (*e.g.,* only to open-end funds or only to closed-end funds or only to BDCs) where the use of universal proxies in contested elections is mandatory for one party but optional for another? Why or why not? We are interested in the views of both investment companies and shareholders as to how frequently they would choose to use a universal proxy under a mandatory, optional or hybrid approach and why.

67. Would the frequency of contested elections increase or decrease for investment companies under a universal proxy system and why? Please provide any data to the extent available. Would the frequency of contested elections vary depending on whether an investment company is an open-end fund, closed-end fund, or BDC, and why? Would the frequency vary depending on whether the use of universal proxies is under a mandatory, optional, or hybrid approach? Why or why not?

68. To what extent do investment companies generally, and open-end funds, closed-end funds and BDCs in particular, experience exempt solicitations under the current proxy rules? Please provide any data to the extent available. Should investment companies generally, and open-end funds, closed-end funds and BDCs in particular, be required to use universal proxies in non-exempt solicitations only, or in some or all exempt solicitations? Why or why not?

69. To what extent do investment companies generally, and open-end funds, closed-end funds and BDCs in particular, have bylaws that contain advance notice provisions? Please provide any data to the extent available. Should special rules regarding notice apply for investment companies that do not regularly hold annual meetings (*i.e.,* open-end funds)? For example, should such investment companies be required to provide a specific date by which a dissident must provide the investment company with the names of the nominees for whom it intends to solicit proxies? If so, how should such date be provided to investors? For example, should an investment company be required to disclose the date via disclosure on its Web site or via a press release? Would that disclosure be sufficient, or should such date also be provided in a filing made with the Commission (*e.g.,* in the investment company's annual or semi-annual report to shareholders, a report on Form N–CSR, etc.)? Although funds generally are

[195] *See* Sections 32(a)(2) and 59 of the Investment Company Act. *But see* Rule 32a–4 under the Investment Company Act (providing a conditional exemption from the requirement in Section 32(a)(2)).

[196] In a survey conducted by the ICI, as of 2014, 86 percent of fund complexes employed a unitary board structure and 14 percent of fund complexes employed a cluster board structure. *See* Investment Company Institute, *Overview of Fund Governance Practices, 1994–2014,* at 5 (2015), available at *https://www.idc.org/pdf/pub_15_fund_governance.pdf.* We are also aware that among fund complexes that use cluster boards there are different reasons for particular clusters of funds with their own set of directors. For example, in some cases, the cluster or grouping of funds may be the deliberate result of investment or distribution considerations. In others, the clusters may be the result of previous mergers of different fund complexes. Independent Directors Council Task Force Report, *Director Oversight of Multiple Funds,* at 2 (May 2005), available at *https://www.idc.org/pdf/ppr_idc_multiple_funds.pdf.*

[197] *See, e.g.,* Independent Directors Council Task Force Report, *Director Oversight of Multiple Funds,* at 3–6 (May 2005), available at *https://www.idc.org/pdf/ppr_idc_multiple_funds.pdf* (stating that board oversight of multiple funds provides efficiencies relating to (1) issues faced by directors under the common regulatory structure that applies to all funds, (2) the complex's common personnel and service providers, (3) complex-wide oversight mechanisms applicable across the complex, and (4) enhanced board knowledge and expertise, along with increased authority and influence).

[198] In addition to voting rights provided under state law, the Investment Company Act provides specific rights to shareholders to approve certain fundamental features of the fund or BDC. *See, e.g.,* Sections 8(b)(3), 13(a), 58, and 63(2) (approval of certain operational matters); 15(a) and 59 (approval of advisory contracts and amendments thereto); and 32(a)(2) and 59 (ratification or rejection of the selection of the independent public accountant).

not required to file reports on Form 8–K, should they be required to file a report on Form 8–K providing the notice date? Should funds instead be permitted to provide this disclosure in a different manner? If so, what manner of disclosure would be appropriate?

III. General Request for Comment

We request and encourage any interested person to submit comments regarding the proposed rule amendments, specific issues discussed in this release, and other matters that may have an effect on the proposed rules. We request comment from the point of view of registrants, shareholders and other market participants. We note that comments are of particular assistance to us if accompanied by supporting data and analysis of the issues addressed in those comments, particularly quantitative information as to the costs and benefits. If alternatives to the proposals are suggested, supporting data and analysis and quantitative information as to the costs and benefits of those alternatives are of particular assistance. Commenters are urged to be as specific as possible.

Request for Comment

70. We preliminarily believe that universal proxy cards are not needed for special meetings of shareholders because historically shareholders have not been presented with an opportunity to vote on competing slates of nominees at special meetings. Therefore, we are not proposing to require universal proxy cards at a special meeting of shareholders. Should they be required at a special meeting? Why or why not?

71. We are proposing to mandate the use of universal proxy cards to allow shareholders to vote by proxy in a manner that more closely resembles how they can vote in person at a shareholders' meeting based on our belief that replicating the vote that could be achieved at the meeting facilitates the ''fair corporate suffrage'' that Congress intended our proxy rules to effectuate. Are there reasons our rules should not seek to replicate the vote that could be achieved at a shareholder meeting in this manner? Would replicating the vote that could be achieved at a shareholder meeting appropriately ensure that shareholders using the proxy process are able to fully and consistently exercise their state law voting rights? Are there other means to achieve this objective?

72. If a dissident provides a notice of intent to solicit proxies in support of nominees other than the registrant's nominees but fails to fulfill other requirements, such as filing a definitive proxy statement or the minimum solicitation requirement, should there be consequences for the dissident? If so, what should those consequences be and in what circumstances should they apply? Should the dissident be deemed ineligible to use universal proxy for a period of time in the future?

73. Would our proposed rules affect retail investors differently than institutional investors? [199] If so, how?

74. Does mandating a universal proxy card give rise to any conflicts or other concerns under state law? Would those concerns exist if we were instead to permit but not mandate a universal proxy card? For example, many state laws permit cumulative voting for directors. Are there any concerns relating to cumulative voting under the proposed universal proxy system?

75. Does the proposed universal proxy system give rise to any conflicts or other concerns under existing stock exchange rules?

IV. Economic Analysis

A. Background

As discussed above, we are proposing amendments to our proxy rules to address concerns over the inability of shareholders using the proxy system to vote for the combination of candidates of their choice in a contested election. The amendments would apply to contested elections at registrants that are subject to our proxy rules other than funds and BDCs. To allow for the inclusion of all candidates on a proxy card, we are proposing to amend Rule 14a–4(d)(4) such that each party to a contest need not seek consent from the nominees of the other party to include them on its card. The proposed amendments would also require the use of a universal proxy in all contested elections with competing slates of director nominees. Under these amendments, each party in such a contest would continue to use its own proxy card to solicit [200] votes for its director candidates. However, in contrast to current requirements, each proxy card would be required to include all candidates nominated by the registrant, by a dissident in the proxy contest, or by another party under a provision of state or foreign law or a company's governing documents.

We are proposing these amendments to allow shareholders voting by proxy to choose among director nominees in an election contest in a manner that more closely reflects the choice that could be made by voting in person at a shareholder meeting. Shareholders voting in person in a contested election with competing slates of nominees are able to choose among all of the duly nominated candidates. In contrast, because of the bona fide nominee rule and state law provisions regarding the submission of multiple proxies,[201] currently shareholders voting by proxy are typically limited to voting only for registrant nominees or voting only for the dissident's nominees (or, in the case of certain short slate elections, for the dissident's nominees and certain registrant nominees chosen by the dissident).[202] If shareholders wish to vote for a combination of nominees across the two slates, they generally must do so in person by attending or sending a representative to the shareholder meeting and incurring the costs of doing so. In some cases, parties such as proxy solicitors may make arrangements for one or more individuals to attend a meeting on behalf of certain shareholders in order to facilitate split-ticket voting. However, many shareholders, particularly retail shareholders or those who do not hold a large stake in the registrant, might not be willing or able to bear the costs of voting in person and may not have access to other arrangements. These shareholders may, therefore, not be able to vote for their preferred selection of candidates.

Universal proxies would allow shareholders to vote for any combination of nominees when voting their shares by proxy in advance of the meeting, which we understand is generally the way in which the vast majority of shares are voted.[203] For shareholders who would otherwise incur incremental costs to vote for a

[199] *See infra* notes 289–290.

[200] *See* 17 CFR 240.14a–1(*l*) for definitions of the terms ''solicit'' and ''solicitation.'' Parties to a contested election may use a variety of approaches to request that a shareholder authorize them to cast the shareholder's votes at the shareholder meeting.

[201] As discussed above, the bona fide nominee rule currently only allows a party to include a nominee of its opponent on its own proxy card if that nominee has consented to being named on that party's proxy card, which, in practice, generally prevents either party from including nominees of its opponent on its proxy card. Also, under state law, a later-dated proxy card generally invalidates any earlier-dated proxy card, effectively limiting a shareholder to voting on a single proxy card.

[202] Though our economic analysis focuses on contests between a registrant and a single dissident for ease of exposition, we believe that the economic effects discussed below would also apply to contests involving more than one dissident. Election contests with more than one soliciting dissident are uncommon. For example, the staff has identified only one initiated proxy contest in 2015 that involved more than one dissident with separate slates of nominees.

[203] We do not have data that would allow us to quantify the proportion of votes submitted by proxy relative to the proportion submitted in person at a shareholder meeting. We request such data below.

combination of candidates that could not be voted for by proxy, such as by attending the meeting in person, universal proxies would result in direct cost savings. Universal proxies would also enable shareholders who want to split their vote but would not choose to incur additional costs to be able to vote for their preferred combination of nominees to do so without incurring additional costs.

The proposed amendments would require each party soliciting for a competing slate in an election of directors to provide shareholders with a universal proxy card that includes the names of all duly-nominated candidates. Though the parties would be required to include the names of all parties' nominees on their proxy cards, they would not be required to provide background information about their opponents' nominees in their proxy statements.[204] Under the proposal, registrants and dissidents would be required to use universal proxies in all contested elections with competing slates of nominees.[205] Universal proxies would not be required in the case of exempt solicitations [206] or in cases in which shareholders would not have the ability to affirmatively vote for both dissident and registrant nominees at the meeting.[207] In the case of solicitations that do not present competing director nominees, such as those that involve the solicitation of votes against certain nominees or for proposals that do not relate to director nominees, the proposed amendments would provide proponents with the flexibility to include the names of some or all of the registrant nominees on their proxy cards and solicit votes for (or against) those individuals but would not require them to do so.

The nomination and election of directors by shareholders represents a fundamental governance mechanism that can mitigate conflicts of interest between shareholders and management. While the most direct effect of the proposed amendments would be to permit shareholders greater choice when voting by proxy in contested director elections, the proposed amendments may also have broader impacts on corporate governance and the relationship between shareholders and management. For reasons discussed below,[208] it is difficult to predict the likely extent or direction of these broader potential effects, but we cannot rule out the possibility that they could be significant.[209] For example, enabling split-ticket voting could lead to a greater number of boards that are composed of a mix of registrant-nominated [210] and dissident-nominated directors, which may affect the effectiveness of boards, either positively or negatively. Additionally, mandating the use of universal proxies by registrants as well as dissidents—which, in practice, would likely result in the names of dissident nominees being disseminated via registrant proxy cards to all shareholders—may provide potential dissidents with a new means of generating publicity for alternative nominees or for the broader concerns behind a contest at a relatively low cost, which could change the nature of interactions between potential dissidents and management. These and other potential effects, as well as possible mitigating factors, are discussed in detail below.

The proposed amendments would impose certain other related requirements in the case of contested elections with competing slates of nominees. In order to provide advance notice of the requirement to use a universal proxy, the proposed amendments would require that dissidents in all such contested elections provide the names of the nominees for whom they intend to solicit proxies to registrants no later than 60 days before the anniversary of the previous year's annual meeting date, and that registrants provide notice of their nominees to dissidents no later than 50 days before that anniversary date. To provide shareholders timely access to information about all nominees, a dissident would also be required to file its definitive proxy statement by the later of 25 days prior to the meeting or five days after the registrant files its definitive proxy statement. Additionally, under the proposed approach, dissidents in all contested elections with competing slates of nominees would be required to solicit the holders of shares representing at least a majority of the voting power of shares entitled to vote on the election of directors.[211]

Finally, the proposed amendments would impose certain presentation and formatting requirements for universal proxy cards to help ensure that the names of all parties' nominees and the total number of nominees for whom a shareholder can vote are clearly and fairly presented on the universal proxy card. Further, to address concerns about inaccuracies and ambiguous language in proxy statements and on proxy cards with respect to director elections in general, specifically with regard to how certain kinds of votes will be counted and the standards by which outcomes will be determined, we are proposing amendments that would specify how such information must be presented in proxy statements and on proxy cards.[212]

Exchange Act Section 3(f) requires us, when engaging in rulemaking that requires us to consider or determine whether an action is necessary or appropriate in the public interest, to consider, in addition to the protection of shareholders, whether the action will promote efficiency, competition and capital formation. Exchange Act Section 23(a)(2) requires us, when adopting rules under the Exchange Act, to consider the impact that any new rule would have on competition, and prohibits any rule that would impose a burden on competition that is not necessary or appropriate in furtherance of the purposes of the Exchange Act.

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[204] The proposed mandatory universal proxy system differs in this and other respects from proxy access. *See supra* Section II.B.1.a.

[205] *See supra* note 20.

[206] Exempt solicitations, such as solicitations in which the person is not acting on behalf of the registrant and the aggregate number of persons solicited is not more than ten, are discussed in Section IV.B.3 *infra.*

[207] For example, the proposed amendments would not require universal proxies in cases where shareholders are presented with proposals to remove incumbent directors and replace them with dissident nominees (rather than the ability to affirmatively vote for dissident or registrant nominees), as is generally the case when a dissident uses a special meeting to try to obtain board seats for its candidates. The proposed amendments would also not require universal proxies in the case of ''vote no'' campaigns (the solicitation of votes against certain registrant nominees) or for proposals that do not relate to director nominees. Special meeting contests and ''vote no'' campaigns are discussed further in Section IV.B.3. *infra.*

[208] *See* Section IV.D.

[209] We are unaware of any empirical studies that find that universal proxies would have significant effects on corporate governance and the relationship between shareholders and management. One study finds that a universal proxy is unlikely to lead to more proxy contests or to greater success by special interest groups. *See* Scott Hirst, *Universal Proxies,* working paper (Aug. 24, 2016), available at *http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2805136 (''Hirst study'').* However, we note that this study relies on several critical assumptions that might not be reliable. *See infra* note 317.

[210] For ease of exposition, we refer throughout this economic analysis to the nominees of the board or its nominating committee as the nominees of the registrant and, in total, as the registrant slate. *See supra* note 28.

[211] Because a soliciting party is required to disseminate a definitive proxy statement to the shareholders being solicited (except in the case of an exempt solicitation), the proposed minimum solicitation requirement may affect the costs of engaging in contests for dissidents that would not otherwise have solicited the holders of shares representing a majority of the voting power in the election, as discussed in Section IV.D.2 *infra.* Proxy statement dissemination methods are discussed in Section IV.B.2. *infra.*

[212] Two rulemaking petitions received by the Commission raised concerns about the quality of voting standard disclosure. *See* CII letter and Carpenters letter, *supra* note175.

The discussion below addresses the economic effects of the proposed amendments, including their anticipated costs and benefits, as well as the likely effects of the proposed amendments on efficiency, competition, and capital formation. We also analyze the potential costs and benefits of the principal alternatives to what is proposed. We request comment on all aspects of the costs and benefits of the proposed approach and of possible alternatives. We also request comment on any effects the proposed amendments or possible alternatives may have on efficiency, competition and capital formation.

B. Baseline

To assess the economic impact of the proposed amendments, we are using as our baseline the current state of the proxy process. Our baseline includes existing Commission rules, state laws, and corporate governing documents that jointly govern the ability to solicit proxies in support of director nominees other than the registrant nominees and the manner in which contested elections are conducted. This section discusses the parties involved in director election contests under the current legal framework, current proxy voting practices, and the means available to shareholders to influence the composition of boards of directors.

1. Affected Parties

We consider the impact of the proposed amendments on shareholders, registrants, dissidents in contested elections (who are typically also shareholders), and directors.

a. Shareholders

Different types of shareholders exhibit different degrees of involvement in the proxy process. In particular, there are, on average, large differences in involvement by institutional investors compared to retail investors.[213] Institutional and retail investors also face different levels of difficulty and resource constraints to vote for their preferred choices of nominees in contested director elections under current rules.[214] As a result, the proposed amendments are likely to have a differential impact with respect to the costs of voting and feasible voting choices for these two types of shareholders.

We estimate that the average (median) number of beneficial shareholder accounts for U.S. public companies is 30,011 (4,404).[215] The number of accounts varies significantly by company market capitalization: The average (median) number of beneficial shareholder accounts is 3,208 (1,369) for companies with less than $300 million in market capitalization, 9,764 (5,678) for companies with between $300 million and $2 billion in market capitalization, 28,206 (15,530) for companies with between $2 billion and $10 billion in market capitalization, and 188,176 (63,607) for companies with market capitalization above $10 billion.[216] Among all companies, we estimate that 91 percent of account holders are retail investors.[217] For U.S. public companies that held their annual meetings in the main 2015 proxy season (*i.e.,* between January 2015 and June 2015), a study by a proxy services provider found that retail investors held approximately 32 percent of shares held in brokerage accounts and institutional investors held 68 percent.[218] The study also finds that the percentage of ownership by retail investors varies significantly with company size, and was estimated to be 72 percent in companies with less than $300 million in market capitalization, 35 percent in companies with between $300 million and $2 billion in market capitalization, 24 percent in companies with between $2 billion and $10 billion in market capitalization, and 28 percent in companies with market capitalization above $10 billion.

Retail and institutional shareholders exhibit very different voting behavior. In the main 2015 proxy season, while institutional investors voted 91 percent of their shares, retail investors only voted 28 percent of their shares.[219] The voting propensity of retail investors does not vary significantly by the size of the registrant.[220] In contrast, institutional investors vote a significantly smaller portion of their shares in registrants with less than $300 million in market capitalization (72 percent) than in larger registrants (91 to 93 percent),[221] which may be a function of the types of institutions that invest in companies of different sizes.

Retail and institutional investors may also have differential access to resources that can be expended in order to cast a vote, and may have different levels of incentive to expend such resources. In general, we expect retail investors to face greater resource constraints than institutional investors. Differences across shareholders in the ability to take advantage of different approaches to voting and in the resources expended on voting are discussed in more detail in Sections IV.B.2.d and IV.D.1 below.

b. Registrants

The proposed amendments would apply to all registrants that have a class of equity securities registered under Section 12 of the Exchange Act and are thereby subject to the federal proxy rules, but would not apply to funds and BDCs. The proposed amendments would not apply to foreign private issuers or companies with reporting obligations only under Section 15(d) of the Exchange Act, which are not subject to the federal proxy rules. We estimate that approximately 6,265 registrants would be subject to the proposed amendments (including approximately 4,198 Section 12(b) registrants and 2,067 Section 12(g) registrants).[222]

There is substantial variation across registrants in characteristics such as director ownership, bylaws pertaining to director elections, and use of a dual-class share structure, that may affect the degree to which different registrants are affected by the proposed amendments.

Incumbent Management Ownership

We would expect that incumbent managers (senior executives and directors) would support the slate of directors nominated by the registrant rather than a slate nominated by outside dissidents, and vote accordingly either at the annual meeting or by proxy using

[213] *See* Broadridge et al., *Proxy Pulse 2015 Proxy Season Wrap-up* (3d ed. 2015) (''Broadridge Proxy Pulse''), available at *http://media.broadridge.com/documents/ProxyPulse-Third-Edition-2015.pdf.*

[214] *See infra* Section IV.B.2.d for a discussion on different shareholders' current ability to arrange split-ticket voting.

[215] Based on industry data provided by a proxy services provider. Note that an individual shareholder may have more than one account, so the number of beneficial shareholders likely is lower than the number of beneficial shareholder accounts. For the purpose of estimating costs related to distribution of proxy materials, the number of accounts is the more relevant number because dissemination costs such as intermediary and processing fees apply on a per account basis per NYSE Rule 451. The data is based on domestic companies that held shareholder meetings between July 1, 2014 and June 30, 2015, excluding meetings that involved proxy contests.

[216] *Id.*

[217] *Id.*

[218] *See* Broadridge Proxy Pulse, at 2.

[219] *Id* at 4. We acknowledge that the voting participation of retail shareholders in particular could increase in the case of a contested election, because of greater media coverage and expanded outreach efforts, but we do not currently have data that would allow us to separately estimate the degree of retail participation in contested elections.

[220] *Id.*

[221] *Id.*

[222] These estimates are based on staff review of EDGAR filings in calendar year 2015.

the registrant's card.[223] The proposed amendments to the proxy rules are unlikely to change incumbent managers voting behavior in this regard. We therefore think the percentage of total voting power held by a registrant's incumbent management is likely to have an important effect on the potential impact of these amendments.

Table 1 below reports estimates of the average combined vote ownership by incumbent managers for a broad sample of 3,911 potentially affected registrants, as well as for several size-related sub-samples of registrants: Those included in the S&P 500 index (''large-cap stocks''), in the S&P 400 index (''mid-cap stocks''), in the S&P 600 index (''small-cap stocks''), and outside the S&P 1500 index that is composed of these three indices (and which tend to be smaller than those registrants in the S&P 1500). The average (median) percentage is 15.1 percent (6.9 percent) for all registrants, and this percentage is greatest for registrants outside the S&P 1500 index. We also estimate the percentage of registrants for which incumbent managers hold a majority of the voting power. Overall, incumbent managers hold a majority of votes in 7.7 percent of registrants. This percentage ranges from 1.4 percent for S&P 500 registrants to 10.9 percent for non-S&P 1500 registrants.

The data in Table 1 indicates that to the extent incumbent managers tend to vote for the registrant's slate of director nominees in contested elections, the impact of such votes is likely to be significant especially in the non-S&P 1500 category of smaller registrants.

TABLE 1—INCUMBENT MANAGEMENT VOTE OWNERSHIP OF REGISTRANTS SUBJECT TO PROXY RULES[224]

	Incumbent management vote ownership (% of total voting power)				
	Mean	25th percentile	Median	75th percentile	Percentage with majority ownership
All registrants	15.1	2.4	6.9	20.3	7.7
S&P 500 registrants	4.4	0.5	1.1	2.9	1.4
S&P 400 registrants	6.9	1.4	2.5	5.4	3.2
S&P 600 registrants	9.7	2.6	4.9	10.4	2.7
Non-S&P 1500 registrants	19.7	4.5	11.6	27.9	10.9

Governance Structure

Registrants' governance characteristics may affect the incidence and outcomes of proxy contests currently as well as the effects, if any, of potential changes in the proxy rules on the incidence and outcomes of proxy contests. For example, some registrants have adopted a staggered board structure, in which only some directors are up for re-election in any given year. Because in the typical staggered board each director is only up for election once every three years, a staggered board prevents a majority of directors from being replaced via a shareholder vote in a single year. In addition, a staggered board makes it harder to replace a particular director in the years he or she is not up for election. Therefore, the presence of a staggered board would mitigate the impact on board composition of any proposed amendments to the proxy rules by prolonging the time over which any changes in board composition would occur. We estimate that approximately 43 percent of registrants have a staggered board.[225] Similar to incumbent management ownership, this percentage varies substantially across market capitalization categories: Approximately 18 percent for S&P 500 registrants, 44 percent for S&P 400 registrants, 48 percent for S&P 600 registrants, and 47 percent for non-S&P 1500 registrants.[226]

Cumulative voting may increase the ability of minority shareholders to elect a director and may therefore also be important to consider when evaluating the potential effects of the proposed amendments on proxy contests. Shareholders with cumulative voting rights are permitted to cast all of their votes for a single nominee for the board of directors when the company has multiple openings on its board.[227] For this reason, in a contested election, cumulative voting would generally make it easier for at least one of the dissident's nominees to gather enough votes to be elected.[228] We estimate that 4.9 percent of registrants have cumulative voting. This percentage also varies across market capitalization categories: Approximately 2.9 percent for S&P 500 registrants, 7.1 percent for S&P 400 registrants, 5.8 percent for S&P 600 registrants, and 4.7 percent for non-S&P 1500 registrants.[229]

Registrants' governing documents generally provide that one of two main standards be applied to the election of directors: Either a majority voting standard or a plurality voting standard. Under a majority voting standard, directors are elected only if they receive affirmative votes from a majority of the shares voting or present at the meeting, and shareholders can vote ''for'' each nominee, ''against'' each nominee, or ''abstain'' from voting their shares. In contrast, under a plurality voting standard, the nominees receiving the

[223] Note that in the case of a dissident who is also an insider (such as an incumbent director), this may not be the case.

[224] Estimates based on staff analysis of director and senior executive vote ownership data from Institutional Shareholder Services Inc. (''ISS'') as of calendar year 2014. This data is available for 3,911 of the potentially affected registrants and may include ownership through options exercisable within 60 days. The sample represents approximately two-thirds of potentially affected registrants. It is our understanding that the registrants for which data is missing in the ISS database tend to be the smallest registrants in terms of market capitalization, and therefore the data presented may not be representative for these registrants. In particular, we believe it is likely that incumbent management ownership for this group of registrants is on average even greater than for the non-S&P 1500 registrants listed in Table 1.

[225] Estimates based on staff analysis of board characteristics data from ISS as of calendar year 2014. This data is available for 3,918 of the potentially affected registrants.

[226] *Id.*

[227] For example, if the election is for four directors and a shareholder holds 500 shares (with one vote per share), under the straight voting method she could vote a maximum of 500 shares for each candidate. With cumulative voting, she could choose to allocate all 2,000 votes for one candidate, 1,000 each to two candidates, or otherwise divide the votes however she desired.

[228] *See, e.g.,* David Ikenberry & Josef Lakonishok, *Corporate Governance through the Proxy Contest: Evidence and Implications,* 66 J. Bus. 405, 413 (1993), (finding that dissidents are successful in obtaining at least one seat in 41.3 percent of contests held under straight voting and that this increases to 71.9 percent in contests using cumulative voting).

[229] Estimates based on staff analysis of board characteristics data from ISS as of calendar year 2014. This data is available for 3,965 of the potentially affected registrants. We do not have ready access to this data for other registrants.

greatest number of ''for'' votes are elected, and shareholders can withhold votes from specific nominees but cannot vote ''against'' any of them. We understand that even in those cases in which a majority standard is in place in director elections, registrants tend to have a carve-out in the bylaws (or charter) that applies a plurality standard in contested director elections. In the case of a majority voting standard in a contested election, there is a risk that some or all of the nominees receiving the highest relative shareholder support may still not win a majority of votes cast. This risk is especially high when nominees only appear on either the registrant's or the dissident's card, which is generally the case under the current proxy rules. Based on data that we have available for potentially affected S&P 1500 registrants, we estimate that approximately 55 percent have a majority standard in director elections, but also that in approximately 87 percent of cases in which a majority voting standard is in place, a plurality standard applies in the case of a contested election.[230]

Another governance characteristic that can affect the impact of changes to the proxy system is the presence of multiple share classes. Some registrants have adopted a dual-class share structure, where one class of shares has greater voting rights than the other. In these regimes, insiders tend to hold shares with greater voting rights, effectively entrenching the control of the company in the hands of these insiders and reducing other shareholders' influence in matters formally put to a vote, including director elections.[231] Thus, the proposed amendments to the proxy rules would be less likely to have an effect on voting outcomes in registrants with a dual-class share structure. We have access to data on the use of a dual-class structure for potentially affected S&P 1500 registrants and estimate that approximately 6 percent of these registrants have a dual-class share structure.[232]

c. Dissidents in Contested Elections

The dissidents in contested elections are typically shareholders of the registrant, but may fit into one of several categories. A common category of dissidents is activist hedge funds that take a proactive approach to the companies in their investment portfolios by trying to influence the management and decision-making through various means, such as proxy contests. Dissidents may also be former insiders or employees of the registrant. A corporation may also contest the election of directors at a registrant when, for example, it is seeking to acquire the registrant but the registrant's current board does not approve of the transaction. In some cases, a group of dissatisfied shareholders other than activist hedge funds jointly contests an election. Section IV.B.2.a below provides further information about the relative frequency of different types of dissidents.

d. Directors

We note that reputational concerns may be an important consideration for directors and potential directors.[233] Research has found that proxy contests may affect the reputation of incumbent directors, in that such contests appear to have a significant adverse effect on the number of other directorships they hold.[234] Therefore, any changes to the proxy rules that would increase the likelihood of proxy contests at any given registrant could reduce the willingness of current and potential directors to be nominated to serve on the board in the future.

2. Contested Director Elections

A shareholder voting by proxy is generally limited to voting for either the registrant slate or the dissident slate (and, when used to round out a slate, certain registrant nominees chosen by the dissident).[235] In contrast, a shareholder that attends an annual meeting may vote for any combination of registrant and dissident nominees.

a. Data Regarding Proxy Contests

We identify 102 proxy contests[236] that were initiated through the filing of preliminary proxy statements by dissidents in calendar years 2014 and 2015 (51 in 2014 and 51 in 2015) across all registrants subject to the proxy rules other than funds and BDCs.[237] On a yearly basis, this number of contests is similar to the average yearly number of proxy contests since the middle of the 1990s that has been reported in past studies.[238] Of the proxy contests identified in 2014 and 2015, we estimate that 72 (37 in 2014 and 35 in 2015) involved an election contest with competing slates of director nominees at an annual meeting of shareholders.[239] In one case, there were two dissidents with separate slates of nominees. Approximately 26 percent (19 cases out of 72) of the contests with competing slates were contests for majority control of the board. This percentage is somewhat larger than the percentage documented by a study of contested

[230] Estimates based on staff analysis of governance data for S&P 1500 companies from ISS as of calendar year 2014.

[231] *See, e.g.,* Paul A. Gompers, Joy L. Ishii & Andrew Metrick, *Extreme Governance: An Analysis of Dual-Class Firms in the United States,* 23 Rev. Fin. Stud. 1051, 1056 (2009) (finding that for a sample of public U.S. dual-class companies between 1995–2002, 85 percent tend to have at least one untraded class of common stock, and that insiders on average own approximately 60 percent of the voting rights in dual-class companies, primarily through ownership of the class with superior voting rights).

[232] Estimates based on staff analysis of governance data for S&P 1500 companies from ISS as of calendar year 2014. We do not have ready access to this data for other registrants.

[233] *See, e.g.,* Ronald Masulis & Shawn Mobbs, *Independent Director Incentives: Where Do Talented Directors Spend Their Limited Time and Energy?,* 111 J. Fin. Econ 406, 426 (Feb. 2014) (concluding that director reputation is a powerful incentive for independent directors).

[234] *See* Vyacheslav Fos & Margarita Tsoutsoura, *Shareholder Democracy in Play: Career Consequences of Proxy Contests,* 114 J. Fin. Econ. 316, 326 (2014) (finding that, following a proxy contest, all directors in the targeted company experience on average a significant decline in the number of their directorships, not only in the targeted company, but also in other, non-targeted companies).

[235] While it may be possible for a registrant to require a dissident's nominees to consent to be named on the registrant's card pursuant to the director questionnaires required under a registrant's advance notice bylaw provisions, the staff has seen this tactic used only in two contests in recent years, one of which did not ultimately proceed to a vote. This option is not available to the dissident. In addition, we are not aware of any recent cases where one party's nominees were included on the opposing party's proxy card based on their voluntary consent.

[236] This total number of proxy contests includes all cases in which a proponent or dissident initiated a ''solicitation in opposition'' to the registrant, whether in relation to an election of directors or with respect to another issue. A solicitation in opposition includes (i) any solicitation opposing a proposal supported by the registrant; and (ii) any solicitation supporting a proposal that the registrant does not expressly support, other than a shareholder proposal included in the registrant's proxy material pursuant to Rule 14a–8. *See* 17 CFR 240.14a–6(a), Note 3. This total number of proxy contests does not include exempt solicitations which are discussed in Section IV.B.3. *infra.*

[237] Based on staff review of EDGAR filings in calendar years 2014 and 2015.

[238] *See, e.g.,* Vyacheslav Fos, *The Disciplinary Effects of Proxy Contests,* Manag. Sci., at 1 (July 2015), (forthcoming), available at *http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1705707* (''Fos Study'') (estimating that the average number of proxy contests was 56 per year from 1994 through 2012). This rate of proxy contests is higher than in earlier years. *See, e.g.,* Harold Mulherin & Annette Poulsen, *Proxy Contests and Corporate Change: Implications for Shareholder Wealth,* 47 J. Fin. Econ. 279, 287 (1998) (''Mulherin & Poulsen Study'') (estimating an average of 17 proxy contests per year from 1979 through 1994).

[239] The 30 proxy contests identified in 2014 and 2015 that did not represent election contests with competing slates of candidates at an annual meeting of shareholders include consent solicitations for the removal and election of directors at a special meeting, contests involving ''vote no'' campaigns, and proposals on issues other than director nominees. Special meeting elections and ''vote no'' campaigns are discussed in Section IV.B.3 *infra.*

elections from 1994 to 2012, which found that approximately 22 percent of contested elections were for majority control.[240] Most of the contests with competing slates were in smaller to midsize companies: Only four were S&P 500 companies and 46 were outside the S&P 1500.

A study of U.S. proxy contests from 1994–2012 found that targets of proxy contests have smaller market capitalization relative to other publicly traded companies, have lower ratios of market value to book value, and have had poor stock performance. Importantly for understanding the implications of the proposed amendments, companies subject to proxy contests were also found to have higher percentages of institutional and activist hedge fund ownership in comparison to non-targets.[241] The same study also found that dissidents in proxy contests are most often activist hedge funds, followed by groups of shareholders, other corporations, and former insiders or employees.[242] In particular, the study notes that the proportion of contests sponsored by activist hedge funds has increased from 38 percent in the 1994–2002 period to 70 percent in the 2003–2012 period.[243] Our staff's review of the filings for the 72 proxy contests involving elections initiated in 2014 and 2015 found that activist investors (mainly hedge funds) were dissidents in more than 86 percent of the contests, whereas former or current insiders and employees or groups of shareholders made up the remainder of the dissidents.

b. Notice, Solicitation, and Costs of Proxy Contests

The Commission's proxy rules do not currently require dissidents to provide notice to registrants of their intention to solicit votes for their nominees. However, many registrants have advance notice bylaws that apply in proxy contests.[244] For example, one common form of advance notice bylaw provision requires dissidents to provide notice of their intent to nominate candidates during the 30-day period ending no later than 90 days before the anniversary of the previous year's meeting date.[245] Further, we understand that the latest date on which notice may be provided under advance notice bylaws generally ranges from 60 to 120 days before the anniversary of the meeting date.[246]

Advance notice bylaws are common among registrants. For example, at the end of 2014, 95 percent of S&P 500 registrants had advance notice provisions, and 90 percent of the Russell 3000 had such provisions.[247] Our staff's review of filings related to director election contests initiated in 2014 and 2015 found that approximately 88 percent of dissidents either announced or preliminarily communicated their intent to nominate directors at least 60 days before the annual meeting date. Further statistics on the distribution of the timing for initial announcements and filing of preliminary proxy statements are shown in Table 2 below.

TABLE 2—TIMING OF INITIATION OF ELECTION CONTESTS AND FILING OF PRELIMINARY PROXY STATEMENTS RELATIVE TO MEETING DATES, IN 2014–2015[248]

	Percentage			Mean	Median	Min	Max
	At least 45 days	At least 60 days	At least 90 days				
Days between first announcement or communication of election contest intent and annual meeting date	94.3	88.6	62.9	107	93	29	213
Days between dissident filing preliminary proxy statement and annual meeting date	71.4	44.3	10.0	60	56	23	203

While dissidents in proxy contests are required to make their proxy statements publicly available via the EDGAR system, they are not currently subject to any requirements as to how many shareholders they must solicit. When dissidents actively solicit shareholders they have the choice of sending shareholders a full package of proxy materials (''full set'') or sending only a one-page notice informing them of the online availability of proxy materials (''notice and access'' or ''notice-only''). We estimate that approximately 60 percent of dissidents solicited all shareholders in a sample of recent proxy contests.[249] Among those recent contests in which dissidents did not solicit all shareholders, the median percentage of shares held by solicited shareholders was approximately 95

[240] *See* Fos Study, at 11.

[241] *Id.* at 19. We note that the sample in this study includes proxy contests concerning all issues and not just those involving contested director elections. However, director election contests constitute 88 percent of the sample. *Id.* at 37.

[242] *Id.* at 38 (finding that, for proxy contests including contested elections as well as a much smaller number of issue contests from 1994 to 2012, 57 percent of dissidents were activist hedge funds, 20 percent were groups of shareholders, 11 percent were corporations, and 11 percent were prior insiders and employees).

[243] *Id.* at 13. The study also notes that all the other categories of sponsors declined over the same time. In particular, corporations sponsored 20 percent of contests in the 1994–2002 period but only 5 percent in the 2003–2012 period.

[244] An advance notice bylaw can generally be waived by a registrant's board of directors at their discretion, though we do not have data that would allow us to determine the frequency with which such bylaws are waived. If not waived, such bylaws may also be challenged in court (such as in the case of ''inequitable circumstances''). *See, e.g., AB Value Partners, L.P.* v. *Kreisler Mfg. Corp.,* No 10434–VCP, 2014 WL 7150465 (Del Ch. Dec. 16, 2015).

[245] *See supra* note 114.

[246] *See, e.g.,* Kevin Douglas, Stephen Hinton & Eric Knox, *Advance Notice Bylaws: The Current State of Second Generation Provisions,* Deal Lawyers (July–Aug. 2011), at 15, 19 (finding that, in a review of 100 Delaware corporations that had amended their advance notice bylaws since 2008, including large-cap, mid-cap and small-cap companies, 80 percent of the surveyed bylaws had a window period of 30 days and, among those that had a window period of 30 days tied to the date of the previous year's meeting, 84 percent of those provide for a notice period of 90–120 days prior to the meeting, 9 percent provide for a notice period 60–90 days prior to the meeting and 7 percent provide for a notice period of 120–150 days prior to the meeting).

[247] *See supra* note 116.

[248] Based on staff analysis of the contested elections sample. *See supra* note 115.

[249] Based on industry data provided by a proxy services provider for a sample of 35 proxy contests from June 30, 2015, through April 15, 2016.

percent of the outstanding voting shares of the registrant.[250] We estimate that in approximately 97 percent of these proxy contests the dissident solicited shareholders representing more than 50 percent of the outstanding voting shares.[251] Furthermore, dissidents in the contests discussed above sent full sets of proxy materials to each of the shareholders solicited.[252] The use of the full set delivery method may be driven by findings that such solicitations are associated with a higher rate of voting than notice-only access solicitations.[253]

In proxy contests, both registrants and dissidents incur costs of solicitation.[254] These costs may include, for example, fees paid to proxy solicitors, expenditures for attorneys and public relations advisors, and printing and mailing costs. We understand that for registrants the costs of solicitation generally exceed the costs associated with a shareholder meeting in the absence of a contested election. Both dissidents and registrants are required to provide estimates of the costs of solicitation in their proxy statements. As shown in Table 3 below, based on a review of proxy contests initiated in 2014 and 2015, the median reported estimated total costs were approximately $800,000 for registrants and approximately $250,000 for dissidents.

TABLE 3—REPORTED ESTIMATES OF SOLICITATION EXPENSES IN ELECTION CONTESTS IN 2014 AND 2015[255]

	Mean	Median	Minimum	Maximum
Estimated Total Costs:				
Registrant (beyond usual costs)	$2,092,096	$800,000	$25,000	$15,400,000
Dissident	741,733	250,000	25,000	8,000,000
Estimated Fees Paid to Proxy Solicitor:				
Registrant (beyond usual costs)	296,016	100,000	6,500	2,000,000
Dissident	188,687	100,000	10,000	1,485,895

A study of the solicitation costs in proxy contests from 2006 to 2012 found that the total estimated solicitation costs reported by registrants ranged from approximately $20,000 to approximately $20 million, and that the estimated costs reported by registrants tended to increase with their market capitalization. In contests where costs were disclosed by both parties, the study found that the median estimates of total solicitation costs was $477,500 for registrants and $275,000 for dissidents.[256] The largest recorded estimate of total solicitation costs for a dissident in this period was approximately $9 million.[257]

Beyond these estimated solicitation expenses, proxy contests may be associated with other indirect costs, such as the cost of management or dissident time spent in the process of conducting the contest and expenses associated with any discussions held between management and the dissident(s). We do not have data on these indirect costs. One study that considers the cost of earlier as well as later stages of engagement between management and activist hedge fund dissidents, which eventually culminate in a proxy contest, estimates that a campaign ending in a proxy contest has a total (direct and indirect) average cost to the dissident of approximately $10 million over the full period of engagement.[258]

In addition to the typical proxy contests[259] discussed above, on rare occasions, there have also been nominal contests, in which the dissidents incur little more than the basic required costs to pursue a contest. In particular, a dissident engaging in a nominal proxy contest would have to bear the cost of drafting proxy statements and undergoing the staff review and comment process for that filing. However, a dissident in a nominal contest would not be likely to expend resources on substantial solicitation, such as to disseminate its proxy materials through full set delivery to a substantial percentage of shareholders versus only to select shareholders, to hire the services of a proxy solicitor, or to engage in other broad outreach efforts, as would be the case in a typical proxy contest. Based on staff experience in administering the proxy rules, nominal contests are very rare, and the staff is unaware of any nominal contest that has resulted in the dissident gaining seats for its nominees. We do not have data that is well-suited for empirically identifying nominal contests, in part because dissidents do not always report estimates of their solicitation expenses in their proxy materials.

c. Results of Proxy Contests

A proxy contest may result in several possible outcomes. Our staff's review of 72 proxy contests initiated in 2014 and 2015 found that approximately 33 percent (24 contests) did not make it to a vote. In these cases, registrants may have settled by agreeing to nominate or appoint some number of the dissident's candidates to the board of directors or by making other concessions, the dissident may have chosen to withdraw in the absence of any concessions, or other events may have precluded a vote.[260] Among the 48 proxy contests initiated in 2014 and 2015 that proceeded to a vote, dissidents were at least partially successful (*i.e.,* achieved some board representation) in about 52

[250] *Id.*

[251] *Id.*

[252] *Id.*

[253] *See, e.g.,* Broadridge, *Analysis of Traditional and Notice & Access Issuers: Issuer Adoption, Distribution and Voting for Fiscal Year Ending June 30, 2013* (Oct. 2013), available at *http://media.broadridge.com/documents/Broadridge-6-Yr-NA-Stats-Report-2013.pdf.*

[254] In some cases, dissidents may seek reimbursement of their expenses from registrants. Such potential reimbursement is governed by state law and is more likely in the case of a successful proxy contest. The proxy rules require dissidents to disclose whether reimbursement will be sought from the registrant, and, if so, whether the question of such reimbursement will be submitted to a vote of shareholders. *See* 17 CFR 240.14a–101, Item 4(b)(5).

[255] Based on staff analysis of EDGAR filings in calendar years 2014 and 2015.

[256] *See* Adam Kommel, *Proxy Fight Fees and Costs Now Collected by SharkRepellent: MacKenzie Partners and Carl Icahn Involved in Largest Fights, SharkRepellent.net* (Feb. 20, 2013), available at *https://www.sharkrepellent.net/request?an=dt.getPage&st=undefined&pg=/pub/rs_20130220.html.*

[257] *Id.*

[258] *See* Nickolay Gantchev, *The Costs of Shareholder Activism: Evidence from a Sequential Decision Model,* 107 J. Fin. Econ. 610, 624 (2013).

[259] For ease of reference, we use ''typical proxy contests'' to refer to contested elections of directors other than the nominal contests described below.

[260] The percentage of director election contests initiated in 2014 and 2015 not proceeding to a vote is lower than what has been reported in previous research for earlier years. *See, e.g.,* Fos Study, at 39 (finding that, for proxy contests including contested elections as well as a much smaller number of issue contests from 1994 to 2012, about 53 percent did not make it to a vote, where 25 percent were settled, 15 percent were withdrawn, 6 percent ended with a delisting or a takeover, and 7 percent did not make it to a vote for other reasons).

percent (25) of these contests.[261] In 21 of these contests, the end results was a ''mixed-board'' with directors elected from both slates. In four contests, the dissident's nominees were elected to fill all positions of the board. Between settlements and voted contests, dissidents achieved at least some board representation in half of the director election contests (36 out of 72).

Contests differ in the closeness of voting outcomes. Staff has analyzed the difference in votes between the elected director with the lowest number of votes and the nominee who came closest to being elected. Out of the 48 contests initiated in 2014 and 2015 that proceeded to a vote, registrants disclosed full voting results in Form 8–K filings in 38 contests. In these contests, the median director elected with the fewest votes received 57 percent more votes compared to the nominee with the next highest number of votes. The median difference in votes received between the director elected with the fewest votes and the nominee with the next highest number of votes as a percentage of total outstanding voting shares was approximately 16 percent, and more than 26 percent of the contests (10 out of 38) had a difference in votes received as a percentage of outstanding shares of five percent or less. In these same contests, the elected director who received the fewest votes received no more than 11.5 percent more votes than the non-elected nominee who received the greatest votes. We consider these to be close contests, in which a relatively small number of shareholders could have been determinative of the outcome.

We are unaware of any nominal contest that has resulted in the dissident gaining seats for their nominees. Dissidents may nevertheless choose to initiate nominal contests to pursue goals other than changes in board composition, such as to publicize a particular issue or to encourage management to engage with the dissident. However, we do not have data that would allow us to measure success along those other dimensions.

d. Split-Ticket Voting

Shareholders have the option of voting a split ticket but can only do so by attending the shareholder meeting in person and voting their shares at that meeting. In practice, however, in-person meeting attendance may be limited due to cost and other logistical constraints, which is especially likely to be the case for small shareholders and retail investors.[262] We understand that in certain elections, the parties to the contest and their agents (*e.g.,* proxy solicitors) will help some shareholders ''split their ticket'' by arranging for an in-person representative to vote these shareholders' shares at the meeting on the ballots used for in-person voting. We do not have data on the number or characteristics of shareholders that are arranging to vote a split ticket through current practices, but our understanding is that these practices are more available to large shareholders than small ones. We solicit comment on the prevalence, availability, costs and benefits of these practices below.

For shareholders that do not have ready access to other arrangements, the decision of whether or not to attend a meeting or seek other arrangements for splitting their ticket is likely to depend on having the ability and resources to do so as well as having the incentive to incur the associated costs. To the extent an individual investor believes vote splitting is beneficial, the larger its ownership stake is, the greater the financial incentives to incur the current costs of arranging a split-ticket vote. However, beyond the direct financial incentives from a larger ownership stake, a large investor also has a voting impact commensurate with that stake, which increases the likelihood that its votes are determinative. This in turn, increases the large investor's incentives to arrange for vote splitting when deemed beneficial. We believe institutions are more likely than retail shareholders to have both the resources and the incentives to currently vote a split ticket (if they have the preference to do so).

Because the incentive to arrange a split-ticket vote when such a vote is preferred is dependent on having both a sizable financial stake, in dollar terms, as well as significant voting influence, in percentage terms, we consider the distribution of both of these factors for institutional shareholders. We use data from Form 13F filings to estimate these distributions, which limits us to considering institutions required to report their holdings on Form 13F.[263] Moreover, we only consider shares over which these institutions have voting authority in contested director elections. We do not have comparable data for other institutional shareholders or for retail shareholders.

Figure 1 shows the average percentage, across registrants, of the total outstanding shares held by institutions that each meet a given threshold of minimum voting power. The average percentage of the total outstanding shares is calculated across all registrants within different size categories. As in previous analyses, registrant size is approximated by reference to the S&P index. The data suggest that there is currently a substantial portion of outstanding shares for which the institutional holders may have enough voting power to give them the incentive to arrange split-ticket voting if preferred. For example, the average percentage of the total outstanding shares held by institutions that each have 0.5 percent or more of the total votes is around 27 percent for non-S&P 1500 registrants, 42 percent for S&P 600 registrants, 39 percent for S&P 400 registrants, and 33 percent for S&P 500 registrants. The large difference in ownership between S&P 600 and non-S&P 1500 registrants despite both groups being relatively small registrants is due to a smaller number of institutions holding stock (of any amount) in the non-S&P 1500 registrants. If we consider average total ownership by institutions that are larger block holders (individually owning 5 percent or more of shares) and therefore are more likely to be pivotal voters, the average percentage of the total outstanding shares held by these institutions is approximately 11 percent for both non-S&P 1500 and S&P 600 registrants, 7 percent for S&P 400 registrants, and 6 percent for S&P 500 registrants. Because we are only able to consider ownership by institutions required to report their holdings on Form 13F and that have voting authority over these holdings, these statistics represent an estimate of the lower

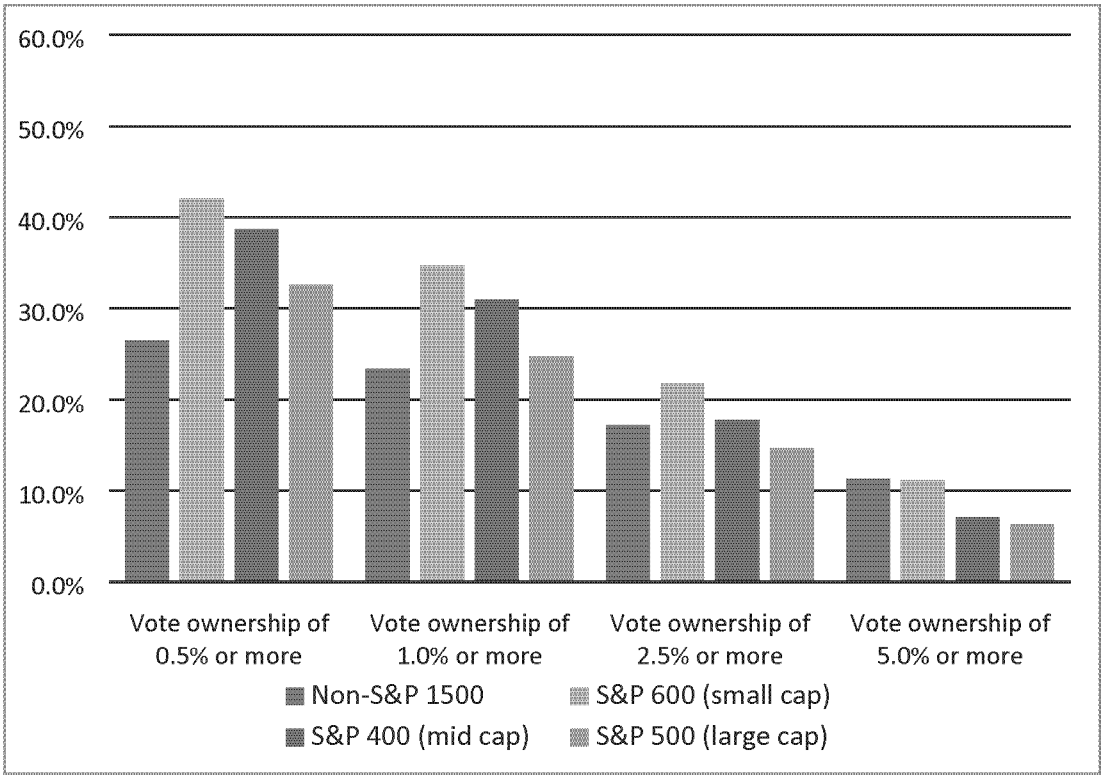
[261] The estimated percentage of voted director election proxy contests that lead to dissident board representation is consistent with previous research. *See, e.g.,* Fos Study, at 13 (finding that for voted proxy contests including contested elections as well as a much smaller number of issue contests from 1994 to 2012, dissidents achieved at least one of their formal goals (*i.e.,* obtaining board seats or passing proposals) in about half of the cases).

[262] *See, e.g.,* Rulemaking Petition (describing in-person attendance as ''generally an expensive and impractical proposition''). The burden of attending a meeting for the purpose of voting a split ticket may be significantly lower in the case of a virtual shareholder meeting but such online meetings are still relatively rare. Moreover, we are unaware of any proxy contest that has culminated in a virtual shareholder meeting. *See, e.g.,* Jena McGregor, *More Companies are Going Virtual for Their Annual Shareholder Meetings,* Wash. Post (Mar. 17, 2015), available at *https://www.washingtonpost.com/news/on-leadership/wp/2015/03/17/more-companies-are-going-virtual-for-their-annual-shareholder-meetings/* (finding that in 2011, 21 companies held virtual-only meetings using the primary provider of online shareholder meeting technology, and that this number grew to 53 in 2014.)

[263] Non-exempt institutional investment managers that exercise investment discretion over $100 million or more in Section 13(f) securities are required to report their holdings on Form 13F with the Commission.

bound of the percentage of outstanding shares held by owners with possible incentives to currently arrange split-ticket voting.

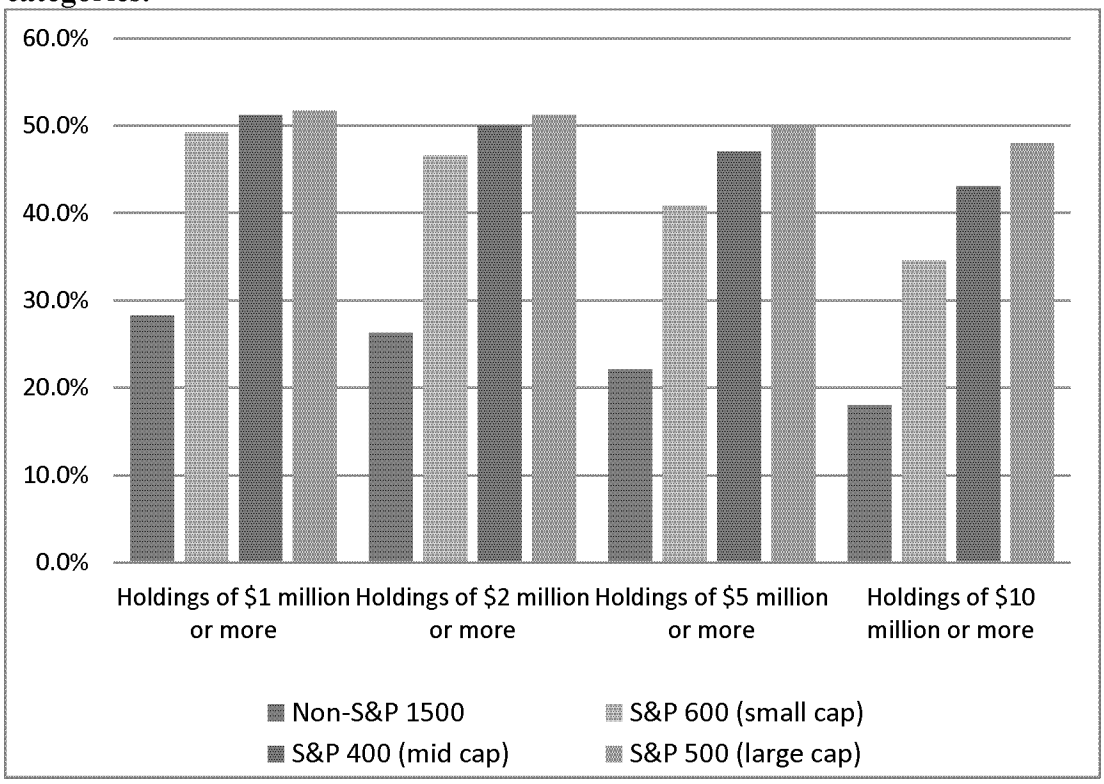
Figure 1: Average percentage of outstanding shares held by institutions with different levels of minimum individual vote ownership, across registrants in different size categories.[264]



Even a large voting stake in a company may not currently be enough to incent a shareholder to incur the costs of attending the annual meeting to vote a split ticket if the investment is low in dollar terms. Therefore we also consider the combined voting power by institutions that individually have a substantial dollar investment in a registrant. In particular, Figure 2 shows the average percentage, across registrants, of the total outstanding shares held by institutions that each meet a given threshold of minimum dollar stake in the registrant. For example, for institutional owners that hold stock worth $1 million or more in a given registrant, the average percentage of the total outstanding shares held by these institutions is around 50 percent for all registrants belonging to one of the S&P 1500 component indexes. By contrast, the corresponding average percentage of outstanding shares among non-S&P 1500 registrants is approximately 28 percent. If we instead consider only institutional owners that each hold stock worth $10 million or more, the average percentage of outstanding shares held by these institutions is 48 percent for S&P 500 registrants, 43 percent for S&P 400 registrants, 35 percent for S&P 600 registrants, and 18 percent for non-S&P 1500 registrants. Overall, the estimates in Figure 2 suggest that a substantial portion of shares in registrants are held by institutions that have a significant financial interest. This is particularly so for relatively larger registrants.

[264] The estimates in the figure are based on staff analysis of Form 13F filings related to potentially affected registrants (excluding registered investment companies) from the last available quarter of 2015 in the Thomson Reuters Form 13F database. The analysis reflects only holdings for which institutions have voting authority in contested director elections.

Figure 2: Average percentage of outstanding shares held by institutions with different levels of minimum financial interest, across registrants in different size categories.[265]



3. Other Methods To Seek Change in Board Representation

Beyond typical proxy contests culminating at annual meetings, we note that under the baseline there are a number of other methods shareholders currently can use to potentially affect changes to the composition of a board of directors. We broadly refer to these methods throughout this economic analysis as shareholder interventions.

First, a shareholder could make recommendations for director candidates directly to the nominating committee of the board. It is then generally left to the board's discretion whether or not such candidates are accepted for nomination. While we do not have direct evidence about the extent to which this approach is used or is effective, a board may be relatively more likely to nominate candidates recommended by a shareholder with a large stake in the registrant than candidates recommended by smaller shareholders because a large shareholder would have a greater interest in the oversight and strategic direction of the registrant and because a large shareholder might be perceived to be more likely to run a proxy contest absent registrant cooperation.

Second, a dissident could call for a special meeting to try to replace all or some of a registrant's directors with the dissident's own candidates, to the extent permitted under the registrant's bylaws. Such an intervention would typically require a two-step process. Initially, the dissident would generally need to obtain the consent of shareholders representing a certain threshold of shares outstanding to call the meeting.[266] Next, the dissident would put to a vote, either by proxy or in person at the special meeting, a proposal to remove certain directors and elect certain other nominees. Attempting to change the board in this manner at a special meeting is different from a contested election at an annual meeting because the issue put to a shareholder vote is the removal of specific incumbent directors and their replacement by specific dissident director candidates. This means that regardless of whether a shareholder votes by proxy or in person, there is no possibility for a shareholder to vote ''for'' a combination of dissident and registrant nominees because only the dissident proposes nominees (to fill the vacancies that would result from the removal of certain incumbent directors if the dissident's removal proposal is successful). In addition, because attempting to replace directors through a special meeting is subject to registrant bylaws and, if such bylaws are available, requires the dissident to first gather enough shareholder support to call the meeting, this alternative may be either unavailable or more burdensome for the dissident compared to initiating a proxy contest at an annual meeting.

Third, if the shareholder base of a registrant is significantly concentrated, a dissident may be able to pursue the election of alternative director nominees at the annual meeting through an exempt solicitation. Rule 14a–2(b)(2) provides that the rules generally applicable to dissident proxy solicitations do not apply where the total number of persons solicited is not more than ten. Thus, dissidents using this approach would be able to obtain proxies from up to 10 persons in support of their candidates, and may receive additional support for their candidates from shareholders attending

[265] *Id.* Financial interest is estimated as the market value of all shares held by the individual institution in a specific registrant. For the average percentage of outstanding shares, we only considered holdings for which institutions had voting authority in contested director elections.

[266] The criteria for how and when a special meeting can be called vary both by state law and corporate bylaws.

the meeting in person. Based on staff experience, we understand that this approach is used only infrequently.

Fourth, some registrants have recently adopted proxy access bylaws that would allow certain qualifying shareholders to nominate a limited number of director candidates for inclusion in the registrant's proxy statement.[267] We are unaware of any cases to date in which a proxy access bylaw has been used to nominate a candidate for the board. Using a proxy access bylaw differs from engaging in a proxy contest in several ways. In particular, while proponents of proxy access nominees could engage in some forms of shareholder outreach efforts, current proxy access bylaws typically restrict the proponents from soliciting votes on a separate proxy card.[268] Proxy access candidates would be included on the registrant's proxy card, and information about those candidates would be included in the registrant's proxy statement. In contrast, dissidents engaged in proxy contests produce their own proxy materials and bear the cost of any solicitation in support of their nominees. Additionally, current bylaws generally limit the number of proxy access candidates to 20 or 25 percent of the board.[269] Also, a proxy access bylaw generally only provides access to the proxy for shareholders meeting certain criteria.[270] Thus, while relying on the provisions of a proxy access bylaw to nominate candidates is likely to involve lower solicitation costs than proxy contests (because, for example, the proxy access shareholder proponent does not produce or disseminate its own separate proxy statement), it also is more limited in its potential to change the composition of the board. We expect similar distinctions to apply in the case of state or foreign law provisions that provide shareholders a form of proxy access.

Other shareholder actions targeted at changes in board composition include withholding votes from (or voting against) directors in uncontested elections as well as waging formal ''vote no'' campaigns to encourage other shareholders to do so. Such campaigns are relatively low in cost but may have a more limited direct effect on boards than proxy contests or the use of proxy access bylaws because, while they can express shareholder dissatisfaction, such campaigns do not directly put forth alternative candidates for election. Nonetheless, such campaigns may have an effect on some registrants. One study of 112 formal ''vote no'' campaigns found that about 20 percent of ''vote no'' campaigns have achieved substantial voting support and ''vote no'' campaigns are associated with a CEO turnover rate of about 25 percent in the year after the campaign, or over three times the turnover rate for a sample of comparable registrants.[271]

Finally, shareholders may also seek a change in board composition by making nominations from the floor of a meeting, without soliciting proxies. However, we understand that such nominations are rare,[272] and generally unlikely to succeed, given the applicability of advance notice bylaws and our understanding that most shareholders vote in advance of meetings via the proxy process.

C. Broad Economic Considerations

The proposed amendments would change the proxy solicitation and voting process at registrants other than funds and BDCs to allow all shareholders of the company to use the proxy system to vote for their preferred combination of director candidates in a contested election. These changes are likely to improve the efficiency of the voting process in certain contested elections. It is possible that the proposed amendments could also affect the cost to registrants and dissidents of contested elections, and the outcomes and incidence of these elections. To the extent that such effects, if any, change the degree to which the risk of attracting a future proxy contest provides either discipline or a distraction to boards, the proposed amendments may affect managerial decision-making and the relationship between shareholders and management. Although the likelihood as well as the direction and extent of these effects is difficult to predict for reasons discussed below, we cannot rule out the possibility that any such effects could be significant.

Our economic analysis of the proposed amendments reflects our consideration of a number of broad issues related to corporate governance and the proxy system. First, the design of the voting process, as a primary mechanism through which shareholders provide input into the composition of boards, can affect the amount of influence that shareholders exercise over the firms they own. Second, it is difficult to predict how the various parties involved in contested elections are likely to respond to any changes to the proxy process, complicating the evaluation of whether such changes would enhance or detract from board effectiveness and registrants' efficiency and competitiveness. Third, corporate governance involves a number of closely interrelated mechanisms, so any effects of contested elections may be either mitigated or magnified by changes in the use or effectiveness of other mechanisms. This section describes these issues in more detail and provides context for the discussion of potential economic effects that follows.

The proposed amendments involve a fundamental aspect of corporate governance: The process by which directors for the boards of registrants are elected. Appropriate mechanisms to allow shareholder input into the nomination and election of directors can be important to maintaining the accountability of directors to shareholders.[273] In turn, the accountability of directors to shareholders can play an important role in addressing the agency problems that arise from the separation of registrant ownership and control, especially when share ownership is widely dispersed. In particular, boards of directors can monitor, discipline and replace the officers of registrants, who have control over registrants' operations, on behalf of dispersed shareholders. Boards of directors can thereby play a key role in managing potential conflicts that may result from divergent interests between these officers and shareholders.[274] The effectiveness of a board can be judged by its ability to adequately perform this monitoring role, and also by its performance across other dimensions,

[267] *See, e.g.,* S&C April Report, *supra* note 91 (stating that 200 public companies had adopted some form of proxy access since the 2015 proxy season, compared to 15 companies prior to 2015).

[268] *See, e.g.,* Sidley Austin LLP, *Proxy Access Momentum in 2016,* at 19 (June 27, 2016), available at *http://www.sidley.com/~/media/update-pdfs/2016/06/final-proxy-access-client-update-june-2016.pdf.*

[269] *See, e.g.,* S&C April Report, *supra* note 91.

[270] Under most current proxy access bylaws, the shareholder generally has to meet a passive holder requirement as well as specific share ownership thresholds and holding period requirements in order to qualify to use proxy access, with most bylaws requiring the shareholder using proxy access to have held either a three percent or five percent ownership stake for a three-year holding period. *See, e.g.,* S&C April Report, *supra* note 91; S&C August Report, *supra* note 114.

[271] *See* Diane Del Guercio, Laura Seery & Tracie Woidtke, *Do Boards Pay Attention When Institutional Investor Activists ''Just Vote No''?,* 90 J. Fin. Econ. 84, 85 (2008).

[272] Based on the staff's discussions with independent inspectors of elections.

[273] The nature of the mechanisms by which shareholders vote is affected by a number of different sources, including state law and a registrant's governing documents as well as Commission rules regarding the proxy process.

[274] *See, e.g.,* Adolf Berle & Gardiner Means, *The Modern Corporation and Private Property* (1932).

such as its ability to provide valuable advice to the officers of the registrant.[275]

The selection of board members generally involves input from existing board members and from shareholders. Under most circumstances, the incumbent board nominates a slate of candidates to fill upcoming vacancies and shareholders vote on each of these candidates. The board's choice of nominees may reflect a number of factors, including board member preferences, information board members have learned about the registrant, board members' past experience, and recommendations from shareholders. In the case of a contested election, dissidents may nominate directors for shareholder consideration in addition to those nominated by the board. Shareholders then vote to determine which nominees are elected.

The proxy system is the principal means by which shareholders in public companies exercise their voting rights. It is therefore important that this system functions efficiently and in a manner that adequately protects the interests of shareholders and does not impede them from exercising their rights under state law. Researchers have noted that details of the proxy process may affect the amount of influence that shareholders can exercise over the firms they own.[276] Under current rules, and as discussed in Section IV.A above, shareholders who vote by proxy in a contested election often have a more constrained set of voting choices than shareholders who vote in person at the meeting. Alleviating these constraints could enhance the influence of shareholders on board composition by allowing all shareholders to cast votes in contested director elections that best reflect their preferences, thus facilitating the exercise of the rights that state law provides to shareholders. Furthermore, any changes in shareholder voting behavior, or other changes in the nature of the proxy process, could also have indirect effects on the nature of the relationship among shareholders, directors, and managers.

It is difficult to predict whether any such changes would enhance or detract from board effectiveness and registrants' efficiency and competitiveness. Strong shareholder rights have been associated with higher firm valuations and better-developed equity markets.[277] However, there are trade-offs between the degree of shareholder oversight and the level of director autonomy in managing the affairs of a registrant. For example, sufficient autonomy of the board and management may be important for fostering an environment focused on initiative, innovation and the registrant's long-term interests.[278] Increasing the influence of shareholders may also empower specific groups of shareholders, who may use their increased influence to advance their own interests at the expense of other shareholders or who may advocate for changes for the benefit of all shareholders.[279] It is therefore unclear what level of shareholder influence would maximize the efficiency and competiveness of registrants, and this optimal level of shareholder influence is likely to vary across registrants. Similarly, research is inconclusive as to what board structure and what combination of director types would maximize the effectiveness of a board, and the ideal board and governance structure likely varies across registrants.[280]

It is also difficult to predict how the various participants involved in director elections may alter their behavior in reaction to any changes in the process by which directors are selected. Shareholders could change their voting behavior along many dimensions—for example, they could become more or less likely to support registrant candidates, more or less likely to support dissident candidates, or more or less likely to support a combination of registrant and dissident candidates without consistently favoring either type of candidate. Director candidates may react by becoming more or less willing to be nominated based on reputational concerns. If the nature of elections were expected to change, registrants and dissidents may change the amount of resources they invest in elections or change their approach to negotiations. Because of the range of actions that any of the involved parties could choose, and the fact that other parties could change their own behavior in reaction to any such actions, the outcome of any changes to the election process is difficult to predict, although we have attempted to assess them to the extent possible in the discussion below.

Finally, it is important to note that proxy contests represent one particular corporate governance mechanism that may substitute for or complement other governance mechanisms. In the case of substitute mechanisms, increasing the usefulness of one mechanism is likely to reduce the use of its substitute. For example, increasing the frequency of buses may reduce the likelihood that commuters drive. In the case of complementary mechanisms, increasing the usefulness of one mechanism is likely to increase the use of complementary mechanisms. For example, improving the quality of roads may increase the likelihood that commuters drive. Similarly, researchers have found that some governance mechanisms are substitutes for or complements to each other.[281] As a result, changes affecting proxy contests may affect the efficacy and use of governance mechanisms that can substitute for or complement such contests. Adjustments in the degree to which different governance mechanisms are used are likely to reflect a new equilibrium in the relationship between shareholders and management.[282] Such changes may either magnify or mitigate

[275] *See, e.g.,* Renee Adams & Daniel Ferreira, *A Theory of Friendly Boards,* 62 J. Fin. 217 (2007) (theoretically exploring the interaction between the monitoring and the advisory role of boards, and how effectiveness in monitoring may or may not be related to effectiveness in advising).

[276] *See, e.g.,* Stuart L. Gillan & Jennifer E. Bethel, *The Impact of the Institutional and Regulatory Environment on Shareholder Voting,* 31 Fin. Manage. 29 (2002); Lucian A. Bebchuk, *The Myth of the Shareholder Franchise,* 93 Va. L. Rev. 675 (2007).

[277] *See, e.g.,* Paul A. Gompers, Joy L. Ishii & Andrew Metrick, *Corporate Governance and Equity Prices,* 118 Q. J. Econ. 107, 128 (2003); Rafael La Porta, Florencio Lopez-de-Silanes, Andrei Shleifer & Robert Vishny, *Investor Protection and Corporate Governance,* 58 J. Fin. Econ. 3, 15 (2000).

[278] *See, e.g.,* Jonathan Karpoff & Edward Rice, *Organizational Form, Share Transferability, and Firm Performance,* 24 J. Fin. Econ. 69 (1989); Philippe Aghion & Jean Tirole, *Formal and Real Authority in Organizations,* 105 J. Polit. Econ. 1 (1997).

[279] *See, e.g.,* Jonathan B. Cohn, Stuart L. Gillan & Jay C. Hartzell, *On Enhancing Shareholder Control: A (Dodd-) Frank Assessment of Proxy Access,* 71 J. Fin. 1623, 1624 (2016), available at *http://onlinelibrary.wiley.com/doi/10.1111/jofi.12402/full* (providing evidence that proxy access, which the authors use as a measure of increased shareholder control, may be relatively more valuable at companies with activist shareholders but relatively less valuable at companies with greater ownership by labor-friendly shareholders).

[280] For a discussion of the inconclusiveness of existing research on what constitutes an optimal board structure, as well as how the observed variation in the structure and function of boards may be an appropriate response to the specific governance and operational issues faced by different companies, *see, e.g.,* Renée B. Adams, Benjamin E. Hermalin & Michael S. Weisbach, *The Role of Boards of Directors in Corporate Governance: a Conceptual Framework and Survey,* 48 J. Econ. Lit. 58 (2010).

[281] *See, e.g.,* Stuart Gillan, Jay Hartzell & Laura Starks, *Tradeoffs in Corporate Governance: Evidence from Board Structures and Charter Provisions,* 1 Q. J. Fin. 667 (''Gillan, Hartzell & Starks Study'') (finding that certain governance mechanisms are substitutes); Martijn Cremers & Vinay Nair, *Governance Mechanisms and Equity Prices,* 60 J. Fin. 2859, 2862 (2005) (finding that certain governance mechanisms are complements).

[282] *See, e.g.,* Gillan, Hartzell & Starks Study (discussing substitute and complementary governance mechanisms and how equilibrium governance choices may be determined given the interrelation among mechanisms).

any potential effects of changes in the nature of proxy contests.

D. Discussion of Economic Effects

The economic benefits and costs of the proposed amendments, including impacts on efficiency, competition and capital formation, are discussed below. For purpose of this economic analysis, we first address the effects of the proposed changes to the proxy process together as a package, including both benefits and costs. In particular, we discuss the anticipated effects of the proposed amendments on shareholder voting and then consider anticipated effects with respect to the costs, outcomes, incidence, and perceived threat of contested elections at registrants other than funds and BDCs. We then discuss the economic effects that can be attributed to specific implementation choices in the proposed amendments, to the extent possible, and the relative benefits and costs of the principal reasonable alternatives to these implementation choices.

1. Effects on Shareholder Voting

By mandating the use of a universal proxy in contested elections, the proposed amendments would allow all shareholders to vote through the proxy system for the combination of director nominees of their choice. This change is expected to increase the efficiency with which shareholders vote in contested elections. In particular, universal proxies would result in benefits in the form of cost savings for shareholders who would otherwise expend time and resources to attend a shareholder meeting or otherwise arrange to vote for a combination of candidates that could not be voted for by proxy. Other shareholders may be newly able to vote for their most preferred candidates. That is, there may be shareholders who would vote for a combination of management and dissident candidates if a universal proxy were available but who do not currently do so because it is not feasible (and in particular cost-effective) to undertake such a vote. Also, with a universal proxy, some shareholders would be able to vote for dissident nominees despite not being solicited by the dissident or receiving the dissident's proxy card because they would be able to vote for those nominees using the registrant's proxy card.

Shareholders voting by proxy are typically restricted to voting only for nominees chosen by one or the other of the parties to the contest. At least some investors have expressed dissatisfaction with these constraints on their ability to vote by proxy.[283] We also note that proxy advisory services have often recommended voting for candidates that have appeared on different proxy cards in contested elections, leading to additional concern among shareholders as to how to cast such votes.[284] Finally, we are aware that registrants and dissidents have creatively (but imperfectly) sought to facilitate vote-splitting in recent years, further demonstrating demand for a generally-applicable solution that would permit split-ticket voting by proxy.[285]

Under the proposed amendments, shareholders who want to vote by proxy for a full complement of directors would no longer be limited to voting only for nominees chosen by the registrant or only for nominees chosen by the dissident.[286] Also, the ability to vote for dissident nominees by proxy would no longer be limited to shareholders solicited by the dissident.[287] Instead, all shareholders could use a universal proxy to vote for the combination of directors of their choice, as they are able to do in person at a shareholder meeting.

Although some shareholders are able to use existing approaches to implement split-ticket votes, such as by attending a shareholder meeting in person, these existing approaches are generally associated with costs beyond the usual costs of voting by proxy. These costs may include the time and expense required to obtain a legal proxy from one's broker (if required) and travel to and attend (or send a representative to attend) a meeting.[288] Even when alternatives besides in-person voting are made available to some shareholders, taking advantage of such accommodations may entail costs. For example, in the case in which a proxy solicitor acting on behalf of a party to the contest arranges for an in-person representative for a large shareholder, this shareholder is likely to spend some incremental time contacting and coordinating with the proxy solicitor. While these costs may be minimal in some cases, any of the incremental time and resources currently expended to implement split-ticket votes would no longer be required in the case of universal proxies, resulting in greater efficiency in vote submission. We do not currently have data regarding how many shareholders implement split-ticket voting, to what extent the different approaches are used, and the degree of incremental costs borne to implement such votes, in order to estimate the potential cost savings. We request comment below on current voting practices, including data about costs to implement split-ticket voting.

We expect that institutional shareholders and large shareholders are relatively more likely than other shareholders to be able to implement a split-ticket vote using one of the existing approaches and would thus be more likely to experience cost savings under the proposed amendments. As discussed above, institutional shareholders hold a majority of the shares in U.S. public companies and are much more likely to vote than retail shareholders.[289] We expect that shareholders with large stakes in the

[283] *See, e.g.,* Rulemaking Petition; Roundtable Transcript, comments of Anne Simpson, Senior Portfolio Manager and Director of Global Governance, CalPERS, at 35–36.

[284] *See, e.g.,* John Wilcox, *Shareholder Nominations of Corporate Directors: Unintended Consequences and the Case for Reform of the U.S. Proxy System,* Shareholder Access to the Corporate Ballot (Lucian Bebchuk ed. 2005).

[285] *See, e.g.,* Richard J. Grossman & J. Russel Denton, *Never Mind Equal Access: Just Let Shareholders ''Split Their Ticket''*, The M&A Lawyer (Jan. 2009) (discussing a contest in which shareholders interested in splitting their votes were instructed to vote on both proxy cards, dating them with the same date, and adding a special notation that neither card was intended to invalidate the other, and noting a concern that such split votes could be challenged in court); Liz Hoffman, *Tessera Proxy's Write-In Option Draws SEC's Eye,* Law360 (May 20, 2013), available at *http://www.law360.com/articles/442878/tessera-proxy-s-write-in-option-draws-sec-s-eye* (discussing a contest in which the registrant included a write-in slot on its proxy card and instructed shareholders interested in splitting their votes to vote on its card and write in the names of dissident nominees, and noting that Commission staff objected to this approach on the basis that it would violate the bona fide nominee rule).

[286] Nominees ''chosen'' by the dissident may include certain registrant nominees. The short slate rule permits a dissident in certain circumstances to solicit votes for some of the registrant's nominees through the use of its proxy card where the dissident is not nominating enough director candidates to gain majority control of the board in the contest, thereby allowing shareholders using the dissident's proxy card to split their vote. However, shareholders voting on the dissident's proxy card would still be limited to voting for those registrant nominees selected by the dissident, rather than any registrant nominee of their choice.

[287] For shareholders not solicited by the dissident, while the registrant's universal proxy card would allow them to support dissident nominees, they would still need to seek out the dissident's proxy statement in the EDGAR system (as directed by the registrant's proxy statement) to obtain information about the dissident nominees.

[288] Shareholders with many different holdings may also face logistical constraints, in that annual meetings for different companies often overlap and it may therefore not be feasible to attend all such meetings in person. These logistical constraints can potentially be overcome at a cost. In particular, while proxy contests are relatively infrequent, to the extent that two registrants subject to proxy contests have meetings on the same date, or a shareholder has other reasons to prefer attending a conflicting meeting in person, shareholders may be able to arrange for a representative to attend one of these meetings on their behalf.

[289] *See infra* Section IV.B.1.

registrant [290] would also generally be more likely to vote than smaller shareholders because of the greater influence they may have on the outcome of the election and their greater economic interest in this outcome. For these same reasons, we expect that large shareholders that prefer to vote a split-ticket would have a particularly strong incentive to find a way to implement such a vote. Institutional and large shareholders may also be more likely to have access to the existing approaches for split-ticket voting. That is, they are more likely than other shareholders to have the resources required to vote in person, and may also be more likely to have access to any accommodations made to facilitate split-ticket voting, as when a party to the contest arranges for an in-person representative to attend a meeting on behalf of a shareholder.

The availability of universal proxies would also expand the voting alternatives of shareholders for whom it would not otherwise be practical or feasible to vote for their preferred combination of candidates. The existing approaches to implementing a split-ticket vote discussed above are likely to be cost prohibitive or unavailable to many shareholders, particularly retail shareholders and small shareholders. That is, shareholders that have a limited economic interest and voting power in the registrant may not have a sufficiently high financial incentive to bear the costs required to attend or send a representative to a meeting. Retail and small shareholders may be unable or unwilling to bear these costs, and may be unlikely to be proactively offered alternative accommodations (such as an in-person representative being arranged by a proxy solicitor). To the extent that such shareholders are interested in splitting their ticket, the availability of universal proxies would enable them to vote for the combination of directors of their choice and thus may result in a greater number of split-ticket votes than under the current system.

In addition, because dissidents are not required to solicit all shareholders, many shareholders might not receive the dissident's proxy card and thus be able to vote for dissident candidates in a substantial fraction of proxy contests.[291] In particular, smaller shareholders, such as those holding fewer than 1,000 shares in the registrant, are less likely to be solicited by dissidents.[292] The proposed requirement that registrants, as well as dissidents, use universal proxies would allow shareholders who are not solicited by dissidents to nonetheless vote for some or all of the dissident nominees through the proxy process, by using the registrant's universal proxy card.

Thus, the proposed amendments would allow shareholders who would not currently find it practical or feasible to vote for their preferred candidates, by using a universal proxy, to split their ticket or support the dissident slate. We expect that retail and small shareholders are more likely than other shareholders to change the votes they would submit upon the availability of universal proxies because they currently have limited access to other means of voting a split-ticket and a lower likelihood of being solicited by dissidents. However, we also note that such shareholders may be less likely to vote in general.[293] For these shareholders, the proposed amendments are not likely to result in direct cost savings, but would allow them to submit votes that better reflect their preferences. The indirect benefits or costs of their expanded voting options depend on whether such changes in voting behavior are widespread enough to change actual or expected election outcomes, and the nature of these changes in outcomes, as discussed below.[294]

There is also a possibility that universal proxies could lead some shareholders to be confused about their voting options and how to properly mark the proxy cards to accurately reflect their choices. This may give rise to minor costs to some shareholders in contested elections, particularly less sophisticated shareholders, if it increases the time required by these shareholders to mark and submit a proxy card. It may also increase the risk that some shareholders submit proxy cards that do not accurately reflect their intentions or that could be invalidated because they are improperly marked. However, we believe that the risk of any such confusion would be mitigated by the presentation and formatting requirements of the proposed amendments, as discussed in Section IV.D.5 below.

2. Potential Effects on Costs of Contested Elections

The proposed amendments may directly impose minor costs on registrants and dissidents that engage in proxy contests, relative to the current costs that these parties bear in proxy contests.[295] The proposed amendments may also have effects on the expected outcomes of contested elections that could result in either a net increase or net decrease in the total costs that either registrants or dissidents incur in contested elections, primarily because of strategic changes in discretionary solicitation expenditures. The extent and direction of such indirect changes in costs incurred are difficult to predict. We also consider the proposal's cost implications in the context of nominal contests, in which the dissidents incur little more than the basic required costs to pursue a contest, which are currently rare but could become more or less frequent under the proposed amendments.

a. Typical Proxy Contests

The total cost borne by a registrant or dissident in a typical proxy contest would generally include solicitation costs, such as basic proxy distribution and postage costs, expenditures on proxy solicitors, attorneys and public relations advisors, and any time spent by the parties or their staff on outreach efforts. The total cost to registrants would also reflect items such as any additional time spent by staff on determining and implementing a strategy in response to the contest and any costs of revising their proxy materials given the proxy contest. The total cost to dissidents would also reflect time spent by the dissident to pursue a contest, the cost to seek nominees and gain their consent to be nominated, and the cost of drafting a preliminary and definitive proxy

[290] *See* Figure 1 and Figure 2 in Section IV.B.2 for the distribution of institutional holders by the size of their stakes in potentially affected registrants for which this data is available.

[291] Based on industry data provided by a proxy services provider for a sample of proxy contests from June 30, 2015 through April 15, 2016, we estimate that there are some shareholders that dissidents do not solicit in approximately 40 percent of contested elections, while all shareholders are solicited by dissidents in the remainder of contested elections. In contests in which fewer than all shareholders were solicited, only those accounts holding a number of shares of the registrant that exceeded a minimum threshold of shares were subject to solicitation by the dissident.

[292] Based on industry data provided by a proxy services provider for a sample of proxy contests from June 30, 2015 through April 15, 2016, in contests in which fewer than all shareholders were solicited, the shareholders to be solicited were chosen based on the size of their shareholdings. Specifically, only those accounts holding a number of shares of the registrant equal to or exceeding a minimum threshold were subject to solicitation by the dissident. The minimum threshold in these cases ranged from 100 to 1 million shares, but was most often between 500 and 1,000 shares.

[293] Retail shareholders vote 28 percent of their shares on average, though their participation rate could be higher in the case of a contested election, because of factors such as increased media coverage, expanded outreach efforts, and greater shareholder interest in the contest. *See supra* Section IV.B.1.

[294] *See infra* Sections IV.D.3 and IV.D.4.

[295] The potential direct cost savings resulting from the proposed amendments for certain shareholders are discussed in Section IV.D.1 *supra.*

statement and undergoing the staff's review and comment process for those filings. These total costs are difficult to estimate because the components of these costs (other than estimated solicitation expenditures) are not specifically required to be disclosed and may vary significantly across contests. However, we note that many of the components of these costs are not likely to be affected by the proposed amendments. In much of the discussion that follows, we focus primarily on solicitation costs because we believe that these costs are most likely to be affected by the proposed amendments.

We first consider the direct cost implications of the proposed amendments. For dissidents that would have engaged in typical proxy contests even in the absence of the proposed amendments, the proposed requirement to solicit shareholders representing at least a majority of the voting power entitled to vote on the election of directors may impose a small incremental cost in some infrequent cases. In most cases, however, we expect that this requirement should not result in a change in costs to dissidents or require any further action on their part. In particular, as noted in Section IV.B.2. above, we estimate that in approximately 97 percent of recent proxy contests the dissident solicited a number of shareholders that exceeded the threshold that would be required under the proposed solicitation requirement.[296] For this reason, we believe that any dissidents who would not otherwise have initiated a contest but may decide to engage in a typical proxy contest as a result of the proposed amendments would also generally not bear any incremental costs as a direct result of the proposed solicitation requirement, though they likely would bear total solicitation costs comparable to those borne in other typical proxy contests (for which the median total solicitation cost was, as discussed above, $250,000 for dissidents initiating contests in 2015).[297] Below, we separately discuss the potential cost implications for nominal proxy contests, which are different from typical proxy contests in that the dissidents incur little more than the minimum required cost to contest an election.

Even in the infrequent cases in which dissidents in a typical proxy contest may currently not solicit shareholders holding a majority of the shares eligible to vote in the registrant, dissidents are likely to solicit shareholders holding a significant fraction of these shares in order to have a chance of winning any board seats.[298] Within a sample of recent proxy contests, we estimate the number of accounts that one would have to solicit in order to meet the proposed solicitation requirement ranges from about 0.1 percent to 10 percent of the outstanding shareholder accounts, with the median number of accounts required equaling about one percent of the total shareholder accounts.[299] Given that even those dissidents that would not currently meet the proposed solicitation requirement have still solicited shareholders representing a large fraction (though less than 50 percent) of the shares eligible to vote, as well as our understanding that the number of accounts required to reach a majority of the shares eligible to vote is generally expected to be a small fraction of the total accounts outstanding, we expect that the incremental cost of the solicitation requirement to a dissident, if any, should be minor relative to the total costs incurred by dissidents in proxy contests.

Specifically, in the infrequent case in which a dissident would otherwise have solicited shareholders representing a substantial fraction, but not a majority, of the shares eligible to vote, we preliminarily estimate that such a dissident would bear an incremental cost of approximately $1,000 if using the least expensive approach[300] to expand solicitation to meet the proposed minimum solicitation requirement.[301] The level of any such incremental cost would be driven by any shortfall in the number of shareholders that would otherwise be solicited compared to the number that would be required to be solicited to meet the proposed majority voting threshold. Factors that may affect this shortfall include the size of the dissident's own voting stake in the registrant and the demographics of the shareholder base, such as whether share ownership is widely dispersed or more concentrated in a given registrant.

In sum, we do not expect the proposed solicitation requirement to impose a large incremental cost burden on dissidents in typical proxy contests in which the dissident engages in substantial solicitation efforts. In the vast majority of cases, we expect dissidents that would have engaged in proxy contests even in the absence of the proposed amendments not to bear any incremental direct costs due to the solicitation requirement. Similarly, for dissidents that newly decide to engage in a typical proxy contest (as opposed to a nominal contest, discussed below) as a result of the proposed amendments, we do not expect the solicitation requirement to change the costs that

[296] *See supra* note 251 and accompanying text.

[297] *See supra* Section IV.B.2.

[298] Based on industry data provided by a proxy services provider for a sample of proxy contests from June 30, 2015 through April 15, 2016, the sole dissident in the sample of 35 contests that solicited less than a majority of the shareholders solicited accounts representing 31.5 percent of the outstanding shares.

[299] Based on industry data provided by a proxy services provider for a sample of proxy contests from June 30, 2015 through April 15, 2016.

[300] Staff assumed that the dissident would use the least expensive approach (*i.e.,* notice and access delivery) to solicit additional accounts given that the dissident would not have chosen to solicit these accounts but for the proposed minimum solicitation requirement. To the extent that dissidents were to use an approach other than the least expensive approach to solicit additional shareholders to meet this requirement, their incremental costs would likely be higher than estimated here. Such approaches may include using full set rather than notice and access delivery, soliciting more than the minimum required number of shareholders, or incurring additional solicitation expenditures on phone calls or other forms of outreach. It is difficult to estimate how much more these approaches would cost than the least expensive approach because of the variety of approaches that could be used and because of the degree of variation in expenses such as postage and printing costs depending on the total size of the dissident's proxy materials.

[301] This estimate was derived by staff based on the NYSE Rule 451 fee schedule and industry data provided by a proxy services provider. In particular, staff based this estimate on the single case out of the 35 contests from June 30, 2015 through April 15, 2016 for which information was provided in which less than a majority of shareholders was solicited by the dissident. The required increase in expenses to solicit a majority of shareholders was estimated based on the number of additional accounts that would have to be solicited and the applicable fees under NYSE Rule 451 and postage costs for notice and access delivery. For the purpose of the nominee coordination fee, staff used information from other proxy contests for which information was provided (specifically focusing on those in which less than all shareholders were solicited) to interpolate the increase in the number of banks or brokers considered ''nominees'' under NYSE Rule 451 that might be involved at the higher solicitation level. The estimated incremental solicitation cost of approximately $1,000 includes nominee coordination fees of $22 for each of the additional nominees expected to be involved, plus basic processing fees, notice and access and preference management fees and postage totaling $1.57 (for suppressed accounts, such as those that have affirmatively consented to electronic delivery) to $1.70 (for other accounts) per additional account to be solicited. Staff assumed that half of the additional accounts to be solicited are suppressed and that none of these accounts requested full set delivery by prior consent or upon receipt of the notice (because such delivery requirements may apply to only a small fraction of accounts and is not expected to significantly affect the overall estimate of costs). Additional notice and access fees of $0.25 per account were assumed to be required for each account that was solicited prior to increasing the level of solicitation because of the use of notice and access delivery for some accounts. Given the number of accounts involved, no additional intermediary unit fees were expected to apply. This estimate does not include printing costs for the notice, for which we do not have relevant data to estimate these costs. We request comment on this estimate and data that could allow staff to obtain a more precise estimate below.

they would expect to bear relative to the costs of any other typical proxy contest. In the infrequent cases in which dissidents may be required to expand their solicitation in order to meet the proposed requirement, our estimate of an incremental cost of approximately $1,000 represents less than one percent of the median total solicitation cost reported in proxy statements by dissidents (which may include expenditures for proxy solicitors, attorneys and public relations advisors as well as the more basic proxy distribution fees and postage costs).[302]

Registrants may also incur minor incremental costs in typical proxy contests as a direct result of the proposed amendments in order to implement the required changes to their proxy cards. For example, under the proposed amendments registrants must list dissident nominees on their proxy cards and provide disclosure about the consequences of voting for a greater or lesser number of nominees than available director positions. In addition, both registrants and dissidents may incur costs to make additional changes to their proxy statements in reaction to the proposed amendments, such as additional disclosures urging shareholders not to support their opponent's candidates using their card and expressing their views as to the importance of a unified, rather than a mixed, board. These costs are expected to be minimal in comparison to the total costs that registrants and dissidents bear in a typical proxy contest.[303]

We next consider indirect effects of the proposed amendments on the costs of proxy contests. For both registrants and dissidents in typical proxy contests, other effects of the proposed amendments have the potential to result in more significant changes in costs than the effects related to revising proxy materials or the proposed solicitation requirement. This is because the greatest potential impact on the cost of proxy contests is likely related to strategic increases or decreases in discretionary solicitation efforts in response to any changes that the proposed amendments may bring about in the likelihood of the different potential outcomes of the contest. Changes in discretionary solicitation efforts may include increases or decreases in expenditures on proxy solicitors or the degree of outreach through phone calls or mailings to convince shareholders to vote for a party's candidates. In particular, while we estimate that the median total solicitation cost for dissidents in 2015 was approximately $250,000, we estimate that the median basic cost of soliciting shareholders, namely the proxy distribution fees and postage costs for the first mailing, was approximately $11,000.[304] The large expenditures on solicitation beyond the basic costs of soliciting shareholders (a median incremental expenditure of over $239,000), demonstrate the potential for substantial increases or decreases in costs if a party were to change their approach to discretionary solicitation activities. However, it is difficult to predict the extent or direction of this potential effect because any changes in discretionary solicitation expenditures are highly dependent on the particular situation and the parties' own views as to how the proposed amendments would affect their likelihood of gaining or retaining seats and the potential impact of solicitation efforts.[305]

For example, registrants that expect that a universal proxy may otherwise result in more dissident nominees being elected may incur additional costs to increase outreach to shareholders in an effort to limit support for dissident nominees. Similarly, dissidents may increase solicitation expenditures in cases where they expect the use of universal proxies and any corresponding increase in split-ticket voting to result in more registrant nominees retaining seats than otherwise expected. At the same time, registrants or dissidents may reduce solicitation expenditures in cases in which they believe that any increased split-ticket voting related to universal proxies would result on average in more support for their own nominees, given that they may therefore be able to achieve the same expected outcome at a lower cost than in the absence of universal proxies. That said, such registrants or dissidents could alternatively decide to increase solicitation expenditures relative to what they would otherwise have spent if they think that they may actually be able to gain or retain more seats than would otherwise have been feasible. We solicit comment below from registrants and dissidents as to whether they anticipate that their solicitation costs would likely increase or decrease under the proposed amendments and why, including specific cost estimates.

b. Nominal Proxy Contests

The proposed amendments may also have implications for nominal contests, in which the dissidents incur little more than the basic required costs to pursue a contest. Despite the fact that there may be a low chance of succeeding in obtaining a board seat if a dissident does not undertake substantial solicitation efforts, such as through full set delivery, use of a proxy solicitor, and other outreach, as they would in a typical proxy contest, dissidents may nevertheless choose to initiate nominal contests to pursue goals other than changes in board composition. Such contests are currently rare[306] but could become more or less attractive as a result of the proposed amendments, as discussed in Section IV.D.4.b. below.

A dissident engaging in a nominal proxy contest currently must bear the cost of drafting a preliminary proxy statement and undergoing the staff's review and comment process for that filing. Under the proposed amendments, such a dissident would also be required to bear the cost of meeting the solicitation requirements of the proposed amendments. We preliminarily estimate that it may cost approximately $6,000 at a median-sized (based on the number of accounts in which its shares are held) registrant using the least expensive approach[307] to meet the proposed minimum solicitation requirements through an intermediary,[308] which is significantly

[302] The median total solicitation cost reported in proxy statements by dissidents in proxy contests in 2014 and 2015 is approximately $250,000, in line with the estimates in a study of such costs over a longer horizon. *See supra* Section IV.B.2.

[303] *See infra* Section V for estimates for purposes of the Paperwork Reduction Act (''PRA'') of the incremental burden that may be required to prepare proxy materials under the proposed amendments.

[304] Our estimate of total solicitation costs is based on costs reported in proxy statements in 2014 and 2015. *See supra* Section IV.B.2. Our estimate of proxy distribution fees and postage costs is based on industry data provided by a proxy services provider for a sample of 35 proxy contests from June 30, 2015 through April 15, 2016, and excludes dissident printing costs (for which we do not have relevant data to estimate these costs).

[305] Effects on strategic discretionary expenditures, whether increases or decreases, are more likely in the case of what would otherwise be close contests. We estimate that approximately 26 percent of proxy contests in 2014 and 2015 were close. *See supra* Section IV.B.2.

[306] Based on staff experience. *See supra* Section IV.B.2.b.

[307] *See supra* note 300.

[308] The median-sized registrant was determined based on the number of beneficial accounts in which shares in the registrant are held. The cost estimate was derived by staff based on the NYSE Rule 451 fee schedule and industry data provided by a proxy services provider. The required cost to meet the proposed solicitation requirement was estimated based on the number of accounts that would have to be solicited and the applicable fees under NYSE Rule 451 and postage costs for notice and access delivery. Specifically, industry data provided by a proxy services provider indicates that there are approximately 4,500 total accounts at the median registrant. Since the shareholder base is likely composed of some large shareholders and many more small shareholders, staff assumed that two percent of these accounts, or a total of 90 accounts, would have to be solicited to reach a majority of the voting power. This assumption is consistent with the average shareholder

less than the total solicitation expenses incurred by a dissident in a typical proxy contest. As noted above in Section IV.B.2, reported proxy solicitation expenses for dissidents in recent contests range from $25,000 to $8 million, with a median of $250,000. These expenses substantially exceed the estimated cost of a nominal contest in part because a dissident in a typical proxy contest would generally incur higher proxy dissemination costs because of the use of full set delivery and the solicitation of a larger fraction of the shareholders entitled to vote, but also because of substantial additional expenditures on solicitation beyond the cost of proxy dissemination, such as the expense to hire a proxy solicitor to perform additional outreach.

The basic required cost to contest an election at a given registrant may also be affected by the dissident's own voting stake in the registrant and the characteristics of the shareholder base, such as whether share ownership is widely dispersed or more concentrated in a given registrant. In particular, these costs may be substantially lower in cases where a dissident can meet the proposed solicitation requirement by disseminating materials on its own, without hiring a proxy services provider or similar intermediary, as in the case of a registrant with a very concentrated shareholder base and majority owners that are known and easily contacted. These costs would be substantially higher at registrants at which the total number of shareholder accounts that would be required to reach a majority of the shares entitled to vote is very high, as at registrants with highly dispersed ownership.

To the extent that the proposed amendments may result in an increased incidence of nominal contests, we expect that registrants that are the subject of such additional contests would bear incremental costs. We expect these costs to be higher than in the case of current nominal contests, for which we believe that the costs borne by registrants are minimal, but significantly lower than in the case of a typical proxy contest. In particular, registrants may revise their proxy materials and increase their solicitation expenditures to explain the appearance of the names of dissident nominees on their proxy cards and urge shareholders not to support the dissident's nominees. However, we do not expect solicitation expenditures to rise as much as they would in the average typical proxy contest because the registrant, in its solicitation efforts, would not be competing with a dissident that is spending significant resources on solicitation. For these reasons, we estimate that the cost borne by a registrant facing a nominal proxy contest may be approximately $25,000, based on the lowest incremental solicitation cost reported by registrants in recent proxy contests.[309]

3. Potential Effects on Outcomes of Contested Elections

By mandating the use of a universal proxy in contested elections, the proposed amendments would allow every shareholder to vote by proxy for the combination of directors of their choice. In addition to reducing costs for certain shareholders who would submit split ticket votes even in the absence of universal proxies, universal proxies may result in additional shareholders submitting split-ticket votes or, for those not solicited by dissidents, supporting the dissident slate or some dissident nominees. Such changes in voting behavior could be significant enough to affect election outcomes in the contests that would have occurred even in the absence of the proposed amendments, as well as to change the incentive to initiate contests.[310] In particular, either more registrant nominees or more dissident nominees might be elected than under the baseline, where vote splitting is harder to achieve and some shareholders do not receive a proxy card that includes the dissident slate. Any resulting changes in board composition or changes in control of the board may impose costs and yield benefits for shareholders, registrants, and dissidents. However, these effects are uncertain because it is difficult to predict the extent or direction of any changes in voting behavior as a result of the proposed amendments and to evaluate whether any resulting changes in the members of the board will lead to more or less effective board oversight.

There may be elections in which universal proxies would result in changes to the percentage of the vote obtained by each director candidate, but in which the changes in vote totals would not be sufficient to change the ultimate election results. We preliminarily believe that this would be the likely outcome for the majority of contested elections that would have taken place in the absence of the proposed amendments. We estimate that approximately three-quarters of recent contests were not very close and would require shareholders holding significant voting power (greater than five percent) to change their voting behavior in order to lead to a different election result.[311] We also note that the voting power represented by shareholders that may potentially change their voting behavior is limited due to the fact that some shareholders, particularly large shareholders, are currently able to send representatives to shareholder meetings or use other mechanisms to implement split-ticket votes when desired. We do not expect the votes submitted by these shareholders to change as a result of the proposed amendments. The extent to which other shareholders are interested in splitting their tickets or, for those not solicited by dissidents, in voting for the dissident slate, is unclear, particularly as the option has not generally been available to them (without additional cost) under the current rules.[312] We solicit comment on this point below.

concentration at the seven registrants with a total number of accounts between 3,000 and 5,000 that are included in the sample of contests for which we were provided industry data by a proxy services provider. Staff also assumed that the number of brokers and banks involved for the purpose of determination of the nominee coordination fee is equal to 45. The estimated solicitation cost of approximately $6,000 includes intermediary unit fees, which apply with a minimum of $5,000, plus nominee coordination fees of $22 per bank or broker considered a ''nominee'' under NYSE Rule 451, plus basic processing fees, notice and access and preference management fees and postage totaling $1.57 (for suppressed accounts, such as those that have affirmatively consented to electronic delivery) to $1.70 (for other accounts) per account. Staff assumed that half of the accounts in question are suppressed and that none of these accounts requested full set delivery by prior consent or upon receipt of the notice (because such delivery requirements may apply to only a small fraction of accounts and is not expected to significantly affect the overall estimate of costs). This estimate does not include printing costs for the notice, for which we do not have relevant data to estimate these costs. We request comment on this estimate and data that could allow staff to obtain a more precise estimate below.

[309] *See supra* Section IV.B.2. We request comment on this estimate below.

[310] The potential incidence of additional contests that would not have occurred in the absence of the proposed amendments is discussed in Section IV.D.4 *infra.*

[311] Based on staff review of contested elections initiated in 2014 and 2015, votes representing greater than 5 percent of the total outstanding voting power would have to change in order to change the result in about 74 percent of the elections. Within that 74 percent, almost two-thirds of the elections would have required a change in votes representing greater than 20 percent of the outstanding voting power to result in a change in the election outcome.

[312] For example, it has been asserted that retail shareholders, when they vote, tend to support management. *See, e.g.,* Neil Stewart, *Retail Shareholders: Looking out for the Little Guy,* IR Magazine (May 15, 2012), available at *http://www.irmagazine.com/articles/shareholder-targeting-id/18761/retail-shareholders-looking-out-little-guy/* (stating that ''as a rule, retail investors tend to support management''); Mary Ann Cloyd, *How Well Do You Know Your Shareholders?,* Harvard Law School Forum on Corporate Governance and Financial Regulation Blog, June 18, 2013, available at *https://corpgov.law.harvard.edu/2013/06/18/how-well-do-you-know-your-*

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However, there may be contests in which universal proxies, by allowing additional shareholders to vote split tickets or vote the dissident slate, affect which director nominees are elected. In general, any changes in voting behavior due to universal proxies are most likely to affect election outcomes in those contests that would otherwise have been very close. In close contests, changes in even a small number of votes may affect which director nominees are elected. We estimate that in about one-fourth of recent election contests, the director elected with the fewest votes received no more than 11.5 percent more votes than the non-elected nominee with the most votes, and that the vote differential in these cases represented no more than five percent of the total outstanding voting power.[313] In such cases, universal proxies may be more likely to affect the election outcome. We note that close contests may be more likely to occur at registrants with cumulative voting.[314]

A recent study uses an alternative approach to estimate the percentage of contests in which universal proxies may be more likely to affect the election outcome.[315] This study estimates that it is possible that universal proxies would have led to different election outcomes in up to 22 percent of cases in a sample of proxy contests from 2008 through 2015.[316] This statistic is comparable to our estimate that close contests may represent approximately one-fourth of recent contests. However, we note that the study makes several assumptions in arriving at this statistic, and it is unclear whether these assumptions can be relied upon.[317]

To the extent that changes in voting behavior lead to different election outcomes, it is not clear how this would affect the composition of directors elected to the board. There may be either more registrant nominees or more dissident nominees elected to boards, or there may be no change, on average, in the types of nominees elected.[318] Also, there may be either fewer changes in control or more changes in control, or there may be the same frequency of changes in control as under the baseline. The impact of forcing shareholders to choose between one proxy card or the other in an election contest depends on the dynamics of the particular contest. On the one hand, where dissatisfaction with current management is greater, shareholders who would otherwise prefer to split their vote may be more likely under the current proxy system to utilize the dissident's card and forego the opportunity to vote for some registrant nominees, to send the message that board change is needed. This choice will no longer be necessary under the proposed amendments, which may lead to a greater likelihood that one or more registrant nominees retain their seats. On the other hand, there also may be cases in which the registrant nominees would, in the absence of the proposed amendments, have retained all of their seats. Currently, we observe that registrant nominees retain all of the seats up for election in half of the contests that proceed to a vote.[319] In such cases, an increase in split-ticket voting, as well as any incremental votes for the full dissident slate by shareholders not solicited by the dissident, may increase the likelihood of dissident nominees gaining one or more of those seats.

Given some of these possible dynamics, we preliminarily believe that the election of mixed boards, or boards including registrant as well as dissident nominees, would be somewhat more likely under the proposed amendments than under the current proxy system. We estimate that approximately 40 percent of recent contests that proceeded to a vote resulted in a mixed board being elected.[320] However, we cannot predict whether any increase in mixed boards would be the result of one or more registrant nominees retaining seats when a board composed of only dissident nominees would otherwise have been elected or one or more dissident nominees gaining seats when all registrant nominees would have retained their seats, nor can we predict how frequently such a mixed board would occur compared with under the current system.[321] Also, we note that it is not necessarily the case that any such changes in outcomes would more accurately reflect shareholder preferences, even though these outcomes may be the product of removing constraints on the combination of nominees that shareholders can vote for, because of limitations in the way that voting rules can communicate preferences.[322]

shareholders/ (stating that ''retail shareholders support management's voting recommendations at high rates''). In contrast, a recent survey of 801 retail investors found that the majority of these retail investors believe activists add long-term value, and may thus be more likely to support activists than generally thought. *See* Brunswick Group, *A look at Retail Investors' Views of Shareholder Activism and Why it Matters* (July 2015), available at *https://www.brunswickgroup.com/media/597919/Brunswick-Group-Retail-Investors-Views-of-Shareholder-Activism-Summary-of-Results.pdf*.

[313] *See supra* Section IV.B.2.c.

[314] Under cumulative voting, each shareholder is generally allowed to cast as many votes as there are nominees and may allocate more than one vote to certain nominees, which may lead to a more concentrated distribution of votes. In contrast, close contests may be relatively less likely at registrants with majority voting standards that do not revert to a plurality standard in the case of a contested election, or with high levels of incumbent board ownership. We estimate that approximately 5 percent of registrants have cumulative voting, approximately 7 percent of registrants have majority voting standards that do not revert to a plurality standard in a proxy contest, and approximately 8 percent of registrants have incumbent directors who together own a majority of the outstanding shares. *See supra* Section IV.B.1.

[315] *See* Hirst study.

[316] *See* Hirst study, at 48 (finding that 17 out of 77 proxy contests examined may have had outcomes that were distorted as a result of barriers to split-ticket voting).

[317] For example, the estimates in this study are based on an assumption that facilitating split-ticket voting through the availability of universal proxies could only result in changes in votes that were otherwise marked as ''withheld'' from a candidate, while votes ''for'' any candidate would be assumed not to change. Also, the study assumes that the degree of increase in ''for'' votes for any given candidate upon facilitating split-ticket voting would be limited to the number of votes withheld from a single opposing candidate, while votes withheld from a different opposing candidate would be assumed not to switch to be in favor of this candidate. *See* Hirst study, at 35 n.96, 39 n. 105. We are unable to test the reliability of these assumptions because we do not have data that would allow us to predict how voting behavior might change with the availability of a universal proxy.

[318] One study finds that universal proxies are unlikely to overwhelmingly favor one side over the other, in that they may result in dissident nominees being elected in place of management nominees and management nominees being elected in place of dissident nominees at similar rates. *See* Hirst study. However, this conclusion is based on several critical assumptions about how shareholder behavior may change upon the availability of universal proxy, and we are unable to test the reliability of these assumptions. *See supra* note 317.

[319] *See supra* Section IV.B.2.c.

[320] *Id.*

[321] One study questions whether universal proxies would result in a substantial increase in mixed board outcomes, based on an analysis indicating that mixed board outcomes could increase by no more than approximately three percent of the contests studied. *See* Hirst study. However, this analysis and conclusion is based on several critical assumptions about how shareholder behavior may change upon the availability of universal proxies, and we are unable to test the reliability of these assumptions. *See supra* note 317.

[322] For example, consider a registrant with 100 voting shareholders, three director seats up for election, and a dissident with two nominees. Assume that 54 of the shareholders prefer to elect the dissident nominees but are indifferent about which registrant nominee retains the third seat. On a universal proxy, each of these shareholders therefore votes for one registrant nominee, with equal probability across the three registrant nominees. The remaining 46 prefer the full registrant slate. In this case, with a universal proxy, 54 votes would be earned by each of the dissident nominees, but 64 votes (46 plus one-third of 54 votes) would be earned by each of the registrant nominees, leading to the registrant slate winning the election even though a majority of shareholders prefer that the dissidents gain two seats. For further discussion of the limitations of voting rules, *see, e.g.,* Kenneth Arrow, *Social Choice and Individual Values* (1st ed. 1951).

Universal proxies may therefore result in either an increase or decrease in changes in control of a board, and in either dissidents or management winning more seats on the board, or a change in voting percentages without a change in the board composition. We expect that dissidents and registrants would take these potential impacts into consideration in their approach to potential proxy contests. For example, as discussed in more detail in the following section, if the parties to a contest anticipate that changes in voting behavior associated with universal proxies may change the number of seats that they expect to win, these expectations may affect the likelihood that they enter into a settlement agreement that results in changes to the board or other concessions. Such changes to board composition and concessions may either enhance or reduce, or have no significant effect on, the efficiency and the competitiveness of registrants.

It is also possible that parties would take measures to reduce the likelihood of changes in election outcomes. For example, proxy statements and other related communications could include additional disclosures intended to deter shareholders from voting split-tickets, such as emphasizing the importance of a unified board and clarifying whether some or all of one party's nominees might not agree to serve if their party does not hold a majority of board seats. Such disclosures might reduce the likelihood of split-ticket voting and limit any potential increase in mixed boards. Another potential tactical response may involve the adoption by registrants of additional defenses to shareholder interventions. For example, registrants might adopt director qualification bylaws or might limit the indemnification or committee membership of dissident-nominated directors.[323] Such changes could limit the likelihood of dissident nominees being elected or limit their impact if they are elected. Similarly, if dissidents anticipate that the proposed amendments could result in fewer dissident nominees being elected, they may choose to rely more heavily on other types of interventions, such as soliciting consents to replace some board members with their own nominees at a special meeting. Also, dissidents interested in minority representation may nonetheless choose to run longer slates of candidates, to the extent it could increase the likelihood that at least some of their nominees are elected.

While the measures discussed above would serve to blunt the effect of the proposed amendments on election outcomes, the effect of other potential responses may serve to magnify these effects. For example, the parties to a contested election may change what they spend on solicitation. Some parties may increase these expenditures in order to further capitalize on an advantage that they anticipate the proposed amendments would give them, or to mitigate a disadvantage they perceive. If so, that may result in a greater likelihood of the parties' candidates being selected.

The composition of boards may also be affected by changes in the set of potential nominees that may result from effects that the proposed amendments could have on the incentives of directors. As discussed above, reputational concerns may be an important consideration for directors and potential directors, and research has found that proxy contests may have an adverse effect on a director's reputation.[324] For this reason, some potential directors may be relatively less willing to be nominated if they believe that universal proxies would reduce the likelihood that they are elected to a seat or retain their seat on a board. While we do not have specific data that suggests the proposed amendments would result in an increase in the reluctance of directors to serve, and it is unclear whether any such reluctance would be more likely to affect more qualified or less qualified candidates, any incremental increase in the reluctance of directors to serve may affect the ability of registrants to recruit individuals with the different skill sets needed to compose an effective board.

Overall, the proposed amendments may have some effect on the composition or control of boards. The effects of any such changes on board effectiveness or on registrant performance are difficult to predict. On the one hand, if more dissident nominees are elected or dissidents are more likely to gain control, it could result in greater efficiency and competitiveness to the extent dissident-nominated directors may be more effective monitors.[325] On the other hand, if more registrant nominees retain their seats or are more likely to retain control, the board may be better able to focus on long-term value creation, because a lower risk of board turnover may reduce the risk that directors unduly focus on short-term metrics.[326] Also, a lower chance of changes in control may reduce the risk that expensive change in control provisions in debt covenants and other material contracts and agreements are triggered.[327] Universal proxies may lead to more mixed boards with directors from both parties than under the current proxy system, but it is unclear whether such boards would be more or less effective than more homogenous boards. Mixed boards may increase the effectiveness of boards, such as through a reduction of ''groupthink'' and benefits stemming from inclusion of directors with diverse backgrounds,[328] particularly because shareholders voting on universal proxies would have the ability to vote for the combination of directors that they believe provides the best mix of backgrounds given the specific circumstances of the registrant.

[323] *See, e.g.,* J.W. Verret, *Defending Against Shareholder Proxy Access: Delaware's Future Reviewing Company Defenses in the Era of Dodd-Frank,* 36 J. Corp. Law 391, 404–06 (2011).

[324] *See supra* Section IV.B.1.d.

[325] *See, e.g.,* Ian Gow, Sa-Pyung Sean Shin & Suraj Srinivasan, *Activist Directors: Determinants and Consequences,* Harv. Bus. Sch. Working Paper No. 14–120 (June 2014), available at *http://www.hbs.edu/faculty/Pages/item.aspx?num=47599* (finding that activist interventions that result in new directors being appointed to the board are associated with significant strategic and operational actions by firms, as well as with positive stock reactions and improved operating performance).

[326] *See, e.g.,* Martijn Cremers, Lubomir P. Litov & Simone M. Sepe, *Staggered Boards and Long-Term Firm Value, Revisited,* working paper (Mar. 14, 2016), available at SSRN: *http://ssrn.com/abstract=2364165* (providing evidence suggesting that a greater likelihood of longer director tenure can serve as a longer-term commitment device with positive effects on longer-term value creation).

[327] For example, one study found in its sample of debt issues that over half of the debt issued in 2012 contained change in control covenants that gave bondholders an option to require the issuer to offer to purchase all of the bonds (typically at 101 percent of their par value) if, at any time, the majority of the board of directors ceased to be those who were directors at the time of issuance or those whose election was approved by a majority of the continuing directors. *See* Frederick Bereskin & Helen Bowers, *Poison Puts: Corporate Governance Structure or Mechanism for Shifting Risk?,* working paper (Sept. 8, 2015), available at *http://irrcinstitute.org/wp-content/uploads/2015/09/FINAL-Poison-Puts-Research-Sept-2015.pdf.* Triggering such covenants, often referred to as ''proxy puts,'' can result in companies repurchasing their own debt at a loss as well as having to incur expenses to refinance with a new debt issue. Such covenants are more binding when they are of the ''dead hand'' variety, which prevents the board from approving dissident-nominated directors in order to avoid triggering the covenant. *See* F. William Reindel, *Dead Hand Proxy Puts—What You Need To Know,* Harvard Law School Forum on Corporate Governance and Financial Regulation Blog, June 10, 2015, available at *https://corpgov.law.harvard.edu/2015/06/10/dead-hand-proxy-puts-what-you-need-to-know/.*

[328] *See, e.g.,* Jeffrey Coles, Naveen Daniel & Lalitha Naveen, *Board Groupthink,* working paper (2015), available at *https://editorialexpress.com/cgi-bin/conference/download.cgi?db_name=AFA2016&paper_id=1137;* David Carter, Betty Simkins & Gary Simpson, *Corporate Governance, Board Diversity, and Firm Value,* 38 Fin. Rev. 33 (2003).

However, mixed boards may also lead to more frequent internal conflicts and result in less efficient decision-making within boards.[329]

4. Potential Effects on Incidence and Threat of Contested Elections

As discussed in Sections IV.D.2 and IV.D.3 above, the effects of the proposed amendments on the outcomes and costs to registrants and dissidents of contested elections are uncertain, but could be significant. In this section, we consider how any such effects of the proposed amendments may change the incentives of dissidents to initiate proxy contests and the manner in which registrants react to the possibility of a contested election (the perceived ''threat'' of a contest), even in the absence of a contest.

We first consider the incidence and perceived threat of typical proxy contests, in which the dissident expends significant resources on solicitation. Then we consider the potential incidence or perceived threat of nominal contests in which dissidents, taking advantage of the proposed mandatory use of universal proxies, may engage in a proxy contest in which they invest significantly fewer resources than in a typical proxy contest.[330] Any changes in the incidence of contested elections of these different types, or, even in the absence of a contest, in managerial decision-making or the relationship between shareholders and management as a result of the threat of such contests, may result in costs and benefits for shareholders, registrants, and dissidents. However, any such effects are uncertain because the extent and direction of the effects of the proposed amendments on the outcomes and costs of contested elections are unclear, because it is difficult to predict how different parties will respond to such effects, and because it is difficult to evaluate whether changes in the incidence or perceived threat of contests would have positive or negative effects on board or registrant performance.

a. Typical proxy contests

Effects Related to Anticipated Changes In Outcomes

Any effects on the expected outcomes of typical proxy contests may affect the incidence of such contests as well as the likelihood that a registrant makes changes (whether in board composition or with respect to other decisions) even in the absence of actual contests. The likely effects of universal proxies on the outcome of a typical contest depend on the dynamics of the particular contest. Thus, it is not clear whether, on average, the proposed amendments would increase or decrease the likelihood of changes in control or the number of board seats won by either party.

On the one hand, a dissident who expects to gain more seats under the proposed amendments than under the baseline may have an increased incentive to initiate a typical proxy contest. This would particularly be the case for a dissident that expects a greater likelihood of gaining control of the board, and for whom majority control of the board would be required to institute the changes the dissident desires. On the other hand, a dissident who expects, under the proposed amendments, to gain fewer seats or face a lower likelihood of gaining control than under the baseline may have a decreased incentive to initiate a typical contest.

If, under the proposed amendments, a registrant is expected to face a higher risk of losing seats or control of the board to dissident nominees, it is likely that a potential dissident could exercise greater influence over that registrant. Conversely, it is likely that the influence of potential dissidents would be reduced where a lower risk of losing seats or control to dissident nominees is expected under the proposed amendments. These changes in influence may derive from the outcomes of election contests or from negotiations with registrants in the course of, or in the absence of, a contest. In particular, registrants facing a greater threat of contests or a higher chance of losing seats (or control) if a contest were initiated may be more likely to enter into a settlement agreement with the dissident and may also be more likely to concede at earlier stages of engagement or to make changes in response to alternative interventions (such as ''vote no'' campaigns).[331] Registrants facing a reduced threat of contests or a lower chance of losing seats (or control) if a contest were initiated may be less likely to enter into settlement agreements, to engage in negotiations at earlier stages, or to make changes in response to alternative interventions.

Thus, it is likely that any changes in expectations regarding the outcome of a potential contest would affect the degree of a dissident's influence relative to that of a registrant's incumbent board and management. It is difficult to generalize about the effects of the proposed amendments as they are very likely to depend on the dynamics of a particular contest (or potential contest). Also, it is not clear whether the actual incidence of contested elections would increase or decrease, because any change in a dissident's incentive to initiate contests may be accompanied by a change in the likelihood that a registrant makes earlier concessions to prevent a disagreement from proceeding to the stage of a proxy contest.

Effects Related to Anticipated Changes in Costs

While it is unclear whether the proposed amendments are likely to change the expected costs of typical proxy contests to registrants and dissidents, any such changes in the expected costs may also affect the incidence and perceived threat of such contests. In particular, a dissident that expects to achieve a similar outcome at a lower cost may have a greater incentive to initiate a typical proxy contest.[332] Registrants that expect dissidents to face lower costs, or those registrants that expect to bear additional costs in the form of increased solicitation expenditures in a contested election, may have greater incentive to make concessions. In contrast, a

[329] *See, e.g.,* Anup Agrawal & Mark Chen, *Boardroom Brawls: An Empirical Analysis of Disputes Involving Directors,* working paper (2011), available at *http://ssrn.com/abstract=1362143* (studying boardroom disputes that are disclosed upon directors resigning or declining to stand for re-election and finding that directors who are likely to be more independent of management are more likely to be involved in the dispute).

[330] We also note that there may be effects on the incidence and threat of ''late-breaking'' proxy contests, or contests initiated close to the meeting date, because of the notice requirement and the proxy statement filing deadline prescribed by the proposed amendments. These timing requirements and their potential effects are discussed in more detail in Section IV.D.5 *infra.*

[331] *See e.g.,* Roundtable Transcript, comment of Michelle Lowry, Professor, Drexel University at 60 and Lisa M. Fairfax, Professor, George Washington University Law School, at 48 (noting that universal proxies could facilitate settlements with or accommodations to dissidents before a contest arose).

[332] It is possible that a significant reduction in the average cost to dissidents in typical proxy contests could have effects that reduce the incentive to initiate some contests. In particular, some studies have found that a high required cost of proxy contests may serve as a credible signal to other shareholders that the value that the dissident's slate of directors can bring to the registrant is high, or else the dissident would not be bearing the cost of a proxy contest. In an environment in which the average cost of a typical proxy contest is very low, the ability of dissidents to get support for their nominees may be decreased, as it may be more difficult and potentially more costly than otherwise for a dissident whose contest has strong merit to differentiate their contest from less worthy contests. *See, e.g.,* John Pound, *Proxy contests and the Efficiency of Shareholder Oversight,* 20 J. Fin. Econ. 237 (1988); Utpal Bhattacharya, *Communication Costs, Information Acquisition, and Voting Decisions in Proxy Contests,* 10 Rev. Fin. Stud. 1065 (1997).

dissident that expects to incur additional solicitation expenses to achieve the same outcome may have a lower incentive to initiate a typical proxy contest, while registrants that expect dissidents to face higher costs, or registrants that expect to face lower costs in a contested election, may have a lower incentive to make concessions.

Differential Effects Across Registrants

To the extent that the incidence and perceived threat of typical proxy contests may change, certain registrants may be affected more than others. For example, relatively smaller to midsize registrants may be more affected because they are currently the most likely to be involved in proxy contests.[333] Any marginal changes may therefore have the greatest impact on this group of registrants. However, more significant changes in the nature of proxy contests could also make it more attractive to target types of registrants that were infrequently the subject of proxy contests in the past. For example, to the extent that large registrants may currently be less likely to be targeted because of the greater resources they can expend to counter a dissident's solicitation efforts, a significant decrease in dissidents' costs or a large increase in their likelihood of success could lead to a higher threat or incidence of contests at such registrants. The governance structures of registrants are also likely to play a role in the impact of the proposed amendments. On the one hand, registrants with governance characteristics that may increase the potential impact of proxy contests, such as cumulative voting, may be more affected than others.[334] On the other hand, registrants with governance characteristics that make them more difficult to target with certain kinds of election contests, such as those with high insider control, may be less affected by the proposed amendments.[335]

b. Nominal Proxy Contests

The proposed amendments may also affect the incidence or perceived threat of nominal proxy contests, in which the dissidents incur little more than the basic costs required to engage in a contest and which are currently rare.[336] The nature of nominal proxy contests may be affected by the proposed amendments in two key ways. First, the proposed solicitation requirement may increase the costs to dissidents of pursuing such contests. Dissidents in nominal contests would have to bear the cost required to draft a proxy statement and undergo staff review and comment process for that filing, as in the case of current nominal contests. However, under the proposal, such dissidents would also have to bear the costs required to meet the proposed solicitation requirement. We estimate that meeting the proposed solicitation requirement would cost approximately $6,000 at the median-sized (based on the number of accounts in which its shares are held) registrant, though this cost could be lower in cases in which the services of an intermediary are not required to meet the solicitation requirement (as in the case of registrants with highly concentrated ownership) or higher at registrants with a more dispersed shareholder base.[337] As discussed above, while this required solicitation cost would be greater than the expenditure currently required in a nominal contest, the costs would remain substantially lower than the solicitation costs dissidents bear in typical proxy contests.[338]

Second, requiring that registrants use universal proxies would, in practice, allow dissidents in nominal contests to put the names of their director candidates in front of all shareholders, via the registrant's proxy card, without additional expense. This change could somewhat increase the likelihood that a dissident in a nominal contest succeeds in gaining seats for their nominees, though, as in the case of current nominal contests, dissidents may have a very limited chance of succeeding in gaining seats if they do not engage in meaningful independent soliciting efforts. Dissidents engaging in a nominal contest would not be required to meet the eligibility criteria that apply to other alternatives that would allow dissidents to include some form of information on the registrant's proxy card, such as the requirements of a proxy access bylaw, where available. Dissidents may therefore consider engaging in a nominal contest when they would not qualify to use alternatives such as proxy access or when these alternatives are not available. However, the information included in the registrant's proxy materials would likely be more limited in the case of a nominal contest (just a list of names) than these other alternatives.

Based on staff experience, we expect that a dissident that solicits holders that represent at least a majority of voting power and files a preliminary and definitive proxy statement, without engaging in any other soliciting efforts, would generally have a very limited chance of having any of its nominees elected to the board despite their names being included on the registrant proxy card. The likelihood that a nominal contest results in dissident nominees winning seats may depend on many factors including the identity of dissident's nominees, their backgrounds and name recognition, the shareholders' level of dissatisfaction with the registrant, and the efforts of the registrant to dissuade shareholders from supporting dissidents' nominees.[339] In general, we expect that engaging in a nominal contest would not be an attractive alternative for most potential dissidents that are truly interested in gaining board representation,[340] particularly if other alternatives are feasible.[341]

Even if the chance of obtaining board representation through a nominal contest may be low, dissidents may be interested in other possible effects of such contests. In particular, introducing the names of alternative candidates onto

[333] For example, staff estimates that only four of the 72 registrants involved in proxy contests in 2014 and 2015 were in the S&P 500 index. *See supra* Section IV.B.2.a.

[334] *See supra* note 228.

[335] *See supra* note 231.

[336] *See supra* note 306.

[337] *See supra* Section IV.D.2.b.

[338] *Id.*

[339] While the registrant's universal proxy card would permit a vote for dissident nominees, its proxy statement can and likely would include disclosure arguing against such a vote. If the dissident does not counter with positive information about its nominees disseminated in a meaningful way to a significant percentage of shareholders, we expect that the dissident's odds of success in the solicitation would be low.

[340] We note that the Commission's 2007 amendments to the proxy rules allowing notice and access delivery of proxy statements decreased the minimum cost at which a proxy contest could be conducted through potentially reduced mailing costs, but did not seem to cause an increase in contested elections, which may be evidence of the importance of full set delivery and other solicitation expenditures in gathering support for dissident nominees. *See, e.g.,* Fabio Saccone, *E-Proxy Reform, Activism, and the Decline in Retail Shareholder Voting,* The Conference Board Director Notes Working Paper No. DN–021 (Dec. 26, 2010), available at *http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1731362.* For details on the 2007 amendments to the proxy rules, *see Shareholder Choice Regarding Proxy Materials,* Release No. 34–56135 (July 26, 2007) [72 FR 42222 (Aug. 1, 2007)].

[341] These alternatives may include a typical proxy contest (with additional solicitation expenditures but also, potentially, with a higher chance of success) or use of a proxy access bylaw (if available and if the dissident is eligible to use proxy access). We are unaware of any cases in which such bylaws have been used to nominate directors to date. However, most proxy access bylaws would require a registrant to include information about the dissident nominees and a supporting statement from the dissident in its proxy materials and would not require the dissident to bear the costs and meet the requirements described above. That said, it is possible that dissidents interested in board representation but for whom additional expenditures are not feasible or justified, and for whom proxy access is unavailable, may consider a nominal proxy contest.

the registrant's proxy card may attract attention to the dissident and its agenda as shareholders, other market participants, proxy advisory services, analysts and journalists seek to understand why these candidates have been put forth and whether they deserve consideration. For example, shareholders who see the names may look up the dissident's proxy materials online to learn more about the candidates and why they are being nominated. Such attention could be used by the dissident to publicize a desired change or a particular issue,[342] or to encourage management to engage with the dissident. However, it is unclear whether the inclusion of dissident nominees on the registrant's proxy card would significantly increase the publicity surrounding a nominal proxy contest.

It is difficult to say whether and to what extent the possibility of such publicity would lead dissidents to more frequently initiate nominal contests, and similarly, whether the ability of dissidents to run such contests would influence the incentives of management to pursue changes in response to such dissidents. Preliminarily, we believe the likelihood of a significant increase in nominal contests would be mitigated by the new costs associated with the proposed solicitation requirements and the current availability to dissidents of other (potentially lower-cost) routes to obtaining publicity.[343] Also, while nominal contests are currently rare, it is also possible that their incidence could decline further under the proposed amendments given the new costs imposed on such contests. In particular, dissidents that would otherwise pursue nominal contests might consider alternatives that would not trigger the proposed solicitation requirement, such as an exempt solicitation, or could choose not to take any such actions due to the higher costs imposed on nominal contests by the proposed amendments.

c. Effects of Any Changes in Incidence or Threat of Proxy Contests

Overall, it is unclear whether the proposed amendments would result in an increase or decrease in the incidence or perceived threat of proxy contests, and thus a change in the level of engagement with and the influence of dissidents. However, to the extent that any of these factors is significantly affected, we cannot rule out the possibility that there may be significant effects on the efficiency and competitiveness of registrants. In particular, a change in the incidence or perceived threat of proxy contests either could result in more effective boards and improved registrant performance, or could interfere with the working of boards and managerial decision-making.

There is some evidence that proxy contests may be beneficial to shareholders. For example, studies have found proxy contests to be associated with positive share price reactions.[344] In this vein, some observers have argued that the low incidence of proxy contests is due to collective action problems related to the high costs of proxy contests [345] and that a higher rate of proxy contests may be optimal.[346] Any increase in engagement between management, dissidents, and shareholders that may result because of changes in the threat of proxy contests, such as discussions at earlier stages of a campaign or reactions to other types of shareholder interventions, could similarly be beneficial. Such engagement may improve the effectiveness of boards, may lead to value-enhancing changes, and may perhaps be a more efficient means to achieve such changes than expensive proxy contests. For example, one study found that an increased likelihood of being targeted with a proxy contest (even if an actual proxy contest does not materialize) is associated with changes in corporate policies that are followed by improved operating performance.[347] In these ways, an increase in the incidence or perceived threat of proxy contests could represent a valuable disciplinary force for some boards.

Conversely, an increase in the incidence and perceived threat of contests could also have a negative impact on the efficiency and competitiveness of registrants. For example, studies have found that proxy contests in which dissidents win one or more seats but there is no change in the incumbent management team and the registrant is not acquired are associated with underperformance in the years after the contest.[348] These results are consistent with the idea that conflicts in the boardroom may have detrimental effects for shareholders. An increase in the perceived threat of proxy contests or in engagement with dissidents could also have negative implications. For example, some studies have found that boards that face a lower threat of being replaced because of poor short-term results may be better able to focus on long-term value creation.[349] Studies have also found that increased dissident influence may be detrimental to the extent that managers make concessions or policy changes that are value-decreasing in order to deter activists.[350] Thus, in some cases, an increase in the incidence or perceived threat of proxy contests could represent a costly distraction for boards and corporate officers. It is also possible that any increased incentive for companies to stay or go private rather than bear the threat of proxy contests could negatively affect capital formation.[351]

[342] While the shareholder proposal process may be used to raise some such concerns, and would allow these concerns to be expressed more directly in the registrant's proxy statement, such proposals would also need to meet the requirements of Rule 14a–8. For example, proposals on certain topics, such as those pertaining to ordinary business matters, may be properly excluded by registrants from their proxy materials. *See* 17 CFR 240.Rule 14a–8(i)(7).

[343] For example, for a much lower cost, a dissident could send a letter to the board detailing its desired changes and file it as an attachment to a voluntary or required Schedule 13D filing, making it available to the public (though, unlike a registrant's universal proxy card, it would not be disseminated to shareholders).

[344] *See, e.g.,* Yair Listokin, *Corporate voting versus market price setting,* 11 Am. L. & Econ. Rev. 608 (2009) (finding that, in a sample of proxy contests, close dissident victories were related to positive stock price impacts, while close management victories were related to negative stock price impacts); Mulherin & Poulsen Study, at 307 (finding that their sample of proxy contests was associated with shareholder value increases, particularly when the contests led to management turnover or acquisitions). *See also* Matthew Denes, Jonathan M. Karpoff & Victoria McWilliams, *Thirty Years of Shareholder Activism: A Survey of Empirical Research,* J. Corp. Fin. (forthcoming 2016), available at *http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2608085.*

[345] That is, when a small group of shareholders must bear all of the costs of proxy contests while sharing in only a fraction of any benefits, with other shareholders absorbing the rest, the small group may be discouraged from initiating potentially value-enhancing proxy contests.

[346] *See, e.g.,* Lucian A. Bebchuk, *The Myth of the Shareholder Franchise,* 93 Va. L. Rev. 675, 712 (2007); Bernard S. Black, *Shareholder Passivity Reexamined,* 89 Mich. L. Rev. 520 (1990).

[347] *See* Fos Study, at 24–26.

[348] *See, e.g.,* Mulherin & Poulsen Study, at 305–08; David Ikenberry & Josef Lakonishok, *Corporate Governance Through the Proxy Contest: Evidence and Implications,* 66 J. of Bus. 405, 424–25 (1993).

[349] *See* Martijn Cremers, Lubomir Litov & Simone Sepe, *Staggered Boards and Long-Term Firm Value, Revisited,* working paper (2016), available at *http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2364165*; Martijn Cremers, Erasmo Giambona, Simone Sepe & Ye Wang, *Hedge Fund Activism and Long-Term Firm Value,* 17–20, working paper (Nov. 19, 2015), available at *http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2693231.*

[350] *See, e.g.,* John Matsusaka & Oguzhan Ozbas, *A Theory of Shareholder Approval and Proposal Rights,* U.S.C. CLEO, Working Paper No. C12–1 (Mar. 2016), available at *http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1984606.*

[351] *See, e.g.,* Geoff Colvin, *Going Private: Take this Market and Shove it,* Fortune Magazine (May 29, 2016), available at *http://fortune.com/going-private/* (citing the avoidance of proxy contests as motivation for firms to go private). While it is possible that companies could have some incremental incentive to stay or go private, we

Given these competing factors, to the extent there is any change in the incidence and perceived threat of typical proxy contests, the effects are likely to vary from registrant to registrant, and it is difficult to predict the average effects of changes in the nature of proxy contests across all registrants. The possible effects of changes in the incidence or threat of nominal proxy contests are similarly unclear. To the extent that such contests have the potential to affect the results of director elections, the actual incidence or perceived threat of such contests may either increase director discipline or create a distraction for boards, as in the case of typical proxy contests. However, such contests may be used to attract attention in the interest of pursuing other changes. In some cases, drawing attention to particular issues in this way could lead to value-enhancing changes. In other cases, dissidents may use such contests to pursue idiosyncratic interests which may not be shared by other shareholders, in which case the average shareholder may be unlikely to benefit and yet likely bear the costs of registrants expending additional resources on solicitation in such contests. In these cases, the negotiations related to such contests or the perceived threat of such contests could also result in registrants making concessions to dissidents that may not be in the best interest of the average shareholder in order to reduce the costs of contending with such contests.

Finally, the effects of any changes in proxy contests may be affected by managers and market participants altering their behavior in reaction to the proposed amendments. In particular, changes in the nature of proxy contests may increase or decrease the use of complementary or substitute governance mechanisms.[352] For example, studies have found that a historical increase in proxy contests was associated with a decrease in hostile takeovers, in which an entity acquires control of a company against the wishes of the incumbent board by purchasing its stock, suggesting proxy contests and hostile takeovers may be substitute mechanisms for control challenges.[353] In contrast, activist shareholders with large holdings in a particular registrant (or activist blockholders) who may be able to directly monitor and communicate with management, may represent a type of governance mechanism that can be a complement to proxy contests.[354] For example, if activist blockholders are present, it may be easier to overcome collective action problems and initiate and win a proxy contest. Thus, any increase in the potential impact of proxy contests may be enhanced by the presence of activist blockholders. At the same time, if the potential impact of proxy contests increases, the incentive of registrants to engage with activist blockholders and make suggested improvements may increase, enhancing the monitoring value of activist blockholders.[355]

Any effects that follow from increasing the incidence or perceived threat of proxy contests may be either mitigated or magnified by indirect effects on these substitute and complementary mechanisms. For example, any increase in the incidence of proxy contests could be offset by reductions in the use of substitute mechanisms such as takeovers.[356] Alternatively, such an increase could be magnified by complementary mechanisms whose effectiveness and therefore usage may increase (such as by activists being more likely to acquire blockholdings) in an environment in which proxy contests are more frequent. Such interactions may have significant effects on the overall economic effects of the proposed amendments. However, because so many different governance mechanisms are closely interrelated, it is difficult to predict the extent and impact of such interactions. We solicit comment below on the likelihood of changes in the incidence and threats of proxy contests as a result of the proposed amendments and any corresponding effects, including effects on efficiency, competition, and capital formation.

5. Specific Implementation Choices

In this section, we discuss, to the extent possible, any costs and benefits specifically attributable to individual aspects of the proposed amendments. We also discuss changes to the proxy voting process we considered that present significant implementation alternatives and their benefits and costs compared to the amendments as proposed.

a. Bona Fide Nominees and the Short Slate Rule

Revision to the Consent Required of a Bona Fide Nominee

We propose to amend the definition of a bona fide nominee under Rule 14a–4(d)(4) for registrants other than funds and BDCs to include all director nominees that have consented to being named in any proxy statement, whether that of the registrant or that of a dissident, relating to the registrant's next meeting of shareholders at which directors are to be elected.

The proposed amendment to the definition of a bona fide nominee would remove the impediment imposed by the current rule to including other parties' nominees on one's own proxy card. We preliminarily believe that this proposed amendment would, in and of itself, likely impose no direct cost on parties to contested elections because it would not require parties to change their slates of nominees or their proxy materials. However, revising Rule 14a–4(d)(4) is a prerequisite to any rule that would allow or require universal proxies. As such, all of the other costs and benefits discussed above, the details of which depend on the other implementation choices in this proposal, are conditional on this proposed amendment. Additionally, revising 14a–4(d)(4) alone, without the other amendments we are proposing, would permit the optional use of universal proxies, an alternative we discuss below.

Elimination of the Short Slate Rule

We propose to eliminate the short slate rule, which currently permits a dissident seeking to elect a minority of the board and running a slate of nominees that is less than the number of directors being elected to round out its slate by soliciting authority to also vote for certain registrant nominees, for registrants other than funds and BDCs. The proposed elimination of the short slate rule potentially would impose costs on certain dissidents. Under the existing proxy rules, dissidents qualifying to use the short slate rule can

believe it is unlikely that the proposed amendments would result in an increased incentive for registrants to relist or redomicile overseas, given that these changes alone would not be sufficient to avoid being subject to the U.S. proxy rules. For example, foreign issuers may be subject to the U.S. proxy rules unless they qualify as foreign private issuers under Exchange Act Rule 3b–4(c). In particular, a foreign registrant cannot qualify as a foreign private issuer if more than 50 percent of its securities are held by U.S. residents and at least one of the following applies: (i) A majority of the officers and directors are U.S. citizens or residents; (ii) more than 50 percent of the issuer's assets are located in the U.S.; or (iii) the issuer's business is principally administered in the U.S.

[352] The concepts of complementary and substitute governance mechanisms are discussed in Section IV.C. *supra.*

[353] *See, e.g.,* Fos Study, at 5–6, 26.

[354] *See* Section IV.B.1.b. for the frequency and size of institutional blockholdings among potentially affected registrants for which this data is available.

[355] For a broader review of issues concerning the role of blockholders in corporate governance, *see* Alex Edmans, *Blockholders and Corporate Governance,* 6 Ann. Rev. Fin. Econ. 23 (2014).

[356] We note that proxy contests may also be a complementary mechanism for certain types of takeovers. In particular, proxy contests can facilitate some hostile takeovers by removing directors who oppose the transaction in question. *See* Mulherin & Poulsen Study, at 309.

select the set of registrant nominees that they prefer to round out their slate. Eliminating this rule, and imposing a mandatory universal proxy, would take away this choice on the part of the dissident, reducing any related strategic advantage that the dissident may expect to gain, and would instead allow shareholders voting on the dissident proxy card to select the registrant nominees, if any, that they prefer.

We have considered whether, as an alternative to the proposed approach, the proxy rules should instead be revised to treat contests that do not involve a potential change in the majority of the board differently from contests in which control of the board is at stake, as in the current short slate rule and as recommended by some observers.[357] For example, we have considered an alternative approach that would not require the use of universal proxies in contests that may involve a potential change in a majority of the board. When a dissident is seeking a majority of seats on the board, electing a mixed board where a minority of seats would be held by dissident nominees may be inconsistent with the intentions and goals of both the dissident and the registrant. Not requiring universal proxy cards in such cases could reduce the likelihood of electing a mixed board when such an outcome is undesirable to both parties to the contest and could be disruptive. However, under this alternative, shareholders would continue to have more limited voting options when voting by proxy than when voting in person in contests that involve a potential change in a majority of the board. Furthermore, the risk of electing a mixed board when it would be disruptive or contrary to the goals of both parties to the contest could also be mitigated through disclosure emphasizing the importance of achieving (or retaining) majority control of the board and clarifying the willingness of each nominee to serve in the case control is not achieved.

Solicitations Without a Competing Slate

Under existing rules, a party may solicit proxies without presenting a competing slate, such as when soliciting proxies against some or all of the registrant nominees (a ''vote no'' campaign) or when soliciting proxies in favor of one or more proposals on matters other than the current election of directors. The proposed amendments would permit, but not require, proponents conducting solicitations without a competing slate to also solicit authority with respect to some or all registrant nominees in their proxy statements and proxy cards. To the extent that the ability to include these candidates would allow shareholders to vote on the proponent's proxy card while still exercising their full voting rights, this change may result in somewhat increased support for proponents in solicitations without a competing slate.

This potential increase in support may increase proponents' incentive to initiate such campaigns. As in the other contexts discussed above, it is difficult to predict to what extent proponents may increase the incidence of such campaigns, or to what degree the involved parties may react in other ways to the potential for somewhat higher support in solicitations without a competing slate. For example, any resulting increase in the frequency of such campaigns may be partially offset by accompanying changes in incentives for registrants to engage with proponents. Such interventions could also substitute, in some cases, for contested elections. It is unclear whether increased support for, or an increased incidence of, proponent initiatives would generally enhance or detract from the effectiveness of boards and the efficiency and competitiveness of registrants.

An alternative to the proposed approach would be to require proponents conducting solicitations without a competing slate to include the names of all duly nominated director candidates on their proxy cards (unless they are soliciting votes against all registrant nominees). This approach may have limited effect in the case of a ''vote no'' campaign, because shareholders would already be able to vote ''for'' and ''against'' their choice of any registrant nominees by using the registrant proxy card. In contrast, in the case of a proponent that solicits in favor of a particular proposal, the registrant may choose to not include the proposal on its proxy card, in which case, shareholders voting on the proponent's proxy card would be disenfranchised under the baseline and similarly may be disenfranchised under the proposed approach unless the proponent chooses to include all director nominees on its proxy card. This alternative would remove the risk of such disenfranchisement with respect to voting for directors. However, the risk of such disenfranchisement under the proposed amendments is likely mitigated because we expect that such proponents would have the incentive to include the registrant nominees on their proxy card in order to increase the incentive for shareholders to use their card and would generally not have strategic reasons to exclude registrant nominees from their proxy card because of the lack of a competing slate.

b. Use of Universal Proxies

Mandatory Use of Universal Proxies in Non-Exempt Solicitations in Contested Elections

The proposed amendments would require that universal proxies be used by each party—the registrant as well as the dissident—in any contested election with competing slates, regardless of the number of director seats being contested. This requirement would apply to all registrants that are subject to the proxy rules other than registered investment companies and BDCs.

Mandatory vs. Optional Use of Universal Proxies

Requiring both the registrant and the dissident in any contested election with competing slates to use universal proxies would enable all shareholders to vote for the combination of candidates of their choice in all such elections, whether they vote by proxy or in person at the meeting. Imposing this mandate on the registrant as well as the dissident may impose minor direct costs on both parties and may result in potentially significant, but uncertain, strategic advantages or disadvantages for these parties, leading to further costs and benefits for these parties and either benefits or costs for shareholders at large. Indeed, many of the potential effects discussed throughout this economic analysis are conditional on a mandatory universal proxy requirement.

Mandating the use of universal proxies by registrants in particular may have certain significant implications. Specifically, this approach would make it possible for all shareholders voting by proxy, even those not solicited by the dissident, to vote for dissident nominees. Requiring registrants to use universal proxies would likely result in all shareholders receiving a proxy card that would allow them to vote for any combination of the full set of director nominees, more accurately reflecting the voting options available to shareholders at the meeting. However, requiring the names of the dissident nominees to appear on the registrant's proxy card would allow a form of access to the registrant's proxy materials without the eligibility criteria that accompany other

[357] The IAC recommended that the Commission consider providing proxy contestants with the option to provide universal proxies in connection with short slate director nominations. The IAC did not make such a recommendation in the case of elections in which majority control of the board is at stake. *See* IAC Recommendation, at 2.

forms of access,[358] and could result in an increased incidence of nominal contests that capitalize on this new channel for such access. As discussed in Section IV.D.4.b above, it is unclear to what extent any dissidents would choose such an approach and whether any such contests would be beneficial or detrimental.

We considered mandating the availability of universal proxy cards while allowing registrants and dissidents to initially disseminate a non-universal proxy card if they so choose. In particular, anyone soliciting a proxy in a contested election using a non-universal proxy card would be required to provide disclosure about the availability of a universal proxy card and to provide a universal proxy card upon request to any shareholder it solicited. Registrants and dissidents would still be subject to other requirements similar to the proposed amendments, such as the notice and filing requirements, in order to facilitate the effective use of universal proxies. Allowing the names of opponent nominees to be excluded from a party's original dissemination may allow both parties to the contest to reduce the degree of publicity that they provide to their opponent's nominees. This approach may therefore reduce the possibility of nominal contests that seek to capitalize on such publicity while still providing shareholders the ability to vote for their preferred combination of nominees by electing to receive a universal proxy card. This approach may also involve additional costs and logistical difficulties associated with maintaining multiple types of proxy cards and fulfilling shareholder requests for universal proxy cards in an efficient and equitable way. Further, we note that this approach would place some burden, although perhaps not particularly heavy, on shareholders to request a universal proxy card.

There are two main alternatives to mandating that universal proxies be used by both parties to a contested election with competing slates. First, the use of universal proxies could be optional for all parties rather than mandatory. Second, there are hybrid approaches in which universal proxies would be mandatory for one party to the contest and optional for the other.

Under an optional approach, which has been recommended by certain observers,[359] whether or not a party chose to provide a universal proxy would depend on strategic considerations. Having the option rather than a requirement to use a universal proxy may benefit either registrants or dissidents, depending on the nature of individual contests. Optional universal proxies likely would be used by a contesting party, to the possible detriment of its opponent, when the party believes that including the names of the opponent's nominees on its own card would be in its best interest, but not otherwise. For example, a party that expects strong support for its opponent's nominees may prefer to include those nominees on its proxy card in order to increase the likelihood that shareholders use its card, since they would be able to do so without giving up the ability to support at least some of the opponent's nominees. Optional universal proxies may also mitigate the risk, relative to that under the proposed amendments, of electing a mixed board when such an outcome is inconsistent with the intentions of both the dissident and the registrant, because both parties may be less likely to use a universal proxy in such cases. This alternative may also reduce the likelihood of an increase in nominal contests because the registrant would control whether or not the names of dissident candidates were included on its proxy card. Finally, because allowing the optional use of universal proxy cards would necessarily entail removing the impediments to such proxies in the existing proxy rules, such an approach might facilitate the ''private ordering'' of a universal proxy requirement—that is, the ability of shareholders to request that individual registrants commit to a policy of using universal proxies in future contests through changes to their corporate governing documents—at only those registrants where shareholders believe mandatory universal proxies would be beneficial.[360]

However, under an optional approach it is likely that in many cases neither registrants nor dissidents would include their opponent's nominees on their proxies, in order to avoid diluting the potential support for their own nominees among those shareholders that use their proxy card. To the extent that contesting parties were further given the option to determine how many and which of their opponent's nominees to include, it is likely that the contesting parties would often include fewer than all of the duly-nominated candidates on their proxy cards, even when they did include some of their opponent's nominees. In any such cases, shareholders would continue to have more limited voting options when voting by proxy than when voting in person. Thus, we expect that an optional approach would result in inconsistent application and not fully achieve the goal of allowing shareholders the ability to vote by proxy for their preferred combination of director candidates, as they could at a shareholder meeting.

Canada's system of optional universal proxies illustrates the potential limitations of an optional system. In Canada, a party to a contested election has the option, but is not required, to include some or all of its opponent's nominees on its own proxy card. There have been roughly 10 to 20 election-related proxy contests per year in Canada over the last decade,[361] representing a significant fraction of the annual number of contests in the United States. However, we are aware of only five cases in which at least one party to a Canadian proxy contest that proceeded to a vote used a universal proxy,[362] and one additional case in which at least one party to the contest included some, but not all, of its opponent's nominees on its proxy card.[363]

In contrast, hybrid alternatives would require at least one party to a contest to use a universal proxy, potentially allowing a greater number of shareholders to split their ticket using a proxy compared to an optional approach. One hybrid alternative would be to require the dissident to use a universal proxy and allow registrants the option, but not the obligation, to include the dissident's nominees on its proxy card. This hybrid approach could be implemented with or without a notice requirement or a minimum

[358] For example, proxy access bylaws, where available, apply certain eligibility criteria including an ownership threshold.

[359] *See* IAC Recommendation, at 2.

[360] The availability of such private ordering may depend on developments in state law. Also, if only a minority of shareholders is interested in splitting their votes, it may be difficult to obtain the support required to revise bylaws or other corporate governing documents to require universal proxies.

[361] *See* Fasken Martineau DuMoulin LLP, *Canadian Proxy Contest Study—2016 Update* (2016), available at *http://www.fasken.com/canadian-proxy-contest-study-2016-update/*.

[362] This estimate includes only those cases that we are aware of in which at least one party included all of the registrant nominees and all of the dissident nominees on its proxy card. *See, e.g.,* Boyd Erman, *CP Vote Broke New Ground for Democracy,* The Globe and Mail (May 30, 2012), available at *http://www.theglobeandmail.com/report-on-business/streetwise/cp-vote-broke-new-ground-for-democracy/article4217586/* (reporting on one such case).

[363] We note that differences in rules and practices in Canada as compared to the United States limit our ability to draw direct inferences from the experience of Canada. *See, e.g.,* Patricia Olasker & Alex Moore, *Debunking the Myth: Why Activism is Tough in Canada,* David Ward Philips & Vineberg (Mar. 2015), available at *https://www.dwpv.com/~/media/Files/PDF_EN/2015/2015-04-14-Debunking-the-Myth-Why-Activism-is-Tough-in-Canada.ashx*.

solicitation requirement. In this case, shareholders solicited by the dissident would be able to cast their votes by proxy for their choice of any combination of candidates. If the registrant chose not to use a universal proxy, those not solicited by the dissident would not be able to vote for dissident nominees or to split their vote across registrant and dissident nominees unless they attended the meeting or specifically requested the dissident's proxy card.[364]

In comparison to the proposed amendments, this hybrid approach would prevent the incidence of nominal contests that seek to capitalize on the ability of dissidents to include the names of alternative director candidates in the registrant's proxy materials. Additionally, this approach may confer an advantage to the registrant in some cases. For example, if the dissident would otherwise have had a high chance of winning many seats in the election, requiring a universal proxy for the dissident but not the registrant could dilute support for the dissident nominees among those voting on the dissident's card, by providing other alternative candidates on the same card. The dissident would not have a corresponding opportunity to gain potential votes from the registrant's proxy card unless the registrant chose also to use a universal proxy. This effect may be mitigated to the extent that registrants may have a stronger incentive to use a universal proxy to attract more shareholders to use their card in situations in which the dissident is likely to draw high levels of support. It may also be mitigated by the possibility that shareholders prefer the dissident's universal card over the registrant's non-universal proxy card, which may result in some additional votes for dissident nominees. Finally, we note that the ability of dissidents to select whom they solicit may provide an advantage that could help to balance any advantage that registrants would gain under this approach.

Another hybrid approach we considered would be to require registrants to use a universal proxy, while dissidents would be given the option, but not the obligation, to do so.[365] This hybrid approach may more fully achieve the goal of allowing all shareholders to vote by proxy for their choice of candidates because, as a practical matter, the registrant likely would distribute a universal proxy card to all shareholders. However, in addition to the risk of conferring a slight advantage to one party in certain cases, as under the other hybrid alternative, this approach would also present a similar likelihood of increased nominal contests as under the proposed amendments due to the exposure gained by the dissident via the registrant's proxy card.

Applicability of Mandatory Universal Proxies to Registered Investment Companies and Business Development Companies

Because the proposed amendments would not apply to funds or BDCs, these registrants would remain subject to the federal proxy rules currently in effect. Therefore, we do not expect the proposed amendments to affect the current nature of director election contests among funds and BDCs.

We currently observe very few director election proxy contests at open-end funds.[366] By contrast, proxy contests do sometimes occur among closed-end funds and BDCs. As discussed previously in Section II.D, contests at closed-end funds and BDCs are generally driven by dissidents seeking to profit from reducing the discount of the fund's or BDC's share price relative to NAV.[367] Staff analysis of proxy statement filings by dissidents in calendar years 2014 and 2015 found 11 contests at closed-end funds and BDCs and in only one contest did the dissident seek fewer seats than were up for election.[368] In three out of the four cases where the dissidents successfully achieved board representation, all the dissidents' nominees were elected to the board.[369]

We have considered, as an alternative, applying the proposed amendments to funds and BDCs, which would also enable shareholders of funds and BDCs to vote a split ticket in director election contests through the use of universal proxies. In principle, the same general types of potential costs savings and increase in voting alternatives could apply to shareholders of funds and BDCs as those we discussed previously in Section IV.D.1 for shareholders of operating companies. Nevertheless, we recognize that funds and BDCs have particular characteristics that could impact the economic effects of the proposed amendments. Below, we highlight differences between funds and BDCs on the one hand, and operating companies on the other, that suggest the economic effects of the proposed mandatory universal proxy system could be different for funds and BDCs.

First, it is unclear whether there is a current demand for split-ticket voting among shareholders of funds and BDCs. In this regard, we note that petitioners seeking a universal proxy requirement have not specifically expressed a need for universal proxy cards at these types of registrants.[370] Additionally, based on the observation above that contests for fewer than all seats up for election, or the election of some but not all dissident nominees, have been rare at funds and BDCs, we believe that shareholders in these registrants may have been less likely to seek split-ticket voting in contested elections. In addition, particular characteristics of funds and BDCs that they do not share with operating companies may affect the demand for split-ticket voting. For example, the types of changes pursued by dissidents at such registrants, such as converting a closed-end fund to an open-end fund, have tended to be binary in nature. As a result, we generally infer that shareholders siding with the dissident's view on one of these binary choices would be expected to vote the dissident's slate on the dissident's proxy card, as this would maximize the probability of the dissidents being able to carry out their proposed change. This is particularly true where the dissident nominates directors representing all of the seats up for election or a majority of the board—which occurs in the vast majority of cases—as this would give the dissident the power to enact the preferred fundamental change. This contrasts with our understanding of proxy contests for operating companies, where the types of changes pursued by

[364] Existing rules do not require the dissident in an election contest to solicit all shareholders; rather, the incentive to solicit comes from the dissident's motivation to run a successful election campaign.

[365] Registrants with certain advance notice bylaw provisions may have the option of using a universal proxy card if they so choose. In particular, we are aware of two cases in which dissident nominees were required to consent to being included on the registrant's proxy card as part of the director questionnaire required under the registrant's advance notice bylaw provision. The dissident does not have such leverage over registrant nominees and in both cases, the registrant nominees did not consent to being named on the dissident's proxy card.

[366] Staff is not aware of any director election contests in open end funds from the year 2000 to July 2016.

[367] *See supra* note 190 and accompanying text.

[368] Our analysis found three contests in 2014 and eight in 2015. Of those 11 contests, nine were at closed-end funds and two at BDCs. At 10 of the 11 contests dissidents were either seeking a majority of the board or seeking all of the board seats up for election.

[369] In the one case where the dissident did not get all its nominees appointed to the board, there was never a contested vote at the annual meeting as the dissident and the registrant negotiated a settlement prior to the meeting. In the settlement, the registrant agreed to add two of the dissident's four nominees to its own slate of nominees for a non-contested election at the annual meeting.

[370] *See supra* note 45.

dissidents are often less binary in nature and may therefore cause dissidents to seek a minority of board seats. In particular, shareholders may in this case desire to vote a split ticket to express support for intermediate or compromise approaches between affecting the full scope of changes sought by the dissident and the status quo favored by the registrant. Thus, the effect of the proposed amendments for funds and BDCs could be different from the effect for operating companies, because funds and BDCs may experience a smaller number of non-binary contests where shareholders would desire to split their votes.

Second, the effects of the proposed amendments on the costs of contested elections may be different for funds and BDCs to the extent their shareholder base is different from that of operating companies. For example, a recent industry report shows that retail investors held approximately 89 percent of mutual fund assets in the United States,[371] which is significantly larger than the corresponding ownership percentage that has been reported for operating companies.[372] This data may indicate that ownership of funds and BDCs is more dispersed than ownership of operating companies, in which case any increase in solicitation costs from the proposed amendments may be greater for funds and BDCs. However, to the extent this is not the case and instead ownership is more concentrated at funds and BDCs than in operating companies, any increase in solicitation costs may be lower for funds and BDCs.

Third, the effect of the proposed amendments on voting outcomes may differ to the extent funds and BDCs have a different shareholder base than operating companies. For example, on the one hand, if funds and BDCs have a higher portion of shareholders who do not tend to vote their shares in proxy contests, there may be a more limited impact of universal proxy cards on voting outcomes. On the other hand, to the extent funds and BDCs have a higher portion of shareholders participating in voting that are currently unable to vote a split ticket, there may be a greater impact on voting outcomes.

Fourth, specific features of the governance environment could make the effects of the proposed amendments on the outcomes of director election contests different for funds and BDCs compared to their effects for operating companies. For example, funds and BDCs that are part of larger complexes generally have unitary or cluster board structures that are not observed in operating companies. To the extent that an increase in split-ticket voting results in a greater rate of mixed boards, where some dissident nominees are elected together with some registrant nominees, such outcomes may impose more significant costs on funds and BDCs with unitary or cluster board structures. These companies could be required to make costly and potentially disruptive changes in the logistics of board meetings and the discussions held in such meetings to accommodate a mixed board in one fund out of the larger complex. We note, however, that an increased likelihood of mixed board outcomes could be beneficial for funds and BDCs to the extent a mixed board would result in more effective monitoring and less potential for conflicts of interests.[373]

Finally, the effects of universal proxies on the incidence of contested director elections could be different for funds and BDCs. Shareholders of funds and BDCs have rights under the federal securities laws that are not available to shareholders of operating companies that could affect the incidence of contested director elections. Shareholders of funds and BDCs must vote to approve changes in certain operational matters and to approve advisory contracts and material amendments to such contracts.[374] To the extent these shareholder rights enable shareholders to participate effectively in the governance of the entity, there may be lower incentives for potential dissidents to initiate director election contests at funds and BDCs compared to operating companies. As a consequence, depending on how the proposed amendments would change the relative attractiveness of contested elections for potential dissidents at funds and BDCs, there may be either a greater or lesser effect of the proposed amendments on the incidence of contests at these entities compared to operating companies.

We also note that differences across open-end funds, closed-end funds, and BDCs, could lead to differential economic effects of universal proxies across these different types of investment companies. Historically, director elections generally happen less frequently among open-end funds compared to other registrants, including closed-end funds and BDCs,[375] and therefore these types of funds provide dissidents with fewer opportunities to launch director election contests. In addition, dissatisfied shareholders of open-end funds can sell their shares at NAV and invest elsewhere, such as another open-end fund that is a close substitute in terms of its portfolio holdings.

In contrast, dissatisfied shareholders of closed-end funds and BDCs that are trading at a discount to NAV may be interested in encouraging actions that could move the share price closer to NAV, including actions that may be sought by dissidents in a proxy contest.

We request comments in this release on whether, and if so, the extent to which investment companies, or different types of investment companies, would be differentially affected by a universal proxy requirement as well the other changes to the proxy rules contemplated in this release. We also request information and data that would help us understand and quantify differences in the likely economic effects of applying the proposed amendments to investment companies as compared to operating companies and to the different types of investment companies.

Notice Requirements

The proposed amendments would require that dissidents in all contested elections provide notice to registrants of their intention to solicit proxies in favor of other nominees, and the names of those nominees, no later than 60 calendar days prior to the anniversary of the previous year's annual meeting date.[376] A notice to the registrant is necessary for the registrant to be able to include the names on the universal

[371] *See* 2016 ICI Fact Book, at 29.

[372] *See supra* note 213.

[373] Concerns related to the monitoring effectiveness of unitary board structures have been raised by industry observers. *See, e.g.,* James Sterngold, *Is Your Fund's Board Watching Out for You?,* Wall St. J. (June 9, 2012) (stating that ''it's not uncommon for a board member to oversee 100 funds or more,'' and that ''for many critics, that's a prescription for overwhelmed and passive boards''). But, on the other hand, studies have found that unitary boards can be an effective governance mechanism. *See, e.g.,* Sophie Xiaofei Kong & Dragon Yongjun Tang, *Unitary Boards and Mutual fund Governance,* 31 J. Fin. Res. 193 (2008) (finding that mutual funds with unitary boards are associated with lower fees, are more likely to pass the economies of scale benefits to investors, are less likely to be involved in trading scandals, and rank higher on stewardship).

[374] *See supra* notes 193–194.

[375] One reason for this is that many open-end funds are not required to hold annual meetings. *See supra* note 185 and accompanying text.

[376] If the registrant did not hold an annual meeting during the previous year, or if the date of the meeting has changed by more than 30 calendar days from the previous year, then the proposed amendments would require that notice must be provided no later than 60 calendar days prior to the date of the annual meeting or the tenth calendar day following the day on which public announcement of the date of the annual meeting is first made by the registrant, whichever is later.

proxy card it prepares and distributes to shareholders. Without providing such notice, a dissident would not be permitted to run a non-exempt solicitation in support of its director nominees. The proposed amendments would also require registrants to provide similar notice to dissidents no later than 50 days before the anniversary of the previous year's annual meeting date, in order to allow dissidents sufficient time to include the names of registrant nominees on the universal proxy card that they prepare and disseminate to shareholders.

Because advance notice bylaws commonly require a similar amount of notice by dissidents seeking to nominate alternative candidates, the effect of the proposed notice requirement for dissidents may be limited.[377] As discussed above, we understand that advance notice bylaws generally have deadlines ranging from 60 to 120 days before the meeting anniversary date.[378] However, it is possible that some registrants have advance notice bylaws with later deadlines. Also, some registrants do not currently have such bylaws and it is possible that boards may waive the applicability of such bylaws.[379] Further, relatively smaller registrants are somewhat less likely to have advance notice provisions than larger registrants, and proxy contests are more common among these relatively smaller registrants.[380] The proposal would, in effect, replicate the primary effects of an advance notice bylaw applying to contested elections even at registrants that currently have no advance notice bylaw (or bylaws with later deadlines, to the extent these exist).

Although we believe that only a small fraction of registrants do not already have a comparable or stricter notice requirement, because the bylaws at different registrants may have been designed to reflect their individual circumstances, imposing this new requirement on all registrants may not be optimal. In particular, the proposal's notice requirements would impose a new constraint on dissidents in cases in which the same degree of notice was not otherwise required, potentially imposing some incremental costs on such dissidents. The proposal would also prevent the incidence (and eliminate the threat) of contests initiated later than the proposed notice deadline (''late-breaking'' proxy contests) at all registrants. As in the case of other potential effects of the proposed amendments on the incidence and perceived threat of contested elections, these effects of the proposed notice requirements may reduce either the degree of discipline or the risk of unproductive distraction for boards.[381]

To consider potential effects on late-breaking proxy contests, we reviewed the timing of recent proxy contests. As shown in Table 2 above, we estimate that dissidents filed their initial preliminary proxy statements on average 60 days before the annual meeting for contested elections initiated in 2014 and 2015.[382] We also estimate that approximately 56 percent of these contested elections had an initial preliminary proxy statement filed by the dissident within 60 days of the meeting, which may represent late-breaking contests.[383] While the filing of a preliminary proxy statement does not mark the earliest point at which a dissident initiates a proxy contest and finalizes a slate of nominees, it does provide a threshold date before which these actions must have occurred. We also considered the earliest date at which a dissident announced its intent to pursue a proxy contest in a regulatory filing. For those contests for which we have such information, we estimate that in approximately 11 percent of these contested elections the dissident announced its intent to pursue a proxy contest within 60 days of the meeting, which is another measure of potential late-breaking contests.[384] Disclosing the intent to pursue a proxy contest is not the same as providing notice of the names of the dissident nominees, but it may mark a threshold date after which such notice could have been provided.

We therefore cannot rule out that the proposed notice requirement may prevent some proxy contests that would otherwise have occurred. However, dissidents who might have initiated late-breaking contests may simply adjust their timetable to be compatible with the proposed notice requirement. Also, any effects of the proposed notice requirements on the incidence or threat of late-breaking contested elections may be offset somewhat by the ability of dissidents who are unable to meet the notice deadline to take other actions, such as initiating a ''vote no'' campaign, using an exempt solicitation,[385] or calling a special meeting (to the extent possible under the bylaws) to remove existing directors and elect their own nominees, which may allow them to achieve similar goals with respect to changes to the board.

While advance notice bylaws currently apply to dissidents at many registrants, registrants are not currently subject to a requirement that they provide notice of their nominees to dissidents. Thus, the proposed notice requirement for registrants would represent a new obligation for registrants in contested elections. We estimate that 68 percent of registrants filed a preliminary proxy statement at least 50 days before the annual meeting for contested elections initiated in 2014 and 2015,[386] so we expect that the majority of registrants will have a list of nominees ready by the proposed notice deadline. However, the proposed notice requirement may require some registrants to finalize their list of nominees somewhat earlier than they would otherwise.

Also, to the extent that a registrant might consider changing its selected nominees after providing notice and after the dissident thereby disseminates its definitive proxy materials (but perhaps before the registrant does so), the proposed notice requirement may provide registrants with an increased incentive not to make such changes because of the risk that votes for registrant nominees on the dissident card could be invalidated. Because the proposed notice requirement may require some registrants to finalize their nominees earlier than they would otherwise and may increase registrants' incentives not to change their nominees, there is a possibility that this requirement could have a detrimental effect on the quality of candidates that registrants nominate. However, the majority of registrants in recent contests filed a preliminary proxy statement at least 50 days before the meeting date, so the proposed notice deadline is close to the date by which registrants typically disclose their nominees. We therefore expect any such effects to generally be minor.

We have also considered alternatives to the notice requirements included in the proposed amendments, such as earlier as well as later potential notice deadlines for dissidents. In these alternatives, we have assumed that the notice deadline for registrants would also be revised to be 10 days after the revised deadline for the dissident, to allow the registrant sufficient time to prepare its notice and list of nominees

[377] It has been estimated that 95 percent of S&P 500 firms and 90 percent of Russell 3000 firms had an advance notice bylaw at the end of 2014. *See supra* Section IV.B.2.

[378] *See supra* note 246.

[379] *See supra* note 244.

[380] *See supra* Section IV.B.2.

[381] *See* Section IV.D.4.

[382] *See* Section IV.B.2.b.

[383] *Id.*

[384] *Id.*

[385] In this case, the total number of persons solicited could be no more than 10. *See* Section IV.B.3.

[386] Based on staff review of EDGAR filings.

in reaction to the receipt of a notice from a dissident. Under a later notice deadline, the risk of preventing late-breaking proxy contests that would otherwise have occurred, particularly at registrants without advance notice bylaws, would be reduced. For example, when considering a deadline of no later than 45 calendar days (as opposed to 60 calendar days, as proposed) prior to the anniversary of the previous year's annual meeting date, we found that in approximately 6 percent of contested elections initiated in 2014 and 2015 the dissident announced its intent to pursue a proxy contest within 45 days of the meeting (as compared to 11 percent within 60 days), and in 29 percent of these contests the dissident filed a preliminary proxy statement within 45 days of the meeting (as compared to 56 percent within 60 days). Additionally, a later deadline for registrants would reduce the likelihood that some registrants may have to finalize their nominees earlier than they would otherwise. For example, we estimate that in approximately 2 percent of contested elections initiated in 2014 and 2015, the registrant filed its preliminary proxy statement within the 35 days before the meeting (as compared to 32 percent within 50 days).

However, a later deadline may increase the risk of confusion among shareholders and impose additional solicitation costs if the registrant's non-universal proxy card has already been disseminated and requires revision. In particular, we estimate that in 22 percent of contests initiated in 2014 and 2015, registrants filed a definitive proxy statement at least 45 days before the meeting.[387] In contrast, we found no cases in this sample in which a registrant filed a definitive proxy statement earlier than 60 days before the meeting.[388]

An earlier deadline, such as 90 days prior to the anniversary of the prior year's meeting, would reduce the risk, relative to the proposal, of the potential confusion or costs related to notice being received after non-universal registrant proxy cards have already been disseminated. However, the risk that registrants will have distributed their proxy cards prior to the proposed 60-day deadline seems relatively low, and an earlier deadline may further preclude late-breaking contests beyond those prevented by the proposed deadline. For example, when considering a deadline of no later than 90 calendar days (as opposed to 60 calendar days, as proposed) prior to the anniversary of the previous year's annual meeting date, we found that in a significant percentage of contested elections initiated in 2014 and 2015, the dissident announced its intent to pursue a proxy contest or filed its preliminary proxy statement between 60 and 90 days prior to the meeting. Some of these contests may have been permitted under a 60-day deadline but excluded in the case of a 90-day deadline.[389] Additionally, an earlier deadline for registrants would increase the likelihood that some registrants may have to finalize their nominees earlier than they would otherwise. For example, we estimate that in approximately 63 percent of contested elections initiated in 2014 and 2015, the registrant filed its preliminary proxy statement between 80 and 50 days before the meeting.[390]

A further alternative would be to require universal proxies in cases where the dissident provides notice to the registrant, and not require them in cases where the dissident does not meet the notice deadline. Under this alternative, the dissident would be permitted to initiate a late-breaking proxy contest but, because of the risk of confusion if proxies have already been disseminated, would not trigger the use of universal proxies, while other contests (in which notice was provided) would require universal proxies. This alternative may raise similar concerns to those discussed above with respect to the optional use of universal proxies, in that there would still be some elections without universal proxies, and the dissident could strategically time its actions to avoid triggering universal proxies when it believes there is an advantage to doing so.

We have also considered not requiring registrants to provide notice to dissidents of their nominees. In this case, dissidents would generally become aware of the registrant nominees when the registrant files its preliminary proxy statement, which is required to be filed at least 10 calendar days prior to the date the registrant's definitive proxy statement is first sent to shareholders, and would have to finalize their own proxy cards thereafter. This alternative would avoid imposing a new notice obligation on registrants, and may reduce the risk that such an obligation could marginally reduce the quality of registrant nominees in some cases. However, requiring that notice be provided by both parties to the contest would limit the possibility that registrants may gain a strategic advantage by learning about and being able to react to the dissident's slate of nominees significantly earlier than when the dissident may be informed of the registrant's slate.

Minimum Solicitation Requirement for Dissidents

The proposed amendments would apply certain solicitation requirements to all contested elections. In particular, dissidents would be required to solicit the holders of shares representing at least a majority of the voting power of shares entitled to vote on the election of directors. Currently, dissidents in an election contest can solicit as many or as few shareholders as they choose, while registrants routinely furnish a proxy statement to all shareholders.

As discussed in detail above, we do not expect the minimum solicitation requirements to significantly increase the costs borne by dissidents in a typical proxy contest.[391] In the majority of contests, dissidents already solicit all shareholders; in other contests, while dissidents do not solicit all shareholders, they generally solicit a number of shareholders beyond the required threshold.[392] To the extent that there are some infrequent cases in which a dissident may not otherwise have solicited shareholders that represented a majority of the voting power of the registrant, we preliminarily estimate that the incremental costs of the proposed solicitation requirement beyond what such a dissident would be expected to spend in the absence of this requirement to be approximately $1,000, which represents a minor fraction of the total estimated costs of solicitation in a typical proxy contest.[393] Because the vast majority of proxy contests would not be affected by the proposed solicitation requirement, and in the infrequent cases where there would be an effect this requirement would impose minor incremental costs to dissidents, we believe that the proposed solicitation requirement would not have significant effects on the costs of typical proxy contests.

[387] Based on staff analysis of EDGAR filings.

[388] *Id.*

[389] Staff estimates that in 26 percent of contested elections initiated in 2014 and 2015, the dissident announced (in an EDGAR filing) its intent to pursue a proxy contest between 60 and 90 days prior to the meeting, and that in 34 percent of these contests the dissident filed a preliminary proxy statement between 60 and 90 days prior to the meeting. *See* Section IV.B.2.b. Neither the date on which intent to pursue a contest is announced nor that on which a preliminary proxy statement is filed need correspond to the date on which notice could have been provided in these contests, though they may provide some indication of the universe of contests that might have been affected by a particular notice deadline.

[390] Based on staff analysis of EDGAR filings.

[391] *See* Section IV.D.2.

[392] *Id.*

[393] *Id.*

Nevertheless, the proposed solicitation requirement would impose a cost on any dissidents that may try to capitalize on the ability to introduce the names of alternative candidates on the registrant's proxy card by running a nominal proxy contest, in which minimal resources are spent on solicitation. As discussed above, in addition to the existing cost of pursuing a nominal proxy contest, we estimate that it would cost approximately $6,000 at the median-sized (based on the number of accounts in which its shares are held) registrant to meet the proposed minimum solicitation requirements through an intermediary.[394] We note that this estimate is higher than the incremental cost of $1,000 that we estimate could apply in the case of certain typical proxy contests because dissidents in nominal proxy contests currently expend minimal resources on solicitation. Therefore, the additional cost required to comply with the minimum solicitation requirement, beyond current expenditures in contests, is likely to represent a relatively larger incremental cost in the case of nominal contests. We expect that the proposed minimum solicitation requirements may to some degree deter dissidents from initiating nominal contests, as discussed in Section IV.D.4.b. above.

An alternative to the proposed solicitation requirements would be to require universal proxies without imposing any minimum solicitation requirement on dissidents. This approach would eliminate the risk that such a requirement would increase the cost to dissidents of running a typical proxy contest in some cases, such as where cumulative voting or other registrant characteristics could allow dissidents to gain board representation with more limited solicitation. However, without a minimum solicitation requirement, requiring registrants to use a universal proxy may increase the likelihood that dissidents engage in more nominal proxy contests. In particular, a dissident would be able to obtain exposure for its nominees on the registrant's proxy card without engaging in any meaningful solicitation at its own expense and without facing the limitations (such as on the number of nominees put forth) as well as the eligibility and procedural requirements of proxy access bylaws, where available, or (to the extent the dissident is concerned about a particular issue) the shareholder proposal process. While this may enable some beneficial contests that could otherwise be cost-prohibitive, it would also increase the risk of detrimental contests. That is, the ability of dissidents to introduce an alternative set of nominees to all shareholders without incurring meaningful solicitation expenditures may result in an increase in contests that are frivolous or that could be initiated in pursuit of certain idiosyncratic interests rather than shareholder value enhancement. Such contests could lead registrants to incur significant disclosure and solicitation expenses to advocate against the dissident's position and could distract management from critical business matters. There is also some chance that a frivolous contest could result in election outcomes which could disrupt the proper functioning of the board.

Another alternative would be to require a different minimum level of solicitation for dissidents than what we have proposed. For example, we could require that dissidents solicit all shareholders. This approach may reduce the incidence of nominal contests that might not be in the interests of shareholders at large. As discussed above, we estimate the cost of using the least expensive approach to meet the proposed minimum solicitation requirement through an intermediary at the median-sized (based on the number of accounts in which its shares are held) registrant to be approximately $6,000.[395] In contrast, we estimate that soliciting all shareholders at the median-sized registrant would cost approximately $14,500 when using the least expensive approach [396] to solicit through an intermediary.[397] However, a requirement that dissidents solicit all shareholders would also affect the cost to dissidents in more typical proxy contests. As discussed above, we understand that in 40 percent of recent proxy contests, dissidents solicited a number of shareholders fewer than all of the shareholders eligible to vote.[398] We estimate that it would have cost dissidents in these contests approximately an additional $3,000 to $2.5 million, with a median of approximately $11,500 beyond the costs they already incurred, to increase their level of solicitation to include all shareholders if using the least expensive approach [399] to expand solicitation.[400] Thus, requiring dissidents to solicit all shareholders would increase the costs borne by dissidents in a large fraction of typical proxy contests and may prevent some value-enhancing contests from taking place.

We also considered requiring other possible levels of solicitation. In general, any solicitation requirement that imposes a very low cost on the dissident may increase the risks discussed above that are associated with permitting the dissident to obtain exposure for its nominees on the registrant's card with minimal expenditure of its own resources in the

[394] *Id.*

[395] *Id.*

[396] *See supra* note 300.

[397] This estimate was derived by staff based on the NYSE Rule 451 fee schedule and industry data provided by a proxy services provider. *See supra* note 301 (providing assumptions for the estimation of the costs of solicitation at the median-sized registrant). In this case, staff estimated the costs of NYSE Rule 451 fees and postage for soliciting all 4,500 accounts at the median-sized registrant using notice and access delivery, and assumed that the number of brokers and banks involved for the purpose of determination of the nominee coordination fee is equal to 90. The estimated solicitation cost of approximately $14,500 includes intermediary unit fees, which apply with a minimum of $5,000, plus nominee coordination fees of $22 per bank or broker considered a ''nominee'' under NYSE Rule 451, plus basic processing fees, notice and access and preference management fees and postage totaling $1.57 (for suppressed accounts, such as those that have affirmatively consented to electronic delivery) to $1.70 (for other accounts) per account. We request comment on this estimate and data that could allow staff to obtain a more precise estimate below.

[398] *See* Section IV.B.2.

[399] *See supra* note 300.

[400] These estimates were derived by staff based on the NYSE Rule 451 fee schedule and industry data provided by a proxy services provider. In particular, the required increase in expenses to solicit all shareholders was estimated based on the number of additional accounts that would have to be solicited and the applicable fees under NYSE Rule 451 and postage costs for notice and access delivery. For the purpose of the nominee coordination fee, staff used information from other proxy contests for which information was provided (specifically focusing on those in which less than all shareholders were solicited) to interpolate the increase in the number of banks or brokers considered ''nominees'' under NYSE Rule 451 that might be involved at the higher solicitation level. The estimated incremental solicitation cost for each contest includes nominee coordination fees of $22 for each of the additional nominees expected to be involved, plus basic processing fees, notice and access and preference management fees and postage totaling $1.57 (for suppressed accounts, such as those that have affirmatively consented to electronic delivery) to $1.70 (for other accounts) per account for additional accounts solicited within the first 10,000 accounts solicited, and on a declining scale for additional accounts thereafter. Staff assumed that half of the additional accounts to be solicited are suppressed and that none of these accounts requested full set delivery by prior consent or upon receipt of the notice (because such delivery requirements may apply to only a small fraction of accounts and is not expected to significantly affect the overall estimate of costs). Additional notice and access fees of $0.25 per account for the first 10,000 accounts, and on a declining scale thereafter, were assumed to be required for each account that was solicited prior to increasing the level of solicitation because of the use of notice and access delivery for some accounts. The estimates also include incremental intermediary unit fees of $0.25 per account for each additional account above 20,000 accounts solicited. This estimate does not include printing costs for the notice, for which we do not have relevant data to estimate these costs. We request comment on these estimates and data that could allow staff to obtain more precise estimates below.

solicitation, while a solicitation requirement that imposes a very high cost may deter value-enhancing proxy contests. Also, in any approach that requires the dissident to solicit less than all of the shareholders entitled to vote (such as under the proposed amendments) we note that any shareholders not solicited by the dissident would still see the names of the dissident's nominees on the registrant's proxy card but would have to seek out the dissident's proxy statement in the EDGAR system (as directed by the registrant's proxy statement) in order to learn about those nominees and make an informed voting decision.

Dissemination of Proxy Materials

We are proposing amendments to Rule 14a–19 that would require any dissident in a contested election to file a proxy statement by the later of 25 calendar days prior to the meeting date, or five calendar days after the date that the registrant files its definitive proxy statement, regardless of the choice of proxy delivery method. This requirement would help to ensure that all shareholders who receive a universal proxy, which will not be required to include complete information about the opposing party's nominees, will have access to information about all nominees. We do not expect this requirement to impose a substantial burden or constraint on dissidents given existing requirements and the notice requirement of the proposed amendments.

In particular, dissidents that elect notice-only delivery are currently required to make their proxy statement available at the later of 40 calendar days prior to the meeting date or 10 calendar days after the registrant files its definitive proxy statement. For such dissidents, the proposed filing deadline would provide five fewer days to furnish a proxy statement in cases in which the registrant files its definitive proxy statement within fewer than 30 calendar days of the meeting date, which we estimate occurred in 20 percent of recent contested elections, and would not otherwise present an incremental timing constraint.[401] Dissidents that elect full set delivery are not currently subject to any such requirement, and thus the proposed dissemination requirement would impose a new filing deadline for all such dissidents. Some dissidents may therefore be required to prepare their proxy statements earlier than they would otherwise. In particular, we estimate that dissidents filed a definitive proxy statement within 25 days of the meeting in 25 percent of recent contested elections.[402]

In the absence of other requirements, the proposed filing deadline might prevent late-breaking proxy contests. However, because the proposed amendments separately require dissidents to provide notice of the contest and the names of their nominees by the 60th calendar day before the anniversary of the prior year's meeting (with alternative treatment for cases in which the meeting date has changed significantly since the prior year), we do not expect this requirement to impose a significant further limitation on late-breaking contests. Also, while the proposed filing deadline would require some dissidents to prepare their proxy statements earlier than they would otherwise, we do not expect this requirement to impose a substantial incremental constraint or burden in most cases. In particular, because of the proposed notice requirement, dissidents would generally have approximately one month to furnish a definitive proxy statement after having provided the names of their nominees to the registrant. We request comment on the effect of the proposed filing deadline on dissidents below.

Alternatively, we have considered proposing an earlier filing deadline for dissidents. While an earlier filing deadline may reduce the risk that some shareholders receive the registrant's proxy statement and make their voting decisions before the dissident's proxy statement is available, such a deadline may also impose an incremental burden on dissidents and could prevent some late-breaking proxy contests beyond those prevented by the proposed notice requirement.

Form of the Universal Proxy

The proposed amendments specify certain presentation requirements for universal proxies, including that each party's slate of nominees be clearly distinguishable and that, within each slate, the names be listed in alphabetical order. Also, the form of the universal proxy would be required to prominently disclose the maximum number of candidates for whom a shareholder can properly grant authority to vote and the treatment of any proxy cards that indicate a greater or lesser number of ''for'' votes than this permitted number. We do not expect the presentation and formatting requirements to impose any significant direct costs on registrants or dissidents, though they may bear some indirect costs in the form of reduced flexibility to strategically design their proxy card.

These presentation and formatting requirements are expected to mitigate the risk that shareholders receiving universal proxies may be confused about their voting choices and how to properly mark their card. For example, shareholders could otherwise be unsure about the total number of candidates for which they can grant authority to vote, or about which candidates are nominated by which party. Such confusion could increase the likelihood that some shareholders submit invalid proxies or submit proxies that do not reflect their intentions. This may be exacerbated in the case of nominees being put forth by multiple dissidents or when there are proxy access nominees as well as dissident and registrant nominees.[403]

In addition to preventing confusion, these presentation and formatting requirements may also promote the fair and equal presentation of all nominees on the proxy cards. In particular, these requirements would prevent registrants and dissidents from strategically choosing the font, style, sizing, and order of candidate names in ways that could create an advantage for their slate. For example, political science research has found that the order of placement of candidates' names on ballots can affect voting outcomes.[404]

Alternatively, we could permit some additional flexibility with respect to how universal proxies are presented. For example, each party to the contest could be allowed to choose how to order the nominees, but only within its own slate. This approach may allow registrants and dissidents to order their own candidates in a way they believe would be most informative to shareholders, such as separately listing independent director nominees or by listing the nominees based on their skill sets. However, this approach runs the risk of generating some (perhaps limited) degree of confusion on the part of a shareholder who receives two proxy cards with candidates in different orders. While this risk could be mitigated by requiring that each party to the contest inform the other party as to

[401] Based on staff review of contested elections initiated in 2014 and 2015.

[402] *Id.*

[403] *See, e.g.,* Roundtable Transcript, comment of David Katz, Partner, Wachtell, Lipton, Rosen and Katz, at 42.

[404] *See, e.g.,* Joanne Miller & Jon Krosnick, *The Impact of Candidate Name Order on Election Outcomes,* 62 Pub. Opinion Q. 291 (1998); David Brockington, *A Low Information Theory of Ballot Position Effect,* 25 Pol. Behav. 1 (2003); Jonathan G.S. Koppell & Jennifer A. Steen, *The Effects of Ballot Placement on Election Outcomes,* 66 J. Pol. 267 (2004).

how to order its slate of candidates, such a requirement would introduce some incremental coordination costs to create consistent ordering across the registrant and dissident proxy cards.

Another approach would be to allow all parties to the contest complete flexibility in the presentation of nominees on their universal proxy cards. This approach may benefit registrants or dissidents that would prefer to strategically design their proxy card to better inform shareholders or to increase their chances of success, regardless of whether such strategic formatting of proxy cards may represent an inefficient use of resources from the perspective of shareholders. For example, presenting the candidates from both parties in a single, alphabetically ordered list may increase the possibility of split-ticket votes.[405] However, such an approach could be confusing for shareholders to the extent that each party's nominees were not readily identifiable as part of a particular slate or opponent nominees were de-emphasized (such as through font and sizing choices).

c. Additional Revisions

The proposed amendments require certain disclosures with respect to voting options and voting standards in proxy statements. We expect that the costs to registrants of such additional disclosures would be minimal. To the extent that such disclosures reduce shareholder uncertainty or confusion as to the effect of their votes, the efficiency of the voting process may be improved. However, we do not anticipate significant changes in voting outcomes or corporate decisions as a result of these disclosures.

Request for Comment

Throughout this release, we have discussed the anticipated costs and benefits of the proposed amendments. We request and encourage any interested person to submit comments regarding the proposed amendments and all aspects of our analysis of the potential effects of the amendments. We request comment from the point of view of shareholders, registrants, dissidents, and other market participants. With regard to any comments, we note that such comments are particularly helpful to us if accompanied by quantified estimates or other detailed analysis and supporting data regarding the issues addressed in those comments. We also are interested in comments on the alternatives presented in this release as well as any additional alternatives to the proposed amendments that should be considered.

76. We request comment on the prevalence, availability, costs, and benefits of split-ticket voting. We request specific estimates of costs borne by shareholders to implement split-ticket votes in recent proxy contests, itemized by the source of the cost. In particular, please provide information about the costs involved in attending a shareholder meeting in person, arranging for an in-person representative at the meeting, and any other methods of voting a split ticket. We also request information about the number of instances in a year in which shareholders choose to vote a split ticket.

77. We request comment on the prevalence, availability, costs, and benefits of certain accommodations currently made to facilitate split-ticket voting, such as a party to a contest arranging for an in-person representative to cast votes for a shareholder at the shareholder meeting. Alternatively, are there changes that could more effectively facilitate alternative means of split-ticket voting (without attending the meeting) consistently being made available to shareholders?

78. We request specific estimates of costs experienced in recent proxy contests, for dissidents as well as registrants, itemized by the source of the cost.

79. We request specific statistics regarding the extent to which shares are currently voted in person at annual meetings rather than voted by proxy in advance of such meetings, and how this varies in the case of contested elections versus uncontested elections.

80. We request specific statistics regarding the frequency of proxy contests in which the dissident does not solicit at least a majority of the shares eligible to vote.

81. We request comment on our estimate of the cost to engage in a nominal proxy contest, the potential incremental cost imposed by the proposed solicitation requirement on certain other proxy contests, and other estimates made in this release. We also request data that would allow us to make more precise estimates, such as data identifying the share ownership structure (including beneficial shareholders as well as holders of record) at registrants of different sizes and data on printing costs (for notices and for full set proxy materials) for dissidents.

82. Would split-ticket voting increase as a result of the proposed amendments? Would the proposed amendments reduce the cost and inconvenience currently faced by shareholders who choose to vote a split-ticket, while not changing the rate of split-ticket voting? Or are there shareholders who would choose to vote a split-ticket in some cases but do not because of the current impediments to doing so?

83. To what extent are votes for the full dissident slate likely to increase as a result of including the dissident nominees on registrant proxy cards, as proposed? Would dissidents change the number of shareholders they solicit as a result of the proposed amendments?

84. Are some kinds of voting choices more likely to be affected by adoption of universal proxy? For example, are either full-slate votes for the registrant or full-slate votes for the dissident more likely to switch to a split-ticket vote?

85. Would removing constraints on shareholder voting choices through universal proxies result in election outcomes that better reflect shareholder preferences, or could there be unintended outcomes? That is, would changes in shareholder voting behavior due to the availability of universal ballots result in election outcomes that do not reflect overall shareholder preferences as well as the outcomes that would have occurred without universal ballots? If so, please explain.

86. Would the use of universal proxy cards lead to more mixed boards, including both management and dissident nominees? How and to what extent? What would be the effect of any such change, including any effects on efficiency, competition, and capital formation? Would any such increase in mixed boards be beneficial or detrimental, and why is that the case?

87. Would the use of universal proxy cards lead to an increase or decrease in the incidence of typical proxy contests (as opposed to the nominal contests discussed above)? How and to what extent? What would be the effects of any such change, including any effects on efficiency, competition, and capital formation? Would any such change in the incidence of proxy contests be beneficial or detrimental, and why is that the case?

88. Would requiring the use of universal proxies provide advantages or disadvantages to one party or the other in an election contest? Would the expected effects of mandating universal proxies lead to an increase or decrease in the threat of proxy contests or otherwise change the nature of the

[405] *See* R. Darcy & Michael Marsh, *Decision Heuristics: Ticket-Splitting and the Irish Voter,* 13 Electoral Stud. 38 (1994) (concluding that the alphabetic ordering of candidates in Irish elections results in more split tickets relative to comparable elections in Malta and Australia, where candidates are grouped by parties).

relationship between registrants, dissidents, and shareholders, resulting in changes in managerial decision-making or registrant performance? How and to what extent? What would be the effects of any such change, including any effects on efficiency, competition, and capital formation? Would any such changes be beneficial or detrimental, and why is that the case?

89. Would the proposed amendments shift burdens to registrants in proxy contests? Would the proposed amendments result in nominal contests where the dissident does not expend resources on solicitation beyond the minimum required by the proposed amendments? Would dissidents be deterred from nominal contests by the cost of the proposed minimum solicitation requirement? Or is the magnitude of the cost such that it would not serve as a deterrent? What would be the effects of such contests, including any costs to registrants and any effects on efficiency, competition, and capital formation? Would nominal contests be beneficial or detrimental, and why is that the case? If we changed the proposed minimum solicitation requirements, such as to require solicitation of all shareholders, how would that affect the frequency of nominal contests? What would be the effect if instead we were to eliminate the proposed minimum solicitation requirements?

90. Would dissidents have a reasonable likelihood of gaining board representation under the proposed amendments if they did no more than the minimum required under the proposed amendments (*i.e.,* solicitation, such as by notice and access, of holders of shares representing at least a majority of the voting power of shares entitled to vote)? If so, is this due to the ability of shareholders to vote for dissident nominees on the registrant's universal proxy card? Are there other reasons why dissidents may be likely to initiate nominal contests?

91. Would dissidents in typical proxy contests bear any incremental costs in order to comply with the minimum solicitation requirements of the proposed amendments? If so, please provide estimates of such costs. Would those incremental costs unduly deter proxy contests, and if so, to what extent?

92. What is the current prevalence and distribution of different types of advance notice bylaws? Would the proposed notice deadline of 60 calendar days prior to the anniversary of the previous year's annual meeting date create a new constraint on dissidents, relative to existing advance notice bylaws? If so, how and to what extent? What would the effect be if we were instead to adopt a different notice deadline, such as 90 or 45 days prior to the anniversary of the previous year's annual meeting date?

93. Would the proposed proxy statement filing deadline for dissidents of 25 calendar days prior to the meeting date or five days after the registrant files its definitive proxy statement be sufficient to provide shareholders with the information needed to submit an informed vote? Would the proposed filing deadline create a new constraint on dissidents? If so, how and to what extent? Would a different filing deadline be more appropriate? If so, what deadline should apply and why?

94. Are dissidents or registrants likely to change their solicitation expenditures under the proposed amendments? If so, how and to what extent?

95. Are dissidents or registrants likely to incur incremental costs other than solicitation expenditures under the proposed amendments? If so, please describe and quantify those costs, if possible. For example, would registrants or dissidents incur costs to add disclosures to their proxy statements in reaction to the proposed amendments, such as disclosures urging shareholders not to support their opponent's candidates using their card and expressing their views as to the importance of a homogenous, rather than a mixed, board? What would it cost to prepare such disclosures?

96. Would there be advantages or disadvantages to shareholders, registrants, or dissidents if registrants and dissidents were required to make universal proxy cards available on request, but were allowed to initially disseminate either a standard or a universal proxy card at their option? Would requiring shareholders to request a universal proxy card impose a burden on their ability to vote for the combination of director nominees of their choice? Would this approach be logistically feasible and cost-effective? In particular, how would the process of fulfilling shareholder requests be managed to ensure that shareholders electing a universal proxy card are provided with one in a timely manner? How would the cost of this process be borne by the different parties to the contest? Would electronic and logistical systems need to be changed to accommodate such an approach? Please provide detail on how this approach could be implemented and estimates of the associated costs where possible.

97. Would dissidents and registrants take actions in response to the proposed amendments to lessen or capitalize on any potential effects of the proposed amendments? If so, what actions would they take and why?

98. If registrants and dissidents were permitted, but not required, to use universal proxies, would registrants and/or dissidents choose to use universal proxies? To what extent? In what circumstances would universal proxies be likely to be used by registrants? In what circumstances would universal proxies be likely to be used by dissidents? If one party were to choose to use a universal proxy, would that decision prompt the opposing party also to use a universal proxy?

99. If registrants and dissidents were permitted, but not required, to include opponent nominees on their proxy cards, should we require that all duly-nominated candidates be included, or should we allow registrants and dissidents to select which opponent nominees they include? What would be the effects of allowing only some of the opponent's nominees to be included on a card? Would that give rise to confusion in the voting process?

100. If dissidents were required to use universal proxies, while registrants were permitted, but not required, to do so, would such an approach provide an advantage to registrants in proxy contests? How and to what extent? Would any such advantage be offset by the ability of dissidents to choose which and how many shareholders they solicit, in contrast to the general practice that registrants solicit all shareholders? Would such an approach provide an advantage to dissidents? How and why?

101. We request statistics on the governance characteristics of investment companies and data with respect to proxy contests at investment companies, including their stated goals and outcomes. We also request comment on the prevalence, availability, costs, and benefits of split-ticket voting in the case of proxy contests at investment companies, including information about the number of instances in which shareholders choose to vote a split ticket at such contests.

102. We request statistics on characteristics of the shareholder base for different types of investment companies, including the dispersion in ownership and the distribution of shareholders of different types (*e.g.,* retail vs. institutional). We also request statistics regarding the costs of soliciting shareholders in different types of investment companies, including the estimated cost of soliciting all shareholders or shareholders that represent a majority of the voting rights.

103. What effect would the proposed amendments have on competition?

Would the proposed amendments put registrants subject to the proxy rules or particular types of registrants subject to the proxy rules at a competitive advantage or disadvantage? If so, what changes to the proposed requirements could mitigate any such impact?

104. What effect would the proposed amendments have on efficiency? Are there any positive or negative effects of the proposed amendments on efficiency that we have overlooked? How could the proposed amendments be changed to promote any positive effect or to mitigate any negative effect on efficiency?

105. What effect would the proposed amendments have on capital formation? How could the proposed amendments be changed to promote capital formation or to mitigate any negative effect on capital formation resulting from the amendments?

V. Paperwork Reduction Act

A. Background

Certain provisions of our disclosure rules and forms applicable to registrants contain ''collection of information'' requirements within the meaning of the Paperwork Reduction Act of 1995 (''PRA'').[406] The Commission is submitting the proposed amendments to the Office of Management and Budget (''OMB'') for review in accordance with the PRA.[407] The hours and costs associated with preparing, filing, and sending the schedules and forms constitute reporting and cost burdens imposed by each collection of information. An agency may not conduct or sponsor, and a person is not required to comply with, a collection of information requirement unless it displays a currently valid OMB control number. The titles for the affected collections of information are:

(1) Regulation 14A (Commission Rules 14a–1 through 14a–21 and Schedule 14A) (OMB Control No. 3235–0059); and

(2) Rule 20a–1 under the Investment Company Act of 1940, Solicitations of Proxies, Consents, and Authorizations (OMB Control No. 3235–0158).

We adopted Regulation 14A pursuant to the Exchange Act and Rule 20a–1 pursuant to the Investment Company Act. These rules set forth disclosure requirements for proxy statements filed by soliciting parties to help investors make informed investment and voting decisions. Compliance with the information collection is mandatory. Responses to the information collection are not kept confidential and there is no mandatory retention period for the collections of information.

B. Summary of Proposed Amendments' Impact on Collection of Information

We are proposing to amend the proxy rules as they apply to operating companies to revise the consent required of a bona fide nominee, eliminate the short slate rule and add Rule 14a–19 to establish new procedures for the solicitation of proxies, the preparation and use of proxy cards and the dissemination of information about all director nominees in contested elections.[408] The proposed amendments would affect the collection of information requirements of soliciting parties by requiring the use of a universal proxy card in all non-exempt solicitations in connection with contested elections, prescribing requirements for universal proxy cards, and requiring all parties to add a reference to the other party's proxy statement for information about the other party's nominees and explain that shareholders can access the other party's proxy statement on the Commission's Web site. The proposed amendments would additionally require dissidents in such election contests to provide a notice of intent to solicit and a list of their nominees to the registrant and eliminate the ability of dissidents to round out their slate with registrant nominees through use of the short slate rule. The proposed amendments would additionally prescribe filing deadlines for a dissident's definitive proxy statement and require dissidents to solicit at least a majority of the voting power of shares entitled to vote on the election of directors; however, we do not believe that these requirements will affect the reporting and cost burden associated with the collection of information.[409]

We are also proposing amendments to the proxy rules relating to all director elections to:

- Specify that the proxy card must include an ''against'' voting option when applicable state law gives effect to a vote ''against'';
- require proxy cards to give shareholders the ability to ''abstain'' in an election where a majority voting standard is in effect; and
- mandate disclosure about the effect of a ''withhold'' vote in an election. The proposed amendments requiring the appropriate use of an ''against,'' ''abstain'' or ''withhold'' voting option should better enable soliciting parties to properly seek and authorize the appropriate voting option for shareholders.

We arrived at the estimates discussed below by reviewing our burden estimates for similar disclosure. We believe that the proposed amendments regarding the use of a universal proxy card, required notices and related disclosure would result in only a small amount of additional required disclosure and the addition of only a limited amount of material (the names of duly nominated director candidates for which the soliciting party has complied with Rule 14a–19 on proxy cards). The application of these amendments would be limited to contested elections. In addition, we believe that the additional disclosure and changes to the proxy card relating to the appropriate use of ''against,'' ''abstain'' or ''withhold'' voting options would similarly result in only a small incremental increase in the required disclosure; however, the changes would apply to proxy materials in all director elections, not just contested elections.

C. Estimate of Burdens

We derived our new burden hour and cost estimates by estimating the total

[406] 44 U.S.C. 3501 *et seq.*

[407] 44 U.S.C. 3507(d); 5 CFR 1320.11.

[408] We are not proposing to amend the proxy rules for investment companies and BDCs and the discussion in this section does not relate to those entities. *See supra* Section II.D.

[409] Our current proxy rules do not prescribe minimum solicitation requirements for either registrants or dissidents; however, as discussed in Section II.B.4 *supra,* customary practice has been for soliciting parties to solicit more than a majority of shareholders because either, in the case of a registrant, they wish to meet notice, informational and quorum requirements for the annual meeting, or, in the case of a dissident, such solicitation is necessary in order to successfully wage a proxy contest. Based on staff analysis of the industry data provided by a proxy services provider for 35 proxy contests between June 30, 2015 and April 15, 2016, less than a majority of shareholders was solicited by a dissident in only a single proxy contest in that sample. In that instance, we estimate that the proposed amendments would have resulted in incremental solicitation expenses (exclusive of printing costs) to the dissident of approximately $1,000 if the least expensive approach to soliciting through an intermediary had been used to solicit the required additional number of shareholders. *See supra* notes 300–301. It is possible that the proposed amendments may change the number and type of proxy contests, including a possible increase in nominal contests in which dissidents spend little more than the basic required costs to pursue a contest. We preliminarily estimate that, for a nominal proxy contest, it may cost approximately $6,000 at a median-sized registrant using the least expensive approach to meet the proposed minimum solicitation requirements through an intermediary. *See supra* notes 307–308. Because we are unable to predict how the proposed amendments may impact the number and type of election contests, and in light of current solicitation practices, for PRA purposes, we are not estimating that the majority solicitation requirement for dissidents would increase the reporting and cost burden associated with Regulation 14A. However, we solicit comment on this point and request data to help us estimate any such increase for PRA purposes.

amount of time it would take to prepare and review the required disclosures called for by the proposed rules. This estimate represents the average burden for all soliciting parties, both large and small. In deriving our estimates, we recognize that the burdens will likely vary among soliciting parties. We believe that some soliciting parties will experience costs in excess of this average in the first year of compliance with the amendments and some parties may experience less than the average costs.

As discussed more fully in Section IV.D.4. above, it is unclear whether the proposed amendments would result in an increase or decrease in the number of election contests, and we therefore estimate no change in the number of proxy statement filings as a result of the proposed amendments. We estimate that the average incremental burden for a registrant to prepare a universal proxy card in a contested election and include the required disclosure would be two hours. We similarly estimate that the average incremental burden for a dissident to prepare a universal proxy card in a contested election and include the required disclosure would be two hours. We additionally estimate that the average incremental burden for a dissident and registrant to prepare the notice to the opposing party containing the names of its nominees in a contested election would be approximately one hour. Thus, we estimate that the total incremental burden for Schedule 14A would increase by three hours per election contest for registrants and three hours per election contest for other soliciting parties.[410] For purposes of the PRA, we estimate there would be 36 annual election contests per year,[411] resulting in 216 additional total incremental burden hours (6 hours × 36 election contests) under Schedule 14A as a result of proposed Rule 14a–19 and the related amendments.

We estimate that the additional disclosure and changes to the proxy card relating to the appropriate use of ''against,'' ''abstain'' or ''withhold'' voting options in proxy materials for all director elections would be considerably less than one hour for each proxy statement and card relating to an election of directors. Unlike the proposed amendments relating to election contests, these proposed amendments would apply to all director elections, including director elections for funds and BDCs. The disclosure and changes to the proxy card are being proposed to require registrants to clarify existing standards, and many of the descriptions and standards, once revised, are not likely to require significant revision from year to year. We estimate that these changes would result in an average of 10 minutes of additional burden per response.[412] For purposes of the PRA, we estimate the proposed changes would result in 931 hours of additional total incremental burden under Schedule 14A (10 minutes × 5,586 proxy statements) and 185 hours of total incremental burden under Rule 20a–1 (10 minutes × 1,108 filings).

These estimates include the time and cost of preparing disclosure that has been appropriately reviewed, including, as applicable, by management, in-house counsel, outside counsel and members of the board of directors. This burden would be added to the current burden for Regulation 14A and Rule 20a–1, as applicable. For proxy statements under Regulation 14A, we estimate that 75 percent of the burden of preparation is carried internally and that 25 percent of the burden of preparation is carried by outside professionals retained at an average cost of $400 per hour. The portion of the burden carried by outside professionals is reflected as a cost, while the portion of the burden carried internally is reflected in hours. We estimate a similar allocation between internal burden hours and outside professional costs with respect to the PRA burden for Rule 20a–1.

As a result of the estimates discussed above, we estimate for purposes of the PRA that the total incremental burden on all soliciting parties of the proposed amendments under Regulation 14A would be 860 hours for internal time (1,147 total incremental burden hours × 75 percent) and $114,700 (1,147 total incremental burden hours × 25 percent × $400) for the services of outside professionals. We further estimate for purposes of the PRA that the total incremental burden on all soliciting parties of the proposed amendments under Rule 20a–1 would be 138.75 hours for internal time (185 total incremental burden hours × 75 percent) and $18,500 (185 total incremental burden hours × 25 percent × $400) for the services of outside professionals.

A summary of the proposed changes is included in the table below.

TABLE 1—CALCULATION OF INCREMENTAL PRA BURDEN ESTIMATES

	Current annual responses (A)	Proposed annual responses (B)	Current burden hours (C)	Increase in burden hours (D)	Proposed burden hours (E) = C + D	Current professional costs (F)	Increase in professional costs (G)	Proposed professional costs = F + G
Schedule 14A	5,586	5,586	546,814	860	547,674	$72,908,472	$114,700	$73,023,172
Rule 20a–1	1,108	1,108	94,180	139	94,319	33,240,000	18,500	33,258,500

D. Request for Comment

Pursuant to 44 U.S.C. 3506(c)(2)(B), we request comments in order to:

- Evaluate whether the proposed collections of information are necessary for the proper performance of the functions of the Commission, including whether the information will have practical utility;
- Evaluate the accuracy of our assumptions and estimate of the burden of the proposed collections of information;
- Determine whether there are ways to enhance the quality, utility, and clarity of the information to be collected;
- Evaluate whether there are ways to minimize the burden of the collections of information on those who respond, including through the use of automated collection techniques or other forms of information technology; and
- Evaluate whether the proposed amendments would have any effects on

[410] There may be a range of burdens by soliciting parties as they determine exactly how to present the proxy card and the language of the required disclosure; however, we estimate the burdens described above as the average burden for soliciting parties.

[411] We do not estimate that there would be additional election contests as a result of the proposed amendments. We estimate approximately 36 election contests per year based on the average of actual proxy contests for elections of directors in 2014 (37) and 2015 (35).

[412] We estimate that the incremental burden for the proposed disclosure and changes to the proxy card would increase by 20 minutes in the first year and then be reduced to five minutes in years two and three, resulting in a three year average of an increased 10 minute burden per response.

any other collections of information not previously identified in this section.

Any member of the public may direct to us any comments about the accuracy of these burden estimates and any suggestions for reducing these burdens. Persons submitting comments on the collection of information requirements should direct the comments to the Office of Management and Budget, Attention: Desk Officer for the Securities and Exchange Commission, Office of Information and Regulatory Affairs, Washington, DC 20503, and send a copy to Brent J. Fields, Secretary, U.S. Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549–1090, with reference to File No. S7–24–16. Requests for materials submitted to OMB by the Commission with regard to the collection of information should be in writing, refer to File No. S7–24–16, and be submitted to the U.S. Securities and Exchange Commission, Office of FOIA Services, 100 F Street NE., Washington, DC 20549–2736. OMB is required to make a decision concerning the collection of information between 30 and 60 days after publication of this proposed rule. Consequently, a comment to OMB is best assured of having its full effect if OMB receives it within 30 days of publication.

VI. Small Business Regulatory Enforcement Fairness Act

For purposes of the Small Business Regulatory Enforcement Fairness Act of 1996 (''SBREFA''),[413] the Commission must advise OMB as to whether a proposed regulation constitutes a ''major'' rule. Under SBREFA, a rule is considered ''major'' where, if adopted, it results or is likely to result in:

- An annual effect on the economy of $100 million or more (either in the form of an increase or a decrease);
- a major increase in costs or prices for consumers or individual industries; or
- significant adverse effects on competition, investment or innovation.

If a rule is ''major,'' its effectiveness will generally be delayed for 60 days pending congressional review.

We request comment on whether our proposed amendments would be a ''major rule'' for purposes of SBREFA. We solicit comment and empirical data on:

- The potential effect on the U.S. economy on an annual basis;
- any potential increase in costs or prices for consumers or individual industries; and
- any potential effect on competition, investment or innovation.

We request those submitting comments to provide empirical data and other factual support for their views to the extent possible.

VII. Initial Regulatory Flexibility Act Analysis

The Regulatory Flexibility Act[414] requires us, in promulgating rules under Section 553 of the Administrative Procedure Act,[415] to consider the impact of those rules on small entities. The Commission has prepared this Initial Regulatory Flexibility Act Analysis in accordance with 5 U.S.C. 603. This Initial Regulatory Flexibility Act Analysis relates to proposed amendments to Exchange Act Rules 14a–2, 14a–3, 14a–4, 14a–5, 14a–6, and 14a–101 and proposed new Exchange Act Rule 14a–19.

A. Reasons for, and Objectives of, the Proposed Action

In a contested election today, the choices available to shareholders voting for directors through the proxy process are not the same as those available to shareholders voting in person at a shareholder meeting. Shareholders voting in person at a meeting may select among all of the duly nominated director candidates proposed for election by any party in an election contest and vote for any combination of those candidates. Shareholders voting by proxy, however, generally are limited to the selection of candidates provided by the party soliciting the shareholder's proxy.

In 2013, the IAC recommended that we explore revising our proxy rules to provide proxy contestants with the option to use a universal proxy card in connection with short slate director nominations.[416] A 2014 rulemaking petition requested that we require the use of a universal proxy to allow shareholders to vote for their preferred combination of registrant and dissident nominees in contested director elections.[417] The Commission held a roundtable in February 2015 to explore ways to improve proxy voting, including through the adoption of universal proxies. As a result of these recommendations and our review of the proxy rules, we are proposing amendments that would allow a shareholder voting by proxy to choose among director nominees in an election contest in a manner that more closely reflects the choice that could be made by voting in person at a shareholder meeting. To this end, we are proposing to amend the proxy rules to:

- Revise the consent required of a bona fide nominee;
- eliminate the short slate rule; and
- require the use of universal proxy cards in all non-exempt solicitations in connection with contested elections and prescribe requirements for universal proxy cards including notice, filing and solicitation requirements.

We have also considered and are proposing additional improvements to the proxy voting process by making changes to the form of proxy. These changes would apply to all director elections and would require disclosure regarding the effect of shareholder action to vote ''against,'' ''withhold'' or ''abstain'' and that the appropriate voting option be listed on the proxy card.

B. Legal Basis

We are proposing the rule amendments pursuant to Sections 14 and 23(a) of the Exchange Act.

C. Small Entities Subject to the Proposed Rules

The proposed amendments would affect small entities that file proxy statements under the Exchange Act. For purposes of the Regulatory Flexibility Act, under our rules, an issuer of securities, other than an investment company,[418] is a ''small business'' or ''small organization'' if it had total assets of $5 million or less on the last day of its most recent fiscal year.[419] We estimate that there are approximately 692 issuers that are required to file with the Commission, other than investment companies, that may be considered small entities.[420]

[413] Public Law 104–121, Tit. II, 110 Stat. 857 (1996).

[414] 5 U.S.C. 601 *et seq.*

[415] 5 U.S.C. 553.

[416] *See* IAC Recommendation.

[417] *See* Rulemaking Petition.

[418] An investment company is a small entity if, together with other investment companies in the same group of related investment companies, it has net assets of $50 million or less as of the end of its most recent fiscal year. 17 CFR 270.0–10(a). The staff estimates that, as of December 2015, approximately 129 funds and approximately 34 BDCs are small entities. As discussed in Section II.D. *supra,* we are not proposing that the amendments to change the consent required of a bona fide nominee, to eliminate the short slate rule or to require the use of a universal proxy card apply to investment companies. The only proposed amendments that would potentially affect small entities that are investment companies are the amendments that would apply to all director elections and require disclosure regarding the effect of shareholder action to vote ''against,'' ''withhold'' or ''abstain.''

[419] 17 CFR 240.0–10(a). The Regulatory Flexibility Act defines ''small entity'' to mean ''small business,'' ''small organization,'' or ''small governmental jurisdiction.'' 5 U.S.C. 601(6).

[420] The estimate is based on staff review of Form 10–K filings in 2015 by registrants that have a class

The proposed amendments to the federal proxy rules establishing new procedures for use of a universal proxy card only would affect small entities engaged in a contested election. Based on a review of contested elections from 2014 and 2015, we are not aware of any [421] contested elections involving small entities during that time period. While we anticipate that these proposed amendments may affect some small entities in the future, due to the small size of the entities and the higher concentration of ownership in smaller entities,[422] we do not expect many such entities would be affected. Additionally, we are proposing to amend the procedures and disclosure applicable to director elections generally requiring clear disclosure about the effect of shareholder action to vote ''against,'' ''withhold'' or ''abstain'' and require that the appropriate voting option be listed on the proxy card. We expect these changes would affect small entities when those entities solicit proxies in a director election contest and when drafting applicable disclosure relating to voting standards in all director elections.

D. Projected Reporting, Recordkeeping and Other Compliance Requirements

The proposed amendments to the proxy rules would:

- Revise the consent required of a bona fide nominee;
- eliminate the short slate rule;
- require the use of universal proxy cards in all non-exempt solicitations in connection with contested elections and prescribe requirements for universal proxy cards including notice, filing and solicitation requirements; and
- require disclosure regarding the effect of shareholder action to vote ''against,'' ''withhold'' or ''abstain'' and that the appropriate voting option be listed on the proxy card.

The proposed changes in reporting requirements for soliciting parties are outlined in detail above. We do not believe the proposed amendments would impose significant recordkeeping requirements.

E. Duplicative, Overlapping or Conflicting Federal Rules

We believe that there are no federal rules that duplicate, overlap or conflict with the proposed amendments.

F. Significant Alternatives

The Regulatory Flexibility Act directs us to consider alternatives that would accomplish our stated objectives, while minimizing any significant adverse impact on small entities. Pursuant to Section 3(a) of the Regulatory Flexibility Act,[423] we considered certain types of alternatives, including: (1) The establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation or simplification of compliance and reporting requirements under the rule for small entities; (3) the use of performance rather than design standards; and (4) an exemption from coverage of the rule, or any part of the rule, for small entities.

We considered a variety of alternatives to achieve our regulatory objective to allow a shareholder voting by proxy to choose among director nominees in an election contest in a manner that reflects as closely as possible the choice that could be made by voting in person at a shareholder meeting. In the alternative, we considered making the use of universal proxies optional for all parties or establishing a hybrid approach where use of a universal proxy would be mandatory for only one party.[424] We have not proposed these alternative approaches in this rulemaking because we do not believe they meet the regulatory objective as well as the proposal; they do not replicate the choice that could be made by voting in person at a shareholder meeting as effectively as the proposed amendments.

The current proxy rules relating to election contests and the proxy rules generally do not impose different standards or requirements based on the size of the registrant or dissident. These rules contain both performance and design standards in order to achieve appropriate disclosure in the proxy voting process under the Exchange Act.[425] The proposed amendments require very limited additional disclosure by either the registrant or the dissident, but do impose additional filing and solicitation requirements on dissidents and an obligation on both parties in an election contest to include the other side's nominees on their respective proxy cards and to notify the other party of the names of their respective director nominees. We believe that the proposed amendments effectively meet the regulatory objective to permit shareholders voting by proxy in an election contest to reflect their choices as they could if voting in person at a shareholder meeting. We believe the proposed amendments are equally appropriate for parties of all sizes seeking to engage in an election contest because they are intended to facilitate shareholder enfranchisement, which does not depend on the size of the soliciting party. For that reason, we are not proposing differing compliance or reporting requirements or timetables for small entities, or an exception for small entities. However we seek comment on whether and how the proposed amendments could be modified to provide differing compliance or reporting requirements or timetables for small entities and whether such separate requirements would be appropriate. Additionally, we request comment on whether we should exempt small entities (either registrants or dissidents) from the proposed amendments.

Similarly, we believe that the proposed amendments do not need further clarification, consolidation, or simplification for small entities, although we solicit comment on how the proposed amendments could be revised to reduce the burden on small entities. We also note that, as with the current proxy rules, the proposed requirements include both performance and design standards. In particular, the proposed universal proxy card is subject to certain presentation and formatting requirements but there is flexibility as to the exact design of the card within those parameters. We solicit comment as to whether there are additional aspects of the proposed amendments for which performance standards would be appropriate.

G. Solicitation of Comment

We encourage the submission of comments with respect to any aspect of this Initial Regulatory Flexibility Analysis. In particular, we request comments regarding:

- How the proposed amendments can achieve their objective while lowering the burden on small entities;
- the number of small entities that may be affected by the proposed amendments;

of equity securities registered under Section 12 of the Exchange Act.

[421] A staff review of 72 Form 10–K filings for registrants involved in director election contests that were initiated through the filing of preliminary proxy statements by dissidents in calendar years 2014 and 2015 revealed that none of these registrants had total assets of $5 million or less on the last day of the fiscal year prior to the contest.

[422] *See supra* Table 1 in Section VI.B.1.b. showing increasing concentration of ownership by management as registrant market capitalization decreases.

[423] 5 U.S.C. 603(c).

[424] *See supra* Section IV.D.5.b.

[425] For example, the proxy rules include filing deadlines and some required specific disclosure. However, Schedule 14A generally permits parties to craft their disclosure as they deem appropriate.

• the existence or nature of the potential impact of the proposed amendments on small entities discussed in the analysis; and

• how to quantify the impact of the proposed amendments.

Respondents are asked to describe the nature of any impact and provide empirical data supporting the extent of the impact. We will consider such comments in the preparation of the Final Regulatory Flexibility Analysis, if the proposed amendments are adopted, and will place those comments in the same public file as comments on the proposed amendments themselves.

VIII. Statutory Authority and Text of Proposed Rule Amendments

The amendments contained in this release are being proposed under the authority set forth in Sections 14 and 23(a) of the Exchange Act.

List of Subjects in 17 CFR Part 240

Reporting and recordkeeping requirements, Securities.

Text of the Proposed Amendments

For the reasons set out above, the Commission proposes to amend 17 CFR part 240 as follows:

PART 240—GENERAL RULES AND REGULATIONS, SECURITIES EXCHANGE ACT OF 1934

■ 1. The general authority citation for part 240 continues to read, in part, as follows:

Authority: 15 U.S.C. 77c, 77d, 77g, 77j, 77s, 77z–2, 77z–3, 77eee, 77ggg, 77nnn, 77sss, 77ttt, 78c, 78c–3, 78c–5, 78d, 78e, 78f, 78g, 78i, 78j, 78j–1, 78k, 78k–1, 78*l,* 78m, 78n, 78n–1, 78*o,* 78*o*–4, 78*o*–10, 78p, 78q, 78q–1, 78s, 78u–5, 78w, 78x, 78*ll,* 78mm, 80a–20, 80a–23, 80a–29, 80a–37, 80b–3, 80b–4, 80b–11, 7201 *et seq.,* and 8302; 7 U.S.C. 2(c)(2)(E); 12 U.S.C. 5221(e)(3); 18 U.S.C. 1350; Pub. L. 111–203, 939A, 124 Stat. 1376 (2010); and Pub. L. 112–106, sec. 503 and 602, 126 Stat. 326 (2012), unless otherwise noted.

* * * * *

■ 2. Amend § 240.14a–2 by revising paragraph (b) introductory text to read as follows:

§ 240.14a–2 Solicitations to which § 240.14a–3 to § 240.14a–15 apply.

* * * * *

(b) Sections 240.14a–3 to 240.14a–6 (other than paragraphs 14a–6(g) and 14a–6(p)), § 240.14a–8, § 240.14a–10, §§ 240.14a–12 to 240.14a–15 and § 240.14a–19 do not apply to the following:

* * * * *

§ 240.14a–3 [Amended]

■ 3. Amend § 240.14a–3 as follows:

■ a. In paragraph (a)(3)(i) remove the period at the end of the paragraph and add in its place ''; or'';

■ b. In paragraph (a)(3)(ii) remove the semi-colon and add a period in its place.

■ 4. Amend § 240.14a–4 as follows:

■ a. Revise paragraph (b)(2);

■ b. Remove Instruction 1 and 2 to paragraph (b)(2);

■ c. Redesignate paragraph (b)(3) as paragraph (b)(5);

■ d. Add new paragraphs (b)(3) and (4);

■ e. Add Instruction to paragraphs (b)(2), (3), and (4);

■ f. Revise paragraphs (c)(5) and (d)(1);

■ g. Amend (d)(3) by adding a comma before ''or'' at the end of the paragraph; and

■ h. Revise paragraph (d)(4).

The revisions and additions read as follows:

§ 240.14a–4 Requirements as to proxy.

* * * * *

(b) * * *

(2) A form of proxy that provides for the election of directors shall set forth the names of persons nominated for election as directors, including any person whose nomination by a shareholder or shareholder group satisfies the requirements of § 240.14a–11, an applicable state or foreign law provision, or a registrant's governing documents as they relate to the inclusion of shareholder director nominees in the registrant's proxy materials.

(3) Except as otherwise provided in § 240.14a–19, a form of proxy that provides for the election of directors may provide a means for the security holder to grant authority to vote for the nominees set forth, as a group, provided that there is a similar means for the security holder to withhold authority to vote for such group of nominees. Any such form of proxy which is executed by the security holder in such manner as not to withhold authority to vote for the election of any nominee shall be deemed to grant such authority, provided that the form of proxy so states in bold-face type. Means to grant authority to vote for any nominees as a group or to withhold authority for any nominees as a group may not be provided if the form of proxy includes one or more shareholder nominees in accordance with § 240.14a–11, an applicable state or foreign law provision, or a registrant's governing documents as they relate to the inclusion of shareholder director nominees in the registrant's proxy materials.

(4) When applicable state law gives legal effect to votes cast against a nominee, then in lieu of providing a means for security holders to withhold authority to vote, the form of proxy shall provide a means for security holders to vote against each nominee and a means for security holders to abstain from voting. When applicable state law does not give legal effect to votes cast against a nominee, such form of proxy shall clearly provide any of the following means for security holders to withhold authority to vote for each nominee:

(i) A box opposite the name of each nominee which may be marked to indicate that authority to vote for such nominee is withheld; or

(ii) An instruction in bold-face type which indicates that the security holder may withhold authority to vote for any nominee by lining through or otherwise striking out the name of any nominee; or

(iii) Designated blank spaces in which the security holder may enter the names of nominees with respect to whom the security holder chooses to withhold authority to vote; or

(iv) Any other similar means, provided that clear instructions are furnished indicating how the security holder may withhold authority to vote for any nominee.

Instruction to paragraphs (b)(2), (3), and (4). These paragraphs do not apply in the case of a merger, consolidation or other plan if the election of directors is an integral part of the plan.

* * * * *

(c) * * *

(5) The election of any person to any office for which a bona fide nominee is named in a proxy statement and such nominee is unable to serve or for good cause will not serve.

* * * * *

(d) * * *

(1) To vote for the election of any person to any office for which a bona fide nominee is not named in the proxy statement,

(i) A person shall not be deemed to be a bona fide nominee and shall not be named as such unless the person has consented to being named in a proxy statement relating to the registrant's next annual meeting of shareholders at which directors are to be elected (or a special meeting in lieu of such meeting) and to serve if elected.

(ii) Notwithstanding paragraph (d)(1)(i) of this section, if the registrant is an investment company registered under the Investment Company Act of 1940 (15 U.S.C. 80a–1 *et seq.*) or a business development company as defined by section 2(a)(48) of the Investment Company Act of 1940 (15 U.S.C. 80a–2(a)(48)), a person shall not

be deemed to be a bona fide nominee and shall not be named as such unless the person has consented to being named in the proxy statement and to serve if elected. Provided, however, that nothing in this § 240.14a–4 shall prevent any person soliciting in support of nominees who, if elected, would constitute a minority of the board of directors of an investment company registered under the Investment Company Act of 1940 or a business development company as defined by section 2(a)(48) of the Investment Company Act of 1940, from seeking authority to vote for nominees named in the registrant's proxy statement, so long as the soliciting party:

(A) Seeks authority to vote in the aggregate for the number of director positions then subject to election;

(B) Represents that it will vote for all the registrant nominees, other than those registrant nominees specified by the soliciting party;

(C) Provides the security holder an opportunity to withhold authority with respect to any other registrant nominee by writing the name of that nominee on the form of proxy; and

(D) States on the form of proxy and in the proxy statement that there is no assurance that the registrant's nominees will serve if elected with any of the soliciting party's nominees.

* * * * *

(4) To consent to or authorize any action other than the action proposed to be taken in the proxy statement, or matters referred to in paragraph (c) of this section.

* * * * *

■ 5. Amend § 240.14a–5 as follows:

■ a. Revise paragraph (c);

■ b. In paragraph (e)(2) remove the ''and'' at the end of the paragraph;

■ c. In paragraph (e)(3) remove the period and add ''; and'' in its place; and

■ d. Add paragraph (e)(4).

The revisions and addition read as follows:

§ 240.14a–5 Presentation of information in proxy statement.

* * * * *

(c) Any information contained in any other proxy soliciting material which has been or will be furnished to each person solicited in connection with the same meeting or subject matter may be omitted from the proxy statement, if a clear reference is made to the particular document containing such information.

* * * * *

(e) * * *

(4) The deadline for providing notice of a solicitation of proxies in support of director nominees other than the registrant's nominees pursuant to § 240.14a–19 for the registrant's next annual meeting unless the registrant is an investment company registered under the Investment Company Act of 1940 (15 U.S.C. 80a–1 *et seq.*) or a business development company as defined by section 2(a)(48) of the Investment Company Act of 1940 (15 U.S.C. 80a–2(a)(48)).

* * * * *

■ 6. Amend § 240.14a–6 by revising NOTE 3 TO PARAGRAPH (a) to read as follows:

§ 240.14a–6 Filing requirements.

* * * * *

(a) * * *

Note 3 to Paragraph (a): Solicitation in Opposition. For purposes of the exclusion from filing preliminary proxy material, a ''solicitation in opposition'' includes: (a) Any solicitation opposing a proposal supported by the registrant; (b) any solicitation supporting a proposal that the registrant does not expressly support, other than a security holder proposal included in the registrant's proxy material pursuant to § 240.14a–8; and (c) any solicitation subject to § 240.14a–19. The inclusion of a security holder proposal in the registrant's proxy material pursuant to § 240.14a–8 does not constitute a ''solicitation in opposition,'' even if the registrant opposes the proposal and/or includes a statement in opposition to the proposal. The inclusion of a shareholder nominee in the registrant's proxy materials pursuant to § 240.14a–11, an applicable state or foreign law provision, or a registrant's governing documents as they relate to the inclusion of shareholder director nominees in the registrant's proxy materials does not constitute a ''solicitation in opposition'' for purposes of § 240.14a–6(a), even if the registrant opposes the shareholder nominee and solicits against the shareholder nominee and in favor of a registrant nominee.

* * * * *

■ 7. Add § 240.14a–19 to read as follows:

§ 240.14a–19 Solicitation of proxies in support of director nominees other than the registrant's nominees.

(a) No person may solicit proxies in support of director nominees other than the registrant's nominees unless such person:

(1) Provides notice to the registrant in accordance with paragraph (b) of this section unless the information required by paragraph (b) of this section has been provided in a preliminary or definitive proxy statement previously filed by such person;

(2) Files a definitive proxy statement with the Commission in accordance with § 240.14a–6(b) by the later of:

(i) 25 calendar days prior to the security holder meeting date; or

(ii) Five (5) calendar days after the date that the registrant files its definitive proxy statement; and

(3) Solicits the holders of shares representing at least a majority of the voting power of shares entitled to vote on the election of directors and includes a statement to that effect in the proxy statement or form of proxy.

(b) The notice shall:

(1) Be postmarked or transmitted electronically to the registrant at its principal executive office no later than 60 calendar days prior to the anniversary of the previous year's annual meeting date, except that, if the registrant did not hold an annual meeting during the previous year, or if the date of the meeting has changed by more than 30 calendar days from the previous year, then notice must be provided by the later of 60 calendar days prior to the date of the annual meeting or the 10th calendar day following the day on which public announcement of the date of the annual meeting is first made by the registrant;

(2) Include the names of all nominees for whom such person intends to solicit proxies; and

(3) Include a statement that such person intends to solicit the holders of shares representing at least a majority of the voting power of shares entitled to vote on the election of directors in support of director nominees other than the registrant's nominees.

(c) If any change occurs with respect to such person's intent to solicit the holders of shares representing at least a majority of the voting power of shares entitled to vote on the election of directors in support of director nominees other than the registrant's nominees or with respect to the names of such person's nominees, such person shall notify the registrant promptly.

(d) A registrant shall notify the person conducting a proxy solicitation subject to this section of the names of all nominees for whom the registrant intends to solicit proxies unless the names have been provided in a preliminary or definitive proxy statement previously filed by the registrant. The notice shall be postmarked or transmitted electronically no later than 50 calendar days prior to the anniversary of the previous year's annual meeting date, except that, if the registrant did not hold an annual meeting during the previous year, or if the date of the meeting has changed by more than 30 calendar days from the previous year, then notice must be provided no later than 50 calendar days prior to the date of the annual meeting. If any change occurs with respect to the names of the registrant's

nominees, the registrant shall notify the person conducting a proxy solicitation subject to this section promptly.

Instruction to paragraphs (b)(1) and (d). Where the deadline falls on a Saturday, Sunday or holiday, the deadline will be treated as the first business day following the Saturday, Sunday or holiday.

(e) Notwithstanding the provisions of § 240.14a–4(b)(2), if any person is conducting a proxy solicitation subject to this section, the form of proxy of the registrant and the form of proxy of any person soliciting proxies pursuant to this section shall:

(1) Set forth the names of all persons nominated for election by the registrant and by any person or group of persons that has complied with this section and the name of any person whose nomination by a shareholder or shareholder group satisfies the requirements of an applicable state or foreign law provision or a registrant's governing documents as they relate to the inclusion of shareholder director nominees in the registrant's proxy materials;

(2) Provide a means for the security holder to grant authority to vote for the nominees set forth;

(3) Clearly distinguish between the nominees of the registrant, the nominees of the person or group of persons that has complied with this section and the nominees of any shareholder or shareholder group whose nominees are included in a registrant's proxy materials pursuant to the requirements of an applicable state or foreign law provision or a registrant's governing documents;

(4) Within each group of nominees referred to in paragraph (e)(3) of this section, list nominees in alphabetical order by last name;

(5) Use the same font type, style and size for all nominees;

(6) Prominently disclose the maximum number of nominees for which authority to vote can be granted; and

(7) Prominently disclose the treatment and effect of a proxy executed in a manner that grants authority to vote for the election of fewer or more nominees than the number of directors being elected and the treatment and effect of a proxy executed in a manner that does not grant authority to vote with respect to any nominees.

(f) If any person is conducting a proxy solicitation subject to this section, the form of proxy of the registrant and the form of proxy of any person soliciting proxies pursuant to this section may provide a means for the security holder to grant authority to vote for the nominees of the registrant set forth, as a group, and a means for the security holder to grant authority to vote for the nominees of any other soliciting person set forth, as a group, provided that there is a similar means for the security holder to withhold authority to vote for such groups of nominees unless the number of nominees of the registrant or of any other soliciting person is less than the number of directors being elected. Means to grant authority to vote for any nominees as a group or to withhold authority for any nominees as a group may not be provided if the form of proxy includes one or more shareholder nominees in accordance with an applicable state or foreign law provision or a registrant's governing documents as they relate to the inclusion of shareholder director nominees in the registrant's proxy materials.

(g) This section shall not apply to:

(1) A consent solicitation; or

(2) A solicitation in connection with an election of directors at an investment company registered under the Investment Company Act of 1940 (15 U.S.C. 80a–1 *et seq.*) or a business development company as defined by section 2(a)(48) of the Investment Company Act of 1940 (15 U.S.C. 80a–2(a)(48)).

■ 9. Amend § 240.14a–101 as follows:

■ a. Revise Instruction 3(a)(i) and (ii) to Item 4;

■ b. Add Item 7(h); and

■ c. In Item 21, revise paragraph (b) and add paragraph (c).

The revisions and addition read as follows:

§ 240.14a–101 Schedule 14A. Information required in proxy statement.

* * * * *

Item 4. Persons Making the Solicitation * * *

Instructions. * * *

3. For purposes of this Item 4 and Item 5 of this Schedule 14A:

(a) * * *

(i) In the case of a solicitation made on behalf of the registrant, the registrant, each director of the registrant and each of the registrant's nominees for election as a director;

(ii) In the case of a solicitation made otherwise than on behalf of the registrant, each of the soliciting person's nominees for election as a director;

* * * * *

Item 7. Directors and executive officers. * * *

* * * * *

(h) If a person is conducting a solicitation that is subject to § 240.14a–19, the registrant must include in its proxy statement a statement directing shareholders to refer to any other soliciting person's proxy statement for information required by Item 7 of this Schedule 14A with regard to such person's nominee or nominees and a soliciting person other than the registrant must include in its proxy statement a statement directing shareholders to refer to the registrant's or other soliciting person's proxy statement for information required by Item 7 of this Schedule 14A with regard to the registrant's or other soliciting person's nominee or nominees. The statement must explain to shareholders that they can access the other soliciting person's proxy statement, and any other relevant documents, for free on the Commission's Web site.

* * * * *

Item 21. Voting Procedures. * * *

* * * * *

(b) Disclose the treatment and effect under applicable state law and registrant charter and bylaw provisions of abstentions, broker non-votes and, to the extent applicable, a security holder's withholding of authority to vote for a nominee in an election of directors.

(c) When applicable, disclose how the soliciting person intends to treat proxy authority granted in favor of any other soliciting person's nominees if such other soliciting person abandons its solicitation or fails to comply with § 240.14a–19.

* * * * *

By the Commission.

Dated: October 26, 2016.

Brent J. Fields,

Secretary.

[FR Doc. 2016–26349 Filed 11–9–16; 8:45 am]

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Department of Justice

Drug Enforcement Administration

Jones Total Health Care Pharmacy, L.L.C., and SND Health Care, L.L.C.; Decision and Order; Notice

DEPARTMENT OF JUSTICE

Drug Enforcement Administration

[Docket No. 15–2]

Jones Total Health Care Pharmacy, L.L.C., and SND Health Care, L.L.C.; Decision and Order

On April 29, 2015, Administrative Law Judge Gail A. Randall (hereinafter, ALJ) issued the attached Recommended Decision.[1] Therein, the ALJ found that ''Respondents violated recordkeeping requirements by failing to record whether Jones Pharmacy's biennial inventory was taken at the opening or close of business, and by failing to indicate the number of tablets per opened commercial container, the number of tablets shipped in each commercial container, and the number of commercial containers that [were] on hand.'' R.D. at 59 (citing 21 CFR 1304.11(e)(3)).

Most significantly, the ALJ further found that Respondent's (Jones Pharmacy) pharmacists dispensed controlled substance prescriptions in violation of their corresponding responsibility, *see id.* at 60–64, pursuant to which it is a violation of federal law for a pharmacist to knowingly dispense a controlled substance prescription which was not ''issued for a legitimate medical purpose by a practitioner acting in the usual course of professional practice.'' 21 CFR 1306.04(a). The ALJ credited the testimony of the Government's Expert that the prescriptions presented various red flags, *i.e.,* indicia that the prescriptions were not issued for a legitimate medical purpose. These included that: (1) The patients were traveling long distances (and many came from out-of-state) to obtain the prescriptions; (2) that the patients were prescribed cocktails which included narcotics such as oxycodone, benzodiazepines such as Xanax (alprazolam), and muscle relaxants such as Soma (carisoprodol) which were known to be highly abused; (3) that on some occasions, two patients came from the same out-of-state location and presented identical or nearly identical prescriptions; (4) that purported pain patients presented only prescriptions for short-acting but not long-acting narcotics; and (5) that the patients paid for their prescriptions with cash. *Id.* at 61–62. The ALJ further credited the testimony of the Government's Expert in pharmacy practice that the red flags presented by many of the prescriptions could not be resolved by the pharmacists. *Id.* at 64.

The ALJ specifically rejected Respondent's contention that its owner (Ms. Cherese Jones) was simply naïve or unaware of various indicia (otherwise known as red flags) that the prescriptions her pharmacy filled lacked a legitimate medical purpose as well as its contention that during the relevant time period, Florida pharmacists were generally ''unaware of the . . . concept of 'red flags.' '' R.D. at 66–69. The ALJ was unpersuaded by the testimony of Respondent's Expert that pharmacists were generally unaware of the concept of red flags during the relevant time period, noting that while Respondent's Expert claimed to have based her opinion on a review of the Agency's administrative decisions, those decisions contradicted her testimony. *Id.* at 68–69.

Finding that the Government met its burden of proof, the ALJ then addressed whether Respondent had put forward sufficient evidence to show why it could be entrusted with a registration. The ALJ specifically found that Ms. Jones had ''carefully avoided any admission that she failed to exercise her corresponding responsibility'' and that her ''wavering responses on cross-examination undoubtedly show her lack of understanding of a pharmacist's corresponding responsibility.'' R.D. 71–72 & n.27. Based on her conclusion that Ms. Jones ''had not accepted responsibility for the unlawful dispensing that occurred at'' Respondent, the ALJ declined to consider Respondent's testimony regarding its remedial efforts. *Id.* at 73. And while finding that Jones Pharmacy and SND Healthcare ''are separate entities,'' *id.,* the ALJ found that Ms. Jones was the owner and operator of both entities and that ''there is no dispute that SND Healthcare and Jones Pharmacy are one integrated enterprise.'' *Id.* at 74. The ALJ thus ''conclude[d] that the unlawful dispensing practices at Jones . . . Pharmacy, L.L.C., are an appropriate basis to deny the pending application'' of SND Healthcare for a registration. *Id.* The ALJ thus recommended that I revoke Jones Pharmacy's registration and deny any pending application by Jones to renew or modify its registration. *Id.* at 75. With respect to SND Healthcare, the ALJ recommended that I deny its pending application.

Respondent filed Exceptions to the ALJ's Recommended Decision and the Government filed a Response to Respondent's Exceptions. Thereafter, the record was forwarded to me for Final Agency Action.

Having considered the record in its entirety including Respondent's Exceptions, I find that while several of its contentions with respect to the ALJ's factual findings are not without merit, I adopt the ALJ's credibility findings and conclude that most of the ALJ's factual findings are supported by a preponderance of the evidence. I further conclude that the ALJ's factual findings support her legal conclusions that: (1) Respondent's pharmacists dispensed numerous controlled substance prescriptions in violation of the Agency's corresponding responsibility rule, *see* 21 CFR 1306.04(a); (2) Respondent has not accepted responsibility for its misconduct; and (3) that there is sufficient overlap in the ownership and control of Jones Pharmacy and SND Healthcare such that Jones' misconduct supports the denial of SND's application.[2]

Accordingly, I adopt the ALJ's legal conclusions, as well as her implicit conclusions that granting Jones' renewal application and SND's application ''would be inconsistent with the public interest.''[3] 21 U.S.C. § 823(f). I will therefore also adopt the ALJ's recommendations that I deny Jones Total Health's renewal application and SND's pending application. A discussion of Respondent's Exceptions follows.

Exceptions to the ALJ's Findings of Fact

Exceptions to Findings Related to the DOH Inspection

Respondent first takes exception to several of the factual findings made by the ALJ with respect to the June 2012 inspection which was conducted by the Florida Department of Health (DOH).

[1] All citations to the Recommended Decision are to the slip opinion as issued by the ALJ.

[2] I also adopt the ALJ's conclusion that Respondent Jones Pharmacy's inventories were non-compliant with DEA regulations. R.D. 59–60.

[3] While the ALJ also recommended that I revoke Jones Total Health Pharmacy's registration, R.D. at 75, I take official notice of the Agency's registration records which show that Jones did not submit a renewal application until December 30, 2015, the day before its registration was due to expire. Because Jones had previously been issued the Show Cause Order, to continue its registration past the expiration date, it was required to file its renewal application ''at least 45 days before the date on which [its] existing registration [was] due to expire.'' 21 CFR 1301.36(i). Respondent did not seek to continue its registration past the expiration date, and based on the evidence in this record, I find that extension of its registration was not ''consistent with the public health and safety.'' *Id.* I therefore find that Jones Total Health Pharmacy's registration expired on December 31, 2015. *See, e.g., Ralph J. Chambers,* 79 FR 4962, 4962 (2014); *Paul H. Volkman,* 73 FR 30630, 30641 (2008). However, Jones Total Health Pharmacy's application does remain pending before the Agency. Respondent may dispute this finding (as well as any other finding which is the subject of official notice) by filing a properly supported motion within ten days of the date of this Order. 5 U.S.C. § 556(e).

Exceptions, at 3–7. Specifically, Respondent excepts to the ALJ's finding (FoF #69) that during the inspection, the DOH Inspector (who testified at the hearing) ''found that the majority of [its] business was the sale of controlled substances, which the pharmacy was filling for cash and that very little business was for non-controlled substances.'' *Id.* Respondent argues that ''[t]his finding is erroneous and contradicted by the record.'' *Id.*

While Respondent argues ''that objective evidence contradicts [the inspector's] testimony,'' the ALJ found the Inspector's testimony credible and the Government produced a second page of the Inspection report on which the Inspector listed ''Additional Remarks'' and stated in part:

> Inspection reveals that the pharmacy fills mostly CII narcotics. They are charging $9.00 per tablet for Oxycodone 30 mg or $1620/180. CII dispensing is cash though they take insurance for other medications. Profits on the CII run between $2,000 and $6600 per day. The non-controls are mostly filler RXs and some HIV meds filled with insurance. Profit on the non-controls are [sic] usually less than $200/day, often less than $50/day. The primary business of the pharmacy is the cash sale of narcotics. The total number of prescriptions filled daily is extremely low.

GX 12, at 2.

Respondent asserts that the Inspector's testimony that this page of the report ''was created at the time of such inspection is not credible'' because it ''was never shown to Ms. Jones, [and] was . . . [n]ever signed by Ms. Jones'' during the inspection. Exceptions, at 4. Respondent further argues that ''[t]he fact that [the DOH Inspector] never shared page 2 . . . with Ms. Jones contradicts her testimony that if she saw things that a pharmacist was doing wrong, she would tell'' the pharmacist. *Id.* Respondent ignores, however, that the Inspector testified that the notes on page two were created so that the inspector on any subsequent inspection ''would know what to look for.'' Tr. 166. The Inspector also explained that her comments about Respondent's dispensing of narcotics were not placed on the first page of the inspection form because ''[w]e had had complaints about us putting things about narcotics on the front of an inspection, because people hang them, so we were told to put them on another page.'' *Id.* at 165–66.[4]

However, even if page 2 of the report was not shown to Ms. Jones, I find no reason to reject the Inspector's testimony that she made the notes based on her observations during the inspection she conducted on June 7, 2012. *Id.* at 165–67.

Respondent further attempts to question the validity of page two of the report. It asserts that the DOH Inspector ''testified that the date field on the top of the document could not be altered on reports after they are finalized.'' Exceptions, at 5. Respondent then notes that the ''[t]he report marked as Respondents' Exhibit 8 [at p. 5] contains a typewritten data field, while the'' first page of the report submitted by the Government ''contains a blank in the date field next to Ms. Jones' signature.'' *Id.* Respondent then maintains that ''[t]his appears to contradict testimony than any date field on the report cannot be changed or manipulated and creates further doubt that page 2 . . . was created contemporaneous to the June 7, 2012 inspection.'' *Id.*

Respondent, however, failed to cite to the portion of the transcript which purportedly contains this testimony. *See id.* While this is reason alone to reject its contention, *see* 21 CFR 1316.66(a),[5] Respondent ignores that the blank date field next to Ms. Jones' signature is located at the bottom of the page and not ''on the top of the document.'' Thus, I find no reason to reject the testimony of the Inspector regarding when she created the document.

Respondent also argues that the Inspector's testimony and the report's statement that ''the majority of Jones' Pharmacy's business was the sale of schedule II controlled substances . . . is inconsistent with the objective evidence.'' Exceptions, at 5. Putting aside that the report actually used the word ''primary'' rather than ''majority'' to describe the nature of Respondent's business, I find the contention unavailing. While Respondent points to data showing that during 2012, Respondent ''made a gross profit of $58,123 on sales of non-controlled substances'' and notes that it filled ''over 2,956 prescriptions'' for non-controlled drugs and filled ''only 769 prescriptions'' for controlled substances, *id.* at 5–6, Respondent ignores that its own prescription log report for the year shows that its gross profit on its sales of controlled substances was $316,942.[6] RX 17, at 19. Thus, the objective evidence shows that in terms of Respondent's gross profit, its primary business during 2012 was the sale of controlled substances.

Respondent also takes issue with the ALJ's crediting of the DOH Inspector's ''annotation in her report that [Respondent] sold a 180 pill prescription for $1620, when [in the Inspector's] opinion the more reasonable price to pay was $200 to $250.'' Exceptions, at 6 (citing ALJ FoF #70). While it is unclear whether Respondent is challenging the Inspector's annotation as to the price Respondent was charging at the time of the inspection or what the Inspector testified as being the ''more reasonable price,'' or both, the ''objective evidence'' shows that in this time period, Respondent was, in fact, charging $1620 for 180 dosage units of oxycodone 30. *See* GX 23, at 5 (RX for 180 Roxicodone 30 issued on July 2, 2102 and dispensed the same day as oxycodone 30[7] for $1620 cash); *see also* GX 24, at 11–14 (Rxs for 180 oxycodone 30 dispensed on May 29, 2012 and June 26, 2012, each for $1620 cash).

Respondent further argues that the DOH Inspector ''conceded on cross-examination that she had no basis to know what an appropriate mark-up would be'' and her ''testimony in this regard should have been rejected.'' Exceptions, at 6 (citing Tr. 136). However, Respondent wrongly attributes this testimony to the DOH Inspector rather than the Supervisory Diversion Investigator who provided it. *See* Tr. 136.

As for the DOH's Inspector's testimony that a ''more reasonable

[4] Respondent also argues that the Inspector's failure to provide page 2 to Ms. Jones violated Florida DOH's ''Licensee Bill of Rights, which . . . requires that a pharmacy be presented for review . . . all inspection reports at the time of the inspection.'' Exceptions, at 4. Even if the Inspector's failure to provide this page to Ms. Jones violated the State's Licensee Bill of Rights, Respondent cites no authority pursuant to which the document would be rendered inadmissible in either administrative or judicial proceedings, and even if there is such authority, it would not be controlling in this proceeding.

[5] This regulation provides that ''[t]he party shall include a statement of supporting reasons for such exceptions, together with evidence of record (including specific and complete citations of the pages of the transcript and exhibits) . . .''

[6] So too, the data for Respondent's previous years in business (2010 and 2011) supports the view that its primary business was the sale of controlled substances. Specifically, in 2010, it dispensed 1847 controlled substance prescriptions and had a gross profit on these of $530,483. RX 13, at 40. By contrast, during 2010, it dispensed a total of 1072 prescriptions (including refills) for non-controlled drugs and had a gross profit of only $10,189 on these dispensings. RX 14, at 25. And while during 2011, the number of non-controlled prescriptions (including refills) it filled (3053) clearly overtook the number of controlled prescriptions it filled (1093), its gross profit on controlled substances was $439,990, more than 11 times its gross profit of $38,242 on the non-controlled drugs it sold. *Compare* RX 15, at 25, *with* RX 16, at 66.

[7] Of note, the prescription label lists the National Drug Code number of 0406–8530–01. GX 23, at 5. I take official notice that, according to the FDA's National Drug Code Directory website, this is the drug code for generic oxycodone 30 mg tablets marketed by Mallinckrodt, Inc. Respondent may refute this finding by filing a properly supported motion within ten (10) days of the date of this Decision and Order.

price'' to pay for a 180 oxycodone 30 prescription was $200 to $250, it is true that she testified that did not know what price Respondent was paying for oxycodone in June 2012. *Id.* at 183. She also testified that she did not prepare a written analysis of the prevailing prices being charged for controlled substances during the period of February 2010 through July 2012. *Id.* at 181. However, the Inspector also testified that, based on her ''experience as an inspector of pharmacies [8] in the same area as [Respondent] on or around that time,'' ''less than $200'' and ''at most $250'' was a more typical price for 180 dosage units of oxycodone 30. *Id.* at 168. Notwithstanding that the Inspector did not know what price Respondent was paying for oxycodone and did not prepare a written report, based on her experience as a pharmacy inspector, she was clearly competent to testify as to the prices being charged by other pharmacies for 180 dosage units of oxycodone 30. *See also* Tr. 161–62 (Inspector's testimony that in determining whether pharmacies are filling legitimate controlled substances she looks at the prices being charged). I thus reject Respondent's contention on this issue as well.

Next, Respondent argues that ''[t]he ALJ incorrectly found based on [GX] 14 that sales of controlled substances were in the top ten products that [Respondent] sold from January 1, 2010 through August 29, 2014.'' Exceptions, at 6 (citing FOF # 72). Respondent contends that ''[t]he finding was erroneous and misleading because [the Exhibit] was an aggregate report of [its dispensing] for multiple years.'' *Id.*

The ALJ's finding was neither erroneous nor misleading as it specifically stated that this ''report indicated that controlled substances were in the top 10 products that [Respondent] sold *from January 1, 2010 to August 29, 2014.*'' R.D. at 15 (emphasis added). And even crediting Respondent's evidence that shows that after 2010, the number of non-controlled prescriptions it dispensed ''far exceeded the number of controlled'' prescriptions that were dispensed, the evidence is what it is—a report of the dispensings during that time period. I thus reject Respondent's challenge to this finding.

Respondent also challenges the ALJ's finding that ''[d]uring the four inspections conducted by the [DOH], [Respondent's] dispensing and corresponding responsibilities were discussed.'' Exceptions, at 7 (citing FOF #76). Respondent maintains that ''only two of the reports shown to Ms. Jones could be argued to relate to [the] corresponding responsibility—the reports of May 14, 2014 and August 29, 2014.'' *Id.* Respondent discounts the inspection of April 14, 2011, during which the Inspector noted on the report (a copy of which was provided to Respondent's representative) that:

> [t]his pharmacy is filling and dispensing what appears to be a large amount of Schedule II Controlled Substance[] written prescriptions, especially for OXYCODONE Tablets, from patients whose home addresses are in Ohio, Kentucky, Tennessee, Connecticut, Indiana, Georgia, Massachusetts, South Carolina, New Jersey, West Virginia, New Hampshire, *as well as from out of area locations in Florida such as Panama City, Fernandina Beach, Kissimmee, Sanford, Orange Park, Gainesville, Crestview, Port Orange, Daytona Beach, St. Cloud, Wesley Chapel, and Tavares.*

GX 13, at 1.

In Respondent's view, this report apparently does not establish that the corresponding responsibility was discussed at the inspection because Respondent ''ceased filling prescriptions for out-of-state residents on April 1, 2011.'' Exceptions, at 7 n.8. Respondent ignores, however, that the Inspector's concerns were not limited to the oxycodone prescriptions dispensed to persons who came from other States and included the prescriptions it dispensed to Florida residents who came from out-of-area. Thus, even if the Inspector's remarks did not specifically use the words ''corresponding responsibility,'' the remarks nonetheless put Respondent on notice that the Inspector was concerned about whether it was dispensing legitimate prescriptions.

In any event, the Agency's corresponding responsibility rule has been in force for decades and numerous decisions of both the courts and the Agency have provided ample guidance as to the scope of a pharmacist's duty under the rule. *See, e.g., Medicine Shoppe-Jonesborough* v. *DEA,* 300 Fed. Appx. 409, 412 (6th Cir. 2008); *United States* v. *Henry*, 727 F.2d 1373, 1378–79 (5th Cir. 1984); *United States* v. *Seelig*, 622 F.2d 207 (6th Cir. 1980); *United States* v. *Hayes*, 595 F.2d 258 (5th Cir. 1979); *see also Frank's Corner Pharmacy*, 60 FR 17574 (1995); *Medic-Aid Pharmacy*, 55 FR 30043 (1990); *Ralph J. Bertolino*, 55 FR 4729 (1990). Having obtained a DEA registration and commenced dispensing controlled substance prescriptions, Respondent's pharmacists were obligated to not fill prescriptions when they either knew or were willfully blind to the fact that the prescriptions lacked a legitimate medical purpose. 21 CFR 1306.04(a). Thus, it is irrelevant whether the DOH Inspectors discussed with Respondent's pharmacists their obligations under the Agency's corresponding responsibility rule.

Exceptions to Findings Regarding the 2013 DEA Inspection

Respondent asserts that ''[t]he ALJ's finding of fact that [Respondent's] inventory only indicated the name of the controlled substances, the strength of the controlled substances, the quantity, and 'one' of the NDC number was also erroneous.'' Exceptions, at 8 (citing FOF #84). The ALJ's Finding of Fact No. 84 stated:

> DI Gonzales also noted that Ms. Jones' biennial inventory was missing some of the required information. The inventory was supposed to indicate amounts of finished form in each container and the amount of commercial bottles that she had on hand during her inventory. Ms. Jones' inventory only indicated the name of the controlled substances, the strength of the controlled substances, the quantity, and one of the NDC numbers.

R.D. at 17–18 (citing Tr. 35). According to Respondent, this finding was erroneous because the evidence ''reflect[s] [that] the entire NDC number for the particular strength was listed on the biennial inventories not just 'one' of the NDC numbers.'' Exceptions, at 8 (citing Tr. 472–73; 687; GX 5).

To be sure, the DI actually testified that Ms. Jones ''only listed the name of the controlled substances, the strength of it, the quantity, and I believe on one of them the NDC number,'' Tr. 35, thus suggesting that the ALJ misread the testimony. Nonetheless, the Agency's regulation which sets forth the information which must be included on a pharmacy's inventory does not require that the pharmacy list the NDC number for any drug. *See* 21 CFR 1304.11(e)(3) (requiring that a dispenser's inventory include ''the same information required of manufacturers pursuant to paragraphs (e)(1)(iii) and (iv) of this section,'' which does not include the NDC number). As Respondent was not required to list any NDC number, to the extent the finding erroneously states that the inventory ''only indicated . . . one of the NDC numbers,'' it is immaterial.

What is material is that the inventories were missing required information. Specifically, the inventory was required to include ''[t]he number of units or volume of each finished form in each commercial container (*e.g.*, 100-tablet bottle or 3-milliliter vial); and

[8] The DOH Inspector had previously worked as a pharmacist for 33 years. Tr. 161. She also testified that in the three and a half years that she has been a DOH Inspector, she had inspected ''[c]lose to 1,500'' pharmacies in the Dade and Broward County areas. *Id.* at 160.

[t]he number of commercial containers of each such finished form (*e.g.*, four 100-tablet bottles or six 3-milliliter vials).'' *Id.* § 1304.11(e)(1)(iii)(C) & (D). Neither Respondent's November 3, 2011 inventory nor its April 13, 2013 inventory listed this information. *See* GX 5, at 1–14; Tr. 34–36, 38. Moreover, neither inventory indicated whether it was ''taken either as of the opening of business or as of the close of business on the inventory date'' as required by 21 CFR 1304.11(a). Tr. 36, 38.

Respondent nonetheless argues that Ms. Jones provided ''unrebutted testimony . . . that the last two digits of the NDC number represent the bottle size of the medication (*i.e.*, the number of tablets per bottle).'' Exceptions, at 8. Respondent further asserts that when it fills prescriptions, it uses ''the contents of open containers first, before opening another closed container of the same controlled substance,'' and thus, ''while the biennial inventory did not contain a column for the number of containers, that number was easily derived from the information on . . . the biennial inventory.'' *Id.* Respondent then contends that ''any factual finding that the DEA was unaware of the number of containers of controlled substances on hand is simply an argument of form over substance.'' *Id.* at 8–9.

This argument does not, however, establish that the ALJ's factual findings as to what information was missing from the inventory were not supported by substantial evidence. Rather, it is an argument which goes to the weight to be given to the violations. With the exception of the discussion in Finding of Fact No. 84 that the inventories contained just ''one NDC'' number, I find that the rest of the ALJ's findings as to what required information was missing from the inventories are supported by substantial evidence.

Respondent also takes exception to the ALJ's Finding of Fact No. 91, which was based on the testimony of a Diversion Investigator, that upon reviewing Respondent's electronic schedule II orders forms (DEA E222 forms), he found ''480 line items that were done incorrectly.'' [9] Exceptions, at 9 (quoting R.D. 19, FOF #91). Respondent submits that this finding is erroneous, because while the DI ''testified to this, . . . DEA . . . bears the burden of proof [and] provided no independent evidence of the 480 line items that were allegedly inappropriate.'' *Id.*

According to the DI, these E222 forms were not properly completed because while the distributor shipped the orders, Respondent's owner did not go back online and ''input[] how many packages she received or the date she received them.'' Tr. 43. The Government also introduced various records showing several instances in which this occurred. GX 6, at 1–2; 3–5.

As evidenced by her factual finding, the ALJ clearly found credible the DI's testimony as to the number of line items that were not properly completed. Contrary to Respondent's contention, the DI's testimony alone provides substantial evidence to support these violations. I therefore reject this contention.

Exceptions to the Testimony of the Government's Expert

Respondent challenges several of the ALJ's factual findings that are based on the Government's Expert's testimony regarding a pharmacist's obligations in dispensing controlled substance prescriptions, and that in 2010, Florida pharmacists were generally aware of various red flags of abuse and diversion. R.D. 22–31; Tr. 240. First, Respondent challenges the ALJ's finding that ''[i]n her role as a retail pharmacist, [the Expert] interacted frequently with other pharmacists in the area.'' R.D. 23, FOF #108 (citing Tr. 216) (cited in Exceptions, at 9–10). Respondent contends that the ALJ should not have credited this testimony because ''[o]n cross-examination it became clear that [the Expert] could not identify any specific pharmacist she had talked to regarding the particular issues.'' Exceptions, at 10. However, the ALJ specifically addressed this portion of the Expert's testimony and while she noted that the Expert became hostile, the ALJ nonetheless found the Expert's testimony credible based on her years of experience. R.D. 24 n.13. Because the ALJ was in the best position to observe the Expert's testimony, and her testimony is not inherently implausible or inconsistent, I find no reason to reject the ALJ's credibility finding.

Next, Respondent challenges the ALJ's factual finding No. 113, which was based on the Expert's testimony that in determining whether a controlled substance prescription is issued for a legitimate medical purpose, one of ''the biggest [signs] is when a patient asks you not to bill their insurance company and to pay cash for the prescription.'' Tr. 226; *see also* R.D. at 24; Exceptions, at 10. According to Respondent, ''[t]his finding is erroneous as the record is devoid of any evidence that anyone associated with the prescriptions at issue or otherwise, paid cash and simultaneously requested that [Respondent] not bill their insurance.'' Exceptions, at 10.

While it is true that there is no evidence in the record that any particular patients asked Respondent's pharmacists not to bill their insurance for the prescriptions, that does not render the finding erroneous. Indeed, other testimony, which stands unrefuted, is that drug seekers are willing to pay high prices in cash to obtain controlled substances and that ''[o]ften the addicts will sell part of their prescription in order to pay this exorbitant amount of money [10] for the prescription. So they take some and they sell some.'' Tr. 170. Moreover, a Supervisory Diversion Investigator, with 35 years of experience as a Diversion Investigator, testified that ''paying cash'' is a ''red flag[] of diversion.'' Tr. 124. This witness further testified that:

> Normally people pay with insurance. And these type of narcotics don't cost that much money, so that is usually an indication that the patient and the pharmacist know that these drugs are going to be diverted, that they'd be willing to pay more than $1,000 for one prescription, for instance.

Id. at 125. *See also id.* at 33 (testimony of DI that upon review of Respondent's schedule II prescriptions, ''we started discussing what we call as red flags, which a majority of [the prescriptions] were for Oxycodone 30 milligram . . . . And then we also noticed that they were all being paid for in cash.''); *id.* at 51 (DI's testimony that upon reviewing the dispensing records, one of the concerns was that ''a majority of the prescriptions were being paid [for] by cash.'').

The evidence further shows that 93 percent of the controlled substance prescriptions dispensed by Respondent from February 15, 2010 through July 3, 2012 were paid for with cash or cash equivalents. Tr. 57; *see also* GX 2 (spreadsheet of the controlled substance prescriptions showing, *inter alia*, the method of payment). The Government's Expert testified that in her experience, ''only . . . maybe five percent of the patients pay cash,'' Tr. 285, a figure which is consistent with other evidence provided by the Government, specifically, an April 2012 report prepared by the IMS Institute for Healthcare Informatics, which, based on

[9] Prior to testifying as to the number of line items that were done incorrectly, the DI testified regarding several E222 order forms that were submitted for the record, noting that the forms ''did not indicate how many packages Ms. Jones received or the date that she received the ordered packages.'' Tr. 39–43; *see also* GX 6.

[10] This testimony was provided by the DOH Inspector in reference to the $1,620 price for 180 oxycodone 30 which Respondent was charging at the time of the June 2012 inspection. *See generally* Tr. 165–67.

its National Prescription Audit, found that out of 4.024 billion prescriptions dispensed during 2011, cash was the method of payment for only 258 million prescriptions or 6.4 percent. GX 29, at 42.

Respondent takes issue with the ALJ's having allowed the Government's Expert ''to testify about the . . . report.'' Exceptions, at 11. It argues that the Government's Expert ''had no personal knowledge to how the report was compiled and the report was not reflective of the South Florida community [sic] which [Respondent] was located.'' *Id.* Respondent also argues that the report ''did not address the record evidence that Florida had one of the highest uninsured rates for individuals.'' *Id.*

While Respondent is correct that the Government's Expert did not have personal knowledge as to how the report was compiled and the report does reflect nationwide data, Respondent ignores that the Expert testified that in her experience, which includes 17 years as a retail pharmacist and a substantial period working at pharmacies in Broward and Dade County, only five percent of patients pay cash for their prescriptions. Respondent also ignores that its Expert agreed that six percent was an accurate figure for the nationwide average.

Moreover, while Respondent produced a Census Bureau Report which shows that in 2012, 20.1 percent of Floridians did not have what the Census Bureau defines as ''comprehensive health insurance'' coverage, the Report clearly stated that ''[t]his definition excluded single service plans, such as accident, disability, dental, vision or prescription medicine.'' RX 33, at 7, 24. Thus, the actual percentage of persons lacking insurance covering their prescriptions is likely less than the 20.1 percent figure.[11] Moreover, even ignoring that 49 percent of the prescriptions in GX 2 were filled for out-of-state customers, there is still a wide disparity between the percentage of prescriptions that were paid for with cash and what one would expect based on the Census Bureau's figure regarding the percentage of uninsured Floridians.

Finally, Respondent takes exception to the ALJ's crediting the Government Expert's ''testimony that 'a pharmacist could also go to the [DOH's] website and lookup the prescriber's specialty.' '' Exceptions, at 10 (citing FOF #115). According to Respondent, the Government's Expert ''was impeached'' on cross-examination ''and conceded that with regard to the cited example the DOH website only lists the training that a particular physician had and not necessarily their area of expertise.'' *Id.* at 10–11 (citing Tr. 339).

To be sure, in this portion of the transcript, Respondent's counsel questioned the Government's Expert about a physician whose profile showed that he had done a residency in pediatrics but did not list any specialty certification. *See* GX 35, at 3. However, the DOH profiles for other physicians do include their ''certifications from specialty boards recognized by the Florida board which regulates the profession for which he/she is licensed.'' GX 36, at 2–3 (profile of Dr. S.K. showing that he was board certified in ''Family Practice'' by the ''American Board of Family Medicine.''); *see also, e.g.,* GX 37, at 2–3 (profile of Dr. J.F. showing that he was board certified in ''Family Practice'' by the ''American Osteopathic Board of Family Phy[sicians]''); GX 38, at 2–3 (profile of Dr. R.T. showing that he was board certified in ''Obstetrics and Gynecology'' by the ''American Board of Obstetrics & Gynecolog[y]''); GX 42, at 2–3 (profile of Dr. R.W. showing that he was board certified in ''Emergency Medicine'' and ''Internal Medicine'' by the American Boards of Emergency Medicine and Internal Medicine).

Moreover, many of the prescriptions in the record also listed the prescriber's NPI (National Provider Identifier) number and the Government's Expert provided unrefuted testimony that a pharmacist can use an NPI number and look up a physician's specialty. Tr. 228. Notably, Respondent did not take exception to this portion of the ALJ's factual finding number 115. *See* Exceptions, at 10.

Respondent also argues that the Government's Expert acknowledged on cross-examination that the prescriptions contained, in the words of Respondent's counsel, ''no indication that a doctor is practicing within any particular scope,'' Tr. 337, and that ''there is no prohibition in the medical field [against] a physician writing a prescription for a particular drug regardless of the area in which they may specialize.'' Exceptions, at 11 (citing Tr. 337, 339). As for the first concession, while it is true that the prescriptions typically did not list the doctor's specialty, the Government's Expert provided testimony which the ALJ found credible that it is important for a pharmacist to know the scope of the physician's practice because a doctor's deviation from his specialty ''could indicate a possible red flag.'' R.D. 25 (FOF# 115). So too, even assuming that in Florida, a physician is not prohibited from prescribing a particular drug regardless of the area in which he/she specializes, certainly when physicians issue prescriptions for large quantities of highly abused controlled substances such as oxycodone 30, alprazolam 2, and in many cases carisoprodol, and these drugs are not usually prescribed by physicians with a particular specialty, there is a compelling reason to question the legitimacy of the prescription. I thus reject Respondent's challenges to the testimony of the Government's Expert.[12]

Exceptions to ''Alleged Red Flags Within Jones Pharmacy's Prescriptions''

Next, Respondent argues that the ALJ erred in finding that Respondent ''filled prescriptions for patients that 'traveled from North Carolina to see doctors in Deerfield Beach.' '' Exceptions, at 12 (quoting R.D. 28, FOF # 123 and citing GXs 16 and 44). Respondent argues that ''there was no evidence in the record that any particular patients travelled from North Carolina'' and that the Government provided ''no evidence that such individuals had traveled to Florida for the purposes of obtaining the prescription as opposed to already staying in Florida for an extended period of time.'' *Id.* Continuing, Respondent maintains that ''[t]he only

[11] Respondent also produced a reprint of an article from the Kaiser Health News which was attributed to the Miami Herald; the article states that Broward County's uninsured rate was 26 percent and was purportedly based on census data. RX 33, at 1. However, this document is hearsay and actually contains hearsay within hearsay. In contrast to the figure provided in the IMS Report, which has been corroborated by both the Government's and Respondent's experts, Respondent has made no showing to establish the reliability of the statements in the Miami Herald article. *See J.A.M. Builders v OSHA,* 233 F.3d 1350 (2000). Nor is there any tradition of courts accepting newspaper articles as reliable evidence of the statements contained in them.

[12] For the same reason, I reject Respondent's Exceptions to the ALJ Factual Findings Nos. 128 and 130. As for Finding No. 128, it discussed prescriptions written by one Dr. K., who was affiliated with ''The Pain Center of Broward,'' for D.T., a male patient whose address was in West Virginia. Exceptions, at 13. Specifically, Dr. K. prescribed 107 du of oxycodone 30, 41 du of oxycodone 15, and 30 alprazolam 2mg, which D.T. filled at Respondent paying $791 in cash for the drugs. GX 48.

While Respondent argues that the Government presented no evidence concerning Dr. K.'s ''then current practice area,'' the DOH website shows that he was board certified in Obstetrics and Gynecology. *See* GX 40, at 4. And even though the prescription did not indicate that Dr. K. was practicing in an area different than his specialty, the Government's Expert provided credible testimony that a pharmacist needs to know a prescriber's practice area when evaluating whether a controlled substance prescription has been issued for a legitimate medical purpose. Indeed, the circumstances attendant with D.T.'s prescriptions provided compelling evidence that the prescriptions lacked a legitimate medical purpose and should have prompted additional investigation into Dr. K.'s background.

evidence in the record concerning these individuals [sic] residence was the fact that the individuals presented licenses from the State of North Carolina.'' *Id.*

With respect to these two patients (L.S. and J.S.), whose driver's licenses showed that they had the same last name and resided at the same residence in Charlotte, North Carolina, the prescriptions they presented raised numerous other red flags. Specifically, each of these individuals went to the same pain clinic in Deerfield Beach and obtained prescriptions for large quantities of oxycodone and alprazolam that were frequently identical and paid approximately $500 to $600 in cash (or cash equivalents) for their drugs when they filled the prescriptions. *See* GX 16; GX 44; Tr. at 230 (discussing red flags). Moreover, at each visit, the patients obtained prescriptions for two short-acting formulations of oxycodone. According to the Government's Expert, this is a red flag because with legitimate chronic pain management, ''the patient should present a prescription for a long acting plus a short acting,'' with the latter being used for breakthrough dosing. Tr. 229. The Government's Expert further explained that ''drug seekers tend to want the short acting medications because those are the ones that will give them those immediate highs'' and you ''don't get the high you do from the long acting that you do from the short.'' *Id.*

As the evidence shows, on March 11, 2010, L.S. and J.S. received the exact same three prescriptions from the same doctor, Rene Casanova,[13] which Respondent filled the next day: 210 oxycodone 30, 90 oxycodone 15 and 75 alprazolam 2. *See* GX 16, at 1–11. At their April 8, 2010 visit to the clinic, L.S. and J.S. saw Dr. Randall Wolff.[14] While Dr. Wolff did not prescribe alprazolam to them, he nonetheless issued both of them prescriptions for 210 oxycodone 30 and 90 oxycodone 15. *Id.* at 13–19. While at their next visit (May 6, 2010) to the pain clinic, a different doctor, Charles Neuringer,[15] issued them slightly different prescriptions for oxycodone 30 (210 du to L.S. and 180 to J.S.), he provided them with identical prescriptions for 90 oxycodone 15 and 60 alprazolam 2, at their June 2, 2010 visit, Dr. Neuringer provided them with identical prescriptions for 180 du of oxycodone 30, 90 oxycodone 15, and 60 alprazolam 2.[16] *Id* at 21–44. Thus, even if the Government did not produce evidence that these two persons were travelling from North Carolina each time they obtained the prescriptions, there were ample other red flags that provided compelling evidence that the prescriptions they presented and Respondent filled lacked a legitimate medical purpose.

Moreover, even if the Government did not show that L.S. and J.S. were travelling from North Carolina each time they obtained prescriptions and filled them at Respondent, the evidence shows that between February 15, 2010 and April 1, 2011, Respondent dispensed more than 1,500 controlled substance prescriptions to more than 500 patients whose addresses indicated that they did not live in Florida. GX 2. The patients came from such States as North Carolina, Ohio, West Virginia, Kentucky, Tennessee, Mississippi, Georgia, and others. *Id.* Given the number of these patients, I find it likely that many of them were traveling to Florida in search of controlled substances.

Respondent also takes exception to the ALJ's crediting of the testimony of Government's Expert regarding prescriptions issued by Dr. M. to R.H. for 180 oxycodone 30, 112 Endocet (oxycodone/acetaminophen) 10/325, and 90 carisoprodol 350. Respondent dispensed the prescriptions, and charged R.H. $945 for the oxycodone 30, $196 for the Endocet, and $41.08 for the carisoprodol, for a total of $1182 in cash. GX 19; GX 47. According to the prescriptions, R.H. resided in Panama City, Florida, which is in the Florida panhandle and on the other side of the State from Fort Lauderdale. *Id.*

Respondent objects to the ALJ's finding that these medications were ''prescribed to a 56 year old man [17] by a pediatrician,'' arguing that the prescriptions ''on their face solely indicated that the physician . . . was associated with the Intercoastal [sic] Medical Group'' and did not reflect that the doctor was a pediatrician. Exceptions, at 12. Respondent further contends that Dr. M.'s DOH Physician Profile indicated only that he had done a residency in pediatrics and there was no testimony as to his current practice. *Id.*

However, even ignoring that Dr. M.'s DOH profile did not list Dr. M. as having any specialty certification, *see* GX 35, at 3; let alone certification in a specialty such as pain management, oncology, or hospice and palliative medicine, *see* Tr. 229, these prescriptions raised numerous other red flags which provided compelling evidence that the prescriptions likely lacked a legitimate medical purpose. These included the drugs, strength of the dosage units and quantities prescribed; the distance R.H. likely travelled to obtain the prescriptions; and R.H.'s willingness to pay nearly $1200 in cash for the drugs. Indeed, were R.H. a legitimate chronic pain patient, these prescriptions would have cost him more than $14,000 a year. Thus, I reject Respondent's exception to the ALJ's Finding of Fact No.128.

Next, Respondent takes exception to the ALJ's crediting of the Government's Expert's testimony regarding Respondent's dispensing of prescriptions for 180 oxycodone 30 and 30 Xanax 2 which were written by a doctor in Sunrise, Florida for three persons from West Palm Beach. Exceptions, at 13 (citing R.D. 30–31, FOF# 130). Respondent states that ''[t]he ALJ accepted [the Expert's] statement that the doctor was 'rubberstamping the prescriptions and there was no individualized treatment.' '' *Id.* (quoting FOF #130). Respondent argues that the Expert's testimony was ''wholesale speculation'' because she did not review patient files, or interview the patients or the doctors. *Id.*

Putting aside that ALJ's actual finding was that ''this *appeared* to be an instance where the doctor was 'rubber stamping' the prescriptions,'' R.D. at 30 (emphasis added), Respondent does not address other portions of the ALJ's findings, including that the prescriptions were for cocktail medications and that Xanax 2 mg is a high dose of Xanax. *Id; see also* Tr. 270–71. Moreover, the prescription numbers assigned by Respondent show that the prescriptions were presented sequentially, and the evidence shows that each of the patients paid $900 in cash for the oxycodone 30 prescriptions. GX 50, at 2; GX 2 (line items 2541–2546). Respondent also fails to explain why legitimate patients would be willing to travel from West Palm Beach

[13] I take official notice that following a hearing, on September 19, 2012, the former Administrator revoked Dr. Casanova's registration based on her findings that he issued controlled substance prescriptions which lacked a legitimate medical purpose in violation of 21 CFR 1306.04(a). *See Rene Casanova*, 77 FR 58150, 58151–52 (2012).

[14] Following a hearing, on January 19, 2012, the former Administrator revoked Dr. Wolff's registration based on her findings that he issued controlled substance prescriptions which lacked a legitimate medical purpose in violation of 21 CFR 1306.04(a). *See* GX 42, at 1; *see also Randall L. Wolff*, 77 FR 5106, 5121–22 (2012).

[15] On or about December 17, 2010, Dr. Neuringer surrendered his registration for cause. GX 41, at 1.

[16] Respondent filled the May 6 and June 2 prescriptions the same day they were issued.

[17] The prescription label lists R.H.'s birthdate as April 2, 1954. GX 19, at 2.

down to Sunrise [18] to obtain prescriptions and pay $900 cash for just the narcotic, which was highly sought after by drug abusers and diverters. Thus, even accepting that three persons presenting the same prescriptions on a single day from the same doctor does not conclusively establish that the latter was engaged in ''rubber stamping'' or ''pattern prescribing,'' there were ample other indicia which created a strong suspicion that the prescriptions lacked a legitimate medical purpose.

Exceptions to the ALJ's Findings Regarding the Testimony of Respondent's Expert

Respondent also argues that in her Finding of Fact #190, ''[t]he ALJ erroneously made findings . . . concerning [its Expert's] testimony as it relates to corresponding responsibility.'' Exceptions, at 14. According to Respondent, ''the ALJ made findings . . . that [its Expert] indicated that she has not done any research about the corresponding responsibility of a pharmacist; had not given any presentations about the corresponding responsibility of a pharmacist since 2007; and has not published any research on corresponding responsibility issues.'' *Id.* (citing R.D. 46). Respondent contends that these findings are contrary to its Expert's unrebutted testimony that ''she sat on the National Association for Board of Pharmacy and sat on a task force for the DEA'' on ''the implementation of prescription monitoring programs.'' *Id.* (citing Tr. 795). According to Respondent, its Expert testified that ''it was very conceivable that [the] corresponding responsibility did come up in this context.'' *Id.* Respondent further notes that its Expert ''testified that she has done research on the area of corresponding responsibility'' because she teaches students in simulated pharmacy dispensing exercises and ''needed to know that knowledge as well for regulatory compliance in the stores I supervise.'' *Id.* (quoting Tr. 799).

As an initial matter, Respondent's Expert actually testified that she ''needed to know that knowledge as well for regulatory compliance in the stores I *supervised*.'' Tr. 799 (emphasis added). Notably, the evidence shows that the Expert last supervised retail pharmacy stores in 2006, when she went to work for the Institute for Safe Medication Practices. Tr. 717; RX 24 (Expert's Resume). Thus, as of the hearing, Respondent's Expert had not worked in regulatory compliance in nearly a decade.

As for her participation on the task force on prescription monitoring programs, her actually testimony was: ''I don't know if we ever discussed that . . . that term [*i.e.*, the corresponding responsibility], but we had a task force with DEA, so to the extent that the DEA wanted to bring that up, we would talk about it.'' Tr. 794. When pressed by the Government if the term came up, Respondent's Expert answered: ''But I can't remember it. I don't remember,'' after which she testified that she did not remember one way or the other but stated that it was ''very conceivable that the term would have come up.'' *Id.* at 794–95.

Respondent also cites to other portions of its Expert's testimony regarding her knowledge of a pharmacist's corresponding responsibility, including her testimony that she has reviewed administrative decisions published by the Agency, the DEA Pharmacist's Manual, and ''pharmacy journals to the extent that they've published anything about that.'' Tr. 800; *see also* Exceptions, at 14. Respondent also notes that its Expert ''is a member of the American Society of Pharmacy Law.'' Exceptions, at 14–15. However, when asked whether the corresponding responsibility had been discussed at any of the Society's meetings, Respondent's Expert answered: ''I don't remember.'' Tr. 801.

The ALJ specifically found that ''the testimony of Respondent's Expert . . . is not credible as it relates to the general knowledge of Florida pharmacists from 2010 to 2012.'' R.D. 68. Having reviewed the record and ALJ's findings, I agree with the ALJ and her reasons for declining to credit the testimony of Respondent's Expert.

As explained above, Respondent's Expert has not supervised retail pharmacies in nearly a decade and, in her own testimony, she acknowledged that she has not filled a prescription in 15 years. Tr. 794. Moreover, Respondent's Expert is licensed only in Massachusetts and while she ''did a consulting job in Florida,'' she has not worked as a dispensing pharmacist in the State.[19] RX 24, at 1; Tr. 737.

Also, much of her testimony as to how she has become knowledgeable on a pharmacist's corresponding responsibility was vague. While Respondent's Expert claimed to have reviewed various Agency decisions including *East Main Street Pharmacy*, 75 FR 66149 (2010), in determining what red flags of abuse and diversion were generally known to pharmacists during the period of 2010 through 2012, she then opined that she did not believe that many of the red flags identified in that decision [20] were widely known to be indicators of diversion and abuse.

For example, Respondent testified that in her opinion, the combination of prescriptions for a narcotic, a benzodiazepine, and carisoprodol ''would [not] signify a pattern of drug abuse to pharmacists in 2010.'' Tr. 865. Yet, based on the expert testimony in *East Main Street Pharmacy*, the Agency found that ''the combination of a benzodiazepine, a narcotic and carisoprodol is 'well known in the pharmacy profession' as being used 'by patients abusing prescription drugs.' '' [21] 75 FR at 66163.

Respondent also testified that she did not believe that it was widely known in 2010 that a patient paying cash was an indicator of abuse or diversion. Tr. 864. However, in *East Main Street*, the Agency found, based on expert testimony, that '''any reasonable pharmacist knows that a patient that wants to pay cash for a large quantity of controlled substances is immediately suspect.' '' 75 FR at 66158.

Respondent's Expert also opined that she did not believe that patients travelling long distances to obtain prescriptions was widely known in 2010 to be an indicator of abuse or diversion of prescription drugs. Tr. 864. However, in *East Main Street*, [22] the Agency found that ''the fact that the patients were driving so far to get their prescriptions filled 'would be a major red flag to any pharmacist.' '' 75 FR at 66164; *see also id.* at 66158 (discussing testimony of expert witness that the fact that patients were ''driving 2 + hours'' to fill prescriptions ''would be a major red flag to any pharmacist and that a reasonable pharmacist would seriously question why these patients were driving such a long distance to have their prescriptions filled'' and that ''the number one reason'' consumers shop at certain pharmacies ''is proximity to where they live'').

[18] According to a query conducted on Mapquest, of which I take official notice, Pt. W.F. resided approximately 47 miles from Dr. A.M.'s office.

[19] Respondent's Expert did not further explain what the ''consulting job'' involved. Tr. 737.

[20] Of note, the *East Main Street* findings were based on the testimony of an expert witness for the Government. 75 FR at 66156.

[21] In *East Main Street*, the Agency also noted the Government Expert's testimony that ''these cocktails would have a synergistic effect on a person's central nervous system and could cause respiratory depression.'' 75 FR at 66163.

[22] In *East Main Street*, the patients were generally travelling from the Portsmouth, Ohio and northern Kentucky to Columbus, Ohio, a considerably shorter distance than that travelled by many of the patients in this matter. *See* 75 FR at 66158.

As for whether, in 2010, pattern prescribing was also an indicator that prescriptions were not issued for a legitimate medical purpose, Respondent's Expert opined that she did not believe that this ''was widely known by pharmacists'' to be ''happening.'' Tr. 865. Yet, in *East Main Street*, the Agency found that ''in the prescriptions he reviewed, the Government[']s] Expert observed that there was 'no individualization of dosing based on pain in these patients' with respect to the hydrocodone and alprazolam prescriptions and that 'any pharmacist would have known that this was a problem and a strong indicator of a doctor operating a controlled substance prescribing mill.' '' 75 FR at 66163.

Finally, when asked whether in her view, it was widely known in 2010 that Xanax in the two milligram dosage was to be used in ''only very rare circumstances,'' Respondent asserted that ''it was not widely known that Xanax should be reserved for certain circumstances.'' Tr. 865–66. However, in *East Main Street*, the Agency found that ''with respect to the alprazolam, the Government's Expert explained . . . that the two-milligram strength . . . is generally only prescribed for a patient with post-traumatic stress disorder.'' 75 FR at 66163.

Respondent's Expert further maintained that the first time DEA publicly addressed the issue of out-of-state patients coming to pharmacies was in the 2012 *Holiday CVS* decision. Tr. 752–53; *see also Holiday CVS, L.L.C., d/b/a CVS Pharmacy Nos. 219 and 5195*, 77 FR 62316, 62321 (2012). However, in *East Main Street*, the Agency had noted that ''approximately half'' of the pharmacy's patients ''were coming from Kentucky,'' which ''was more than two hours away,'' and that this ''would be a major red flag to any pharmacist.'' 75 FR 66164. Beyond this, it is obvious that patients travelling great distances to obtain large quantities of potent narcotics such as oxycodone 30 are likely seeking the drugs to either abuse them or divert them to others.[23]

Respondent also argues that the ALJ ''erroneously made findings that suggested [that its Expert's] opinions in this case that [it] should maintain its . . . registration was based solely on her 'conversations with Ms. Jones.' '' Exceptions, at 15 (quoting R.D. 47, FOF#194). The ALJ did not, however, find that the Expert's Opinion was based ''solely'' on her conversations with Ms. Jones. *See* R.D. 47, FOF#194. Indeed, the ALJ specifically noted the Expert's testimony that Respondent ''has displayed a 'positive trend downwards as to the amount of controlleds that are dispensed per non-controlleds.' '' *Id.* (quoting Tr. 785). And the ALJ also acknowledged that Respondent's Expert had reviewed Respondent's policies and ''opined that Ms. Jones has changes 'policies and procedures as she [has] learned about things.' '' R.D. 48, FOF#197 (citing Tr. 832–33 and quoting Tr. 850).

However, the ALJ also noted that Respondent's Expert ''did not offer any opinions as to whether or not [Respondent's] dispensing of controlled substances was abnormal in 2010 [through] 2012.'' R.D. 47, FOF #195. Indeed, when asked if she was offering any opinion as to whether Respondent's dispensing in this period ''was atypical or abnormal,'' Respondent's Expert answered: ''No, but I do think she did exercise her corresponding responsibility in 2014.'' Tr. 809. Respondent's Expert further admitted that she was not ''offering any opinions . . . on whether . . . any specific prescriptions was or was not filled by [Respondent] in compliance with [its] corresponding responsibility.'' *Id.* Respondent's Expert also testified that she was not offering any opinions as to whether the extent to which Respondent filled prescriptions for cash or for out of state patients was atypical or abnormal. *Id.* at 810–812.

In short, having reviewed Respondent's exceptions to the ALJ's findings as to the testimony of its Expert, I find no reason to reject the ALJ's credibility finding.[24]

Exceptions to the ALJ's Conclusions of Law

Exceptions to the ALJ's Legal Conclusion as to Factor One

In discussing Factor One—the recommendation of the state licensing board—the ALJ found that the record did not contain a recommendation from the Florida Board or any evidence of disciplinary action taken against Respondent or Ms. Jones. R.D. at 57–58. Noting that under DEA precedent, ''[t]he ultimate responsibility to determine whether a registration is consistent with the public interest has been delegated exclusively to the DEA [and] not to entities within state government,'' the ALJ held that the absence of a recommendation or disciplinary action against Respondent (or Ms. Jones) is not dispositive and neither weighs in favor of, or against, a determination as to whether Respondent's continued registration is consistent with the public interest. R.D. at 58 (citing *Top Rx*, 78 FR 26069, 26081 (2013); *Edmund Chein*, 72 FR 6,580, 6590 (2007), *pet. for rev. denied Chein* v. *DEA*, 533 F.3d 828 (D.C. Cir. 2008)).

Respondent argues that the actions of the DOH in conducting six inspections, which found that ''in virtually all of those exams, and certainly all exams subsequent to 2012,'' Respondent ''was in compliance with all rules and regulations including those relating to the maintenance of ordering forms and inventory,'' ''should be deemed as persuasive for continued registration.'' Exceptions, at 16. However, this statement is contradicted by the record evidence related to the DOH inspections.[25]

[23] Respondent's Expert also testified that the first reference to the term ''red flag'' that she could find in DEA's public pronouncements was in the *Holiday CVS* decision. Tr. 753. However, the term appears in DEA administrative decisions involving practitioners including pharmacies even earlier than in *East Main Street. See Paul J. Caragine*, 63 FR 51592, 51600 (1998); *see also Medicine Shoppe-Jonesborough*, 73 FR 364 (2008); *United Prescription Services, Inc.*, 72 FR 50397 (2007). It also has appeared in federal court decisions that predate 2010. *See United States* v. *Johnston*, 322 Fed. Appx. 660, 666–68 (11th Cir. 2009); *Medicine Shoppe-Jonesborough* v. *DEA*, 300 Fed. Appx. 409, 413 (6th Cir. 2008); *United States* v. *Alerre*, 430 F.3d 681,686 (4th Cir. 2005); *United States* v. *Chin*, 795 F.2d 496, 502 (5th Cir.1986).

In any event, the term ''red flag'' has been part of the lexicon for more than 200 years, and whether the Agency has used this term, or such terms as ''warning signs'' or ''suspicious circumstances,'' is of no consequence. *See* III The Compact Edition of the Oxford English Dictionary 1132 (1987) (noting term's use ''[a]s a sign of danger, a warning, or a signal to stop''); *Jayam Krishna-Iyer*, 74 FR 459, 460–61 n.3 (2009). What matters is whether Respondent's pharmacists either knew or were willfully blind to the fact that the controlled substance prescriptions they dispensed lacked a legitimate medical purpose. 21 CFR 1306.04(a).

[24] In this section of its Exceptions, Respondent also takes issue with the ALJ's finding that ''[t]he Florida E–FORSCE website indicated that the system was created in 2009 by the Florida legislature.'' Exceptions, at 15 (citing R.D. 41 n. 21). Respondent argues that ''[i]t appears the ALJ may have performed independent research concerning the E–FORSCE system because it does not appear that either party introduced the website'' into evidence. *Id.* Respondent notes that neither party requested that the ALJ to take judicial notice of the website. *Id.* Respondent further argues that the E–FORSCE system did not become operational until September 1, 2011. Exceptions, at 15–16 (citing a fact sheet at the website).

The ALJ did not, however, base her finding that Respondent's pharmacists violated their corresponding responsibility on their failure to use the E–FORSCE system in determining whether to dispense the prescriptions. Nor do I. Thus, the ALJ's noting that the Florida legislature enacted the legislation creating the system in 2009 is not a material fact and no error was committed. *See* 5 U.S.C. § 556(e) (''When an agency decision rests on official notice of a material fact not appearing in the evidence in the record, a party is entitled, on timely request, to an opportunity to show the contrary.'').

[25] For example during the June 10, 2013 Inspection, the Inspector found that Respondent was non-compliant with the requirement that it report controlled substance dispensings to the PDMP within 7 days. RX 8, at 3. Also, during the

Continued

Respondent also argues that because ''the State has taken no action adverse to [it], the ALJ should have found that this factor weighed in favor of continued registration.'' *Id.* (citing *Physicians Pharmacy, L.L.C.*, 77 FR 47096 (2012)). However, while Respondent retains its state authority, the Agency has long held that possession of state authority is a prerequisite for obtaining and maintaining a registration.[26] Whether a registrant retains its state license is not a factor in determining whether it has committed acts which render its registration inconsistent with the public interest.[27] Thus, in the absence of a recommendation regarding Respondent's registration, Respondent's continued possession of its State authority is not dispositive and neither supports nor refutes the Government's contention that its registration is ''inconsistent with the public interest.'' 21 U.S.C. § 823(f). Accordingly, I agree with ALJ's ruling that factor one ''does not weigh for or against a determination as to whether the Respondents' continued registration is consistent with the public interest,'' R.D. 58, and reject the exception.

Exceptions to the ALJ's Legal Conclusions as to Factors Two and Four

In her decision, the ALJ found that Respondent ''violated recordkeeping requirements by failing to record whether [its] biennial inventory was taken at the opening or close of business, and by failing to indicate the number of tablets per opened commercial container, the number of tablets shipped in each commercial container, and the number of commercial containers that Ms. Jones had on hand.'' R.D. at 59 (citing 21 CFR 1304.11(e)(3)). Reasoning that without ''a complete inventory, the DEA is unable to conduct an accurate accountability audit,'' the ALJ, while acknowledging that ''the inventory was complete in other aspects,'' then explained that ''Ms. Jones' partial compliance does not obviate her failure to record the required the information on the biennial inventory.'' *Id.* at 60. The ALJ further explained that ''Respondent's lack of attention to detail with its accountability of the controlled substances received and dispensed is adequate grounds for recommending [the] revocation of [its] registration.'' *Id.* (citing *Alexander Drug Co.*, 66 FR 18299, 18303 (2001) (citing *Singers-Andreini Pharmacy, Inc.*, 63 FR 4668 (1998))).

Respondent argues that the ALJ's conclusion ''was one of form over substance'' and that ''the unrebutted testimony of Ms. Jones, the biennial inventories presented, [its] expert['s] testimony . . . , and the DOH inspections, all establish that Jones Pharmacy was in substantial compliance with the applicable regulation,'' and that this standard ''is recognized in DEA regulations.'' Exceptions, at 17, 19 (citing 21 CFR 1301.71(b)). Respondent further argues that revocation is not warranted based on ''these minor deficiencies.'' *Id.* at 19.

Contrary to Respondent's understanding, the ''substantial compliance'' standard applies only with respect to the Agency's assessment of an applicant's/registrant's ''overall security system.'' 21 CFR 1301.71(b). Moreover, in the Controlled Substances Act, Congress set the standard for assessing the adequacy of a registrant's inventories by requiring that ''every registrant . . . make *a complete and accurate record* of all stocks thereof on hand.'' 21 U.S.C. § 827(a)(1) (emphasis added). *See also id.* § 827(a)(3) (requiring that ''every registrant . . . shall maintain . . . a complete and accurate record of each such substance . . . received, sold, delivered, or otherwise disposed of'').

Under DEA's regulations, Respondent's inventories were neither complete nor accurate. They were not complete because they did not list the number of commercial containers on hand and the number of units in each such container. *See* 21 CFR 1304.11(e)(3); *id.* § 1304.11(e)(1)(iii)–(iv). Nor were they accurate because they did not indicate whether the inventory was taken ''as of [the] opening of business or as of the close of business.'' *Id.* § 1304.11(a). In the absence of the inventories indicating whether they were taken at the opening or close of business, DEA personnel conducting an audit would not know whether to count the prescriptions dispensed and any shipments received (as well as any returns or other dispositions) on the dates that the inventories were taken.

Respondent nonetheless argues that because the inventories listed the NDC number of the controlled substances, and ''the last two digits of the NDC number represent the bottle size,'' the inventories contained the required information. Exceptions, at 18. While it may be that the last two digits of an NDC number indicate the bottle size, there are a multitude of different manufacturer's controlled drug products on the market and DEA personnel had no obligation to investigate what bottle size corresponded with the various NDC numbers listed on Respondent's inventories.[28]

Moreover, despite her factual finding that 480 line items on Respondent's schedule II order forms were not completed correctly, the ALJ did not draw a legal conclusion as to whether Respondent was in compliance with DEA's regulations. *Compare* R.D. at 18–19 (FOF Nos. 89–91), *with id.* at 58–60 (discussing legal conclusions with respect to recordkeeping). I find that Respondent violated DEA regulations by failing to properly record ''the number of commercial or bulk containers furnished on each item and the dates on which the containers are received by the purchaser.'' 21 CFR 1305.13(e).

August 29, 2014 inspection, the DOH Inspector found that Respondent was non-compliant with Florida law requiring that it maintain controlled substances records ''for 4 years.'' *Id.* at 1. Also at the latter inspection, the Inspector noted that ''controlled substance invoices are mixed in with non-controlled'' and that ''CII should be separate and CIII–V should be marked if filed with noncontrols [sic] [and] must be readily retrievable from all other records.'' *Id.* Of note, under 21 CFR 1304.04(h)(1), ''[i]nventories and records of all controlled substances listed in schedule I and II shall be maintained separately from all other records of the pharmacy.''

[26] Thus, consistent with the structure of section 823(f), determining whether an applicant possesses state authority is an inquiry which is required before the Agency considers the public interest factors. *See* 21 U.S.C. § 823(f). And in revocation proceedings, a registrant's loss of state authority is a basis for revoking a registration which is independent from the determination of whether a registrant has committed such acts as to render its registration inconsistent with the public interest. *Compare id.* § 824(a)(3) *with id.* § 824(a)(4).

To be sure, there are cases in which the Agency has adopted a recommended decision which endorsed the view that the possession of a valid state license ''weighs against a finding that Respondent's registration would be inconsistent with the public interest.'' However, whether an applicant possesses the requisite state authority is properly viewed as a threshold matter which is to be considered before the public interest determination is made.

[27] Certainly conduct which causes a State Board to suspend or revoke a practitioner's controlled substances authority may involve controlled substances and provide a basis to revoke under the public interest standard. But a State Board may also suspend or revoke a practitioner's state authority for reasons having nothing to do with a registrant's controlled substance activities; while such cases do not implicate the public interest standard, they are nonetheless grounds to revoke based solely on the registrant's loss of state authority. 21 U.S.C. § 824(a)(3).

[28] Respondent also asserts that its Expert ''found it compelling that the DOH remarked in the October 12, 2011 DOH report that [it] had a zero (0%) percent error rate on its physical inventory.'' Exceptions, at 18. Putting aside that the Inspector's comment pertained to an audit he conducted and not an inventory, *see* RX 8, at 7; the Inspector's Report noted that Ms. Jones had not provided a controlled drug report and that the software company had to be contacted ''in order to figure out how to print the report.'' *Id.* Thus, the DOH Inspector's audit likely did not include controlled substances.

While Respondent argues that the violations found by the ALJ do not support revocation, I need not decide whether these violations, including those based on its failure to properly complete the order forms, would support the revocation of Respondent's registration as opposed to some lesser sanction. This is so because the evidence shows that Respondent has committed egregious dispensing violations which fully support the denial of both its and SND's applications.

Exceptions to the ALJ's Findings That Respondent Violated Its Corresponding Responsibility

Respondent raises five arguments as to why I should reject the ALJ's legal conclusion that it violated 21 CFR 1306.04(a). The first three of these are based primarily on the ALJ's reliance on the testimony of the Government's Expert that many of the prescriptions presented red flags which were unresolvable. They include that: (1) Government's Expert was not qualified to testify as an Expert; (2) the Expert was biased; and (3) its right to due process was violated when the ALJ denied its request for a copy of the Expert's report. Exceptions, at 20–24. As for its other contentions, Respondent argues that: (4) Substantial evidence does not support a finding that Respondent knew or should have known of the various red flags, *id.* at 24–29; and (5) this proceeding ''may have been brought for punitive reasons'' because Respondent's owner complained to her congressional representatives when DEA failed to approve her request to change her registered location. *Id.* at 30. I find that none of these contentions have merit.

Respondent's Challenges to the Government's Expert

Respondent first challenges the ALJ's ruling accepting the Government's Expert as an Expert in retail pharmacy. Tr. 224. According to Respondent, the Government's Expert was not qualified to testify as such because she has ''no expertise of ever serving on pharmacy boards,'' has ''never taught pharmacy,'' has ''never worked at an independent pharmacy . . . or testified about any expertise with independent pharmacies,'' and ''is not currently working in a capacity where she [is] dispensing.'' Exceptions, at 21. Respondent also argues that the Government's Expert's ''retail pharmacy experience was limited to that of an assistant manager at Publix [a supermarket chain]—and before that [as] a pharmacist at Walgreens,'' these being ''large retail institutions that had significant resources.'' *Id.* And Respondent argues that the Expert ''had never before been qualified as an expert,'' that she ''has not published any articles relating to red flags of diversion,'' nor written ''any policies or procedures relating to diversion'' or ''controlled substances.'' *Id.* at 21–22.

The evidence shows, however, that Government's Expert holds both a Bachelor of Science in Pharmacy and a Doctor of Pharmacy degree. GX 25, at 1. She testified that she had 17 years of experience working in retail pharmacies, Tr. 214, and her CV shows and she has 10 years of experience working a pharmacist, an assistant manager and a pharmacy manager at retail pharmacies. GX 25, at 2, 4. She testified to having dispensed an estimated five million prescriptions. Tr. 216.

She also testified that based on her education and professional experience she was familiar with a pharmacist's responsibilities in dispensing controlled substances and issues involving the diversion and abuse of controlled substances. *Id.* at 218–19. Thus, the Government's Expert's experience and education provided an ample basis for the ALJ to deem her qualified to testify as an expert witness. *See, e.g.*, *United States* v. *Roach*, 644 F.3d 763, 764 (8th Cir. 2011) (physician qualified to testify as expert on issues based on knowledge acquired ''solely from on-the-job observations and attendance at conferences and seminars''); *American General Life Ins. Co.* v. *Schoenthal Family, LLC*, 555 F.3d 1331, 1338–39 (11th Cir. 2009) (rejected argument that ''[e]xperience alone . . . can never form the basis for expert testimony,'' and noting that expert's education and experience rendered him qualified to testify as expert on insurance industry standards). I therefore reject Respondent's argument to the contrary.[29]

Respondent further maintains that the Expert was biased because she ''testified that she helped write the Order to Show Cause.'' Exceptions, at 22. Respondent also notes that the Expert testified that she had provided a report to DEA, which was in existence when it sought discovery from the Government, but that the ALJ denied its request for discovery. Respondent further argues that the ALJ's ruling denying its request for the Expert's report was a denial of its right to due process. *Id.* at 23 (citing *McClelland* v. *Andrus*, 606 F.2d 1278, 1286 (D.C. Cir. 1979)). Respondent then asserts that the Expert's report ''likely contained the identity of other witnesses and may have lead [sic] to the discovery of additional evidence.'' *Id.* at 24.

As for Respondent's claims that the Government's Expert was biased because she ''testified that she helped write the Order to Show Cause,'' the Expert's testimony was: ''Yes, I provided a report of my findings and my opinion only.'' Tr. 303. And when then asked by Respondent if she had ''seen that report in any documents that have been shown to you in this proceeding,'' the Expert ''I think they showed it to me after the fact. This is what we submitted to you. They showed me the Order after, yes. After they gave it to you, they forwarded it to me too, but I'm going to be honest, I don't read all that stuff.'' *Id.*

Of note, the record contains no indication that the Show Cause Order (which was in the record as ALJ Ex. 1) was presented by Respondent to the Expert when this colloquy occurred. *See id.* And when the Government objected to this line of questioning on the ground that ''we're using terms here . . . in a confusing manner'' and asked that Respondent's counsel ''show her the document,'' the ALJ instructed Respondent's Counsel that ''if you would be precise in what you're referring to, that would be very helpful,'' before adding that ''[i]t is confusing.'' Tr. 304. Respondent's Counsel then proceeded to ask the Government's Expert about the report she submitted. *Id.* at 305. As I also find the record confusing, I do not find it established that the Government's Expert helped to write the Order to Show Cause other than in the sense that she reviewed the prescriptions and provided a report to the Government.

I also reject Respondent's contention that it was entitled to discovery of the Expert's report. As several courts of appeals have recognized, ''[t]he

[29] While Respondent invokes Rule 702 of the Federal Rules of Evidence (which provide only guidance in this proceeding, *see Rosalind A. Cropper*, 66 FR 41040, 41041 (2000)), even under Rule 702, the Government's Expert would have been deemed qualified to testify as such based on her experience and knowledge. There is no requirement that an expert has served on a Board of Pharmacy, has written articles on or taught the subject matter, or has previously testified as an expert. *See* Fed. R. Evid.702 (Advisory Committee Notes 2000 Amendments) (''Nothing in this amendment is intended to suggest that experience alone–or experience in conjunction with other knowledge, skill, training or education–may not provide a sufficient foundation for expert testimony.''); *Beins* v. *United States*, 695 F.2d 951, 609 (D.C. Cir. 1982) (expert's lack of publications in field not disqualifying). As for Respondent's argument that the Expert's experience was limited to working ''in large retail institutions'' and not independent pharmacies, the Agency's corresponding responsibility rule applies in the same manner to all pharmacies.

Administrative Procedure Act contains no provision for pretrial discovery in the administrative process . . . and the Federal Rules of Civil Procedure for discovery do not apply to administrative proceedings.'' *Silverman* v. *CFTC*, 549 F.2d 28, 33 (7th Cir. 1977); *see also Mister Discount Stockbrokers, Inc.*, v. *SEC*, 768 F.2d 875 (7th Cir. 1985). Rather, '' '[t]he extent of discovery that a party is entitled to is primarily determined by the particular agency.' '' *Mister Discount Stockbrokers*, 768 F.2d at 878 (quoting *McClelland*, 606 F.2d at 1285).

DEA's regulations do not, however, provide for broad-based discovery. Rather, consistent with the Due Process Clause, they provide only the right to receive in advance of the hearing a summary of the anticipated testimony of the Government's witnesses and copies of the Government's proposed exhibits.

To be sure, the Agency has recognized that ''discovery must be granted if in the particular situation a refusal to do so would so prejudice a party as to deny [it] due process.'' *Margy Temponeras*, 77 FR 45675, 45676 n.4 (2012) (quoting *McClelland*, 606 F.2d at 1285)). *See also Goldberg* v. *Kelly*, 397 U.S. 254, 270 (1970) (''where governmental action seriously injures an individual, and the reasonableness of the action depends on fact findings, the evidence used to prove the Government's case must be disclosed to the individual so that he has an opportunity to show that it is untrue'') (int. quotations and other citation omitted). However, ''the party seeking discovery must rely on more than speculation and must show that the evidence is relevant [and] material, and that the denial of access to the documents is prejudicial.'' *Beau Boshers*, 76 FR 19401, 19403 (2011) (citing *Echostar Comm. Corp.* v. *FCC*, 292 F.3d 749, 756 (D.C. Cir. 2002); *Silverman*, 549 F.2d at 34). The prejudice must be of such ''a significant degree so as to result in a denial of due process.'' *Mister Discount Stockbrokers*, 768 F.2d at 878.

While Respondent contends that the denial of its right to the report of the Government's Expert violated its right to due process, I conclude that Respondent has failed to identify any prejudice, let alone prejudice resulting in the denial of due process. Notably, in advance of the hearing, the Government provided Respondent with a thorough disclosure of the testimony it expected to elicit from its Expert regarding the various red flags of diversion present in the prescriptions she reviewed and it also identified those sets of prescriptions which its Expert would testify were ''filled in the face of numerous unresolvable red flags for diversion.'' ALJ Ex. 11, at 16–19 (Govt. Prehearing Statement). Moreover, Respondent makes no claim that the Government failed to provide copies of its proposed exhibits in advance of the hearing as required by the ALJ's Prehearing Ruling. ALJ Ex.16, at 3. Thus, Respondent was fully apprised of the Government's theory of the case and the evidence it intended to rely on and Respondent had ample opportunity to prepare a defense.

While Respondent asserts that by denying it ''access to [the Expert's] report, [it] was denied access to part of the evidence on which the DEA relies [on] to revoke its license,'' Exceptions, at 24; the Government did not introduce the report into evidence and thus did not rely on it to prove its case. Moreover, Respondent was able to thoroughly cross-examine the Government's Expert as to the basis of her opinions that the prescriptions presented unresolvable red flags. *See* Tr. 289–359; 375–79.

Respondent further asserts that it has been prejudiced because the Expert's report ''likely contains the identity of other witnesses and may have lead [sic] to the discovery of additional evidence.'' Exceptions, at 24. However, earlier in its Exceptions, Respondent argued that I should reject the ALJ's findings as to the prescriptions in GX 22 because the Government's Expert acknowledged that ''she had not . . . spoken with the doctors, or the patients or any physicians that had issued the prescriptions at issue in this action.'' Exceptions, at 13 (citing Tr. 317). As Respondent has not even suggested what other type of witnesses it believes the Expert's report refers to, its claim of prejudice rests on pure speculation. I therefore reject its exception.[30]

Respondent's Contention That Substantial Evidence Does Not Support a Finding That It Knew or Should Have Known of the Red Flags

Respondent argues that ''[t]he ALJ improperly concluded that [Respondent] knew or should have recognized a red flag prior to the time the controlled substances were dispensed.'' Exceptions, at 24. Noting the ALJ's reliance on *Holiday CVS,* Respondent argues that ''unlike the *Holiday CVS* case, there was no evidence in the record of this case that any controlled substance was diverted, or any prescription [was] issued by a prescribing physician who lacked authority to prescribe controlled substances.'' *Id.* at 24–25. Respondent further argues that in *Holiday CVS,* the pharmacies ''were specifically advised by DEA staff on more than one occasion of prescribing patterns to look out for as potential indicators of diversion.'' *Id.* at 25 (citing 77 FR at 62326, 62331). Respondent thus contends that ''[n]one of these facts are [sic] present in this action.'' *Id.*

While it is true that in *Holiday CVS,* the Agency found that pharmacies knowingly filled prescriptions issued by two physicians who were no longer registered and did so well after the pharmacies should have known that the physicians were no longer registered, that was only a small part of the case. *See* 77 FR at 62316–317. Rather, the heart of the Government's case was that the pharmacies' pharmacists had repeatedly violated their corresponding responsibility by dispensing prescriptions when they either knew or were willfully blind to the fact that the prescriptions lacked a legitimate medical purpose. *See id.* at 62317–322; *see also id.* at 62332–334.

Contrary to Respondent's contention, the Government's proof was similar to that put forward in this case in that it was based entirely on circumstantial evidence. More specifically, the evidence showed that: (1) The patients were travelling long distances (and frequently from out-of-state) to obtain their prescriptions; (2) the prescriptions were for large quantities of such highly abused drugs as oxycodone 30 and alprazolam; (3) the doctors issued prescriptions for combinations of oxycodone (including two dosage strengths both oxycodone 30 and 15) and alprazolam; and (4) the patients were paying cash for the prescriptions. *See id.* at 62332–34.

As in this matter, in *Holiday CVS,* the Government did not put forward any witness who testified that he/she had ''personal knowledge'' that the drugs were being diverted. While Respondent further argues that the Government did not put on any evidence ''that any diagnosis was not legitimate . . . or that any controlled substance was diverted after a prescription was filled,'' Exceptions, at 29; the Government did introduce evidence showing that several

[30] In light of my conclusion that Respondent has not shown that the denial of the Expert's report is so prejudicial as to deny it due process, I do not address the Government's argument that the report was a draft report which even under the Federal Rules of Civil Procedure need not be disclosed to the opposing party. Govt. Resp. to Respondents' Exceptions, at 20–21 (citing Fed. R. Civ. P. 26(b)(4)(B)). Nor do I address the Government's contention that the parties agreed that the only documents subject to disclosure were the prehearing summaries of the expected testimony, the experts' CVs, and any documents that their experts would be expected to refer to on direct examination and that Respondents ''are complaining about a document they abandoned months before the hearing.'' *Id.* at 19.

of the physicians either surrendered their registrations or had their registrations revoked after a hearing in which they were found to have issued prescriptions in violation of 21 CFR 1306.04(a). *See Rene Casanova,* 77 FR at 58151–52; GX 42, at 1 (registration printout for *Randall L. Wolff*); *Wolff,* 77 FR at 5121–22; GX 41, at 1 (registration printout showing Dr. Neuringer surrendered his registration for cause).[31]

Nor do I find persuasive Respondent's attempt to distinguish *Holiday CVS* because in that matter, agency Investigators met with CVS employees and discussed both a pharmacist's corresponding responsibility and various red flags attendant with illegitimate prescriptions. To the extent Respondent suggests that its owner and pharmacists were entitled to a similar briefing, and should be excused from liability because they did not receive such a briefing, it is mistaken. DEA does not have the resources to personally brief every registrant following its discovery of new patterns of diversion.[32] Rather, as a participant in a highly regulated profession, Respondent's owner had an obligation to keep herself informed regarding regulatory developments which affected her profession. *Cf. Holiday CVS,* 77 FR at 62317 (citing *United States* v. *Southern Union Co.,* 630 F.3d 17, 31 (1st Cir. 2010) (''[T]hose who manage companies in highly regulated industries are not unsophisticated. . . . It is part of [a company's] business to keep abreast of government regulations.'')).

Moreover, even prior to Respondent's first engaging in the dispensing of controlled substances, this Agency had identified several of the same red flags that are present here, such as the prescribing of drug cocktails of narcotics (oxycodone), benzodiazepines (alprazolam), and carisoprodol and patients obtaining large doses and multiple prescriptions for narcotics. *See Paul H. Volkman,* 73 FR 30630, 30637 (2008) (discussing testimony of expert in pain management that physician's practice of prescribing drug cocktails of opioids, which often included multiple opioids, a benzodiazepine and carisoprodol, ''greatly increased the chance for drug abuse, diversion, [and]/or addiction'');[33] *see also Your Druggist Pharmacy,* 73 FR 75774, 75775 n.1 (2008) (discussing carisoprodol's use by drug abusers as a part of a drug cocktail which also includes an opiate and benzodiazepine).

Also, as discussed above, on October 27, 2010, the Agency identified additional red flags in the *East Main Street Pharmacy* case such as patients paying cash, patients travelling long distances to obtain prescriptions, and patients obtaining prescriptions for alprazolam in the two milligram dosage. To the extent Respondent believes that it should be excused for its dispensing violations which occurred prior to this date because no Agency decision had explicitly found that these circumstances were red flags, the circumstances of patients, who had traveled long distances and frequently from out-of- state, presenting prescriptions for multiple controlled substances including large quantities of oxycodone (and frequently prescriptions for both 30 and 15 milligrams dosages), alprazolam 2mg, and at times also carisoprodol, for which they paid large sums of cash (or cash equivalents), created an obvious and compelling level of suspicion that the prescriptions lacked a legitimate medical purpose. *See Holiday CVS,* 77 FR at 62322 (''[T]he red flags presented by the circumstances of patients travelling from Kentucky or Tennessee to South Florida to obtain prescriptions, including for a schedule II narcotic, which by definition has the highest potential for abuse of any drug that may be lawfully prescribed, and then travelling to Respondents to fill them, are so obvious that only those who are deliberately ignorant would fill these prescriptions.'') (citation omitted).[34] Because I conclude that these red flags rendered it obvious that the prescriptions likely lacked a legitimate medical purpose, I reject Respondent's further contention that ''the ALJ . . . improperly concluded that there was a general knowledge of 'red flags' among . . . independent pharmacies.'' Exceptions, at 29.

Respondent further argues that the ALJ erred in ''credit[ing] the DEA's argument that cash and high prices charged are evidence of knowledge [on Ms. Jones's part] that her 'acts were illegal.' '' *Id.* According to Respondent, this ''argument turns the principles of due process and burden of proof on their head,'' apparently because both parties' Experts testified that there are no ''prohibitions of pharmacies charging any particular price on controlled substances.'' *Id.* (citing Tr. 758).

Respondent, however, cites no authority for its contention. Moreover, even granting that there are no prohibitions on the prices a pharmacy can charge for controlled substances, when those prices far exceed what other pharmacies would charge, the Agency may properly draw the inference that

[31] The evidence also shows that Respondent filled controlled substance prescriptions issued by Drs. Jacobo Dreszer (4 Rxs), Michael Aruta (7 Rxs), Beau Boshers (12 Rxs), and Cynthia Cadet (2 Rxs). *See* GX 2 (line entries nos. 25, 41, 53–60, 70–83, 87). I take official notice that on February 25, 2010, the former Administrator ordered the immediate suspension of each of these doctor's registrations, and following a consolidated hearing before an ALJ, the former Administrator found that each of these doctors had issued controlled substance prescriptions outside of the usual course of professional practice and which lacked a legitimate medical purpose and revoked their respective registrations. *See Cynthia M. Cadet,* 76 FR 19450, 19451, 19465 (2011); *Michael J. Aruta,* 76 FR 19420, 19420, 19434 (2011); *Beau Boshers,* 76 FR 19401, 19404, 19419 (2011); *Jacobo Dreszer,* 76 FR 19386, 19389–90, 19401 (2011).

[32] In *Holiday CVS,* one of the Government's Investigators (who also testified in this proceeding) testified that the DEA Weston Office had decided in 2005 ''to interview all new pharmacy applicants and also treat all new pharmacy applications the same and alert the chains. So when there was a new pharmacy opening up, I would contact them and they would come in for a discussion of the situation.'' 77 FR at 62331. Respondent cites to this testimony and argues that ''[t]here was no testimony from DEA staff that the DEA ever provided similar information to [it] during the . . . time period covering the prescriptions at issue in this action.'' Exceptions, at 29 n.32. Respondent thus suggests that ''there was a disparity of treatment between types of pharmacies despite the DEA seeking to impose the same knowledge on [it] that was given to Holiday CVS.'' *Id.*

To the extent Respondent raises the lack of such a briefing as an affirmative defense, the burden of production was on Respondent to show that it did not occur and Respondent produced no evidence as to whether DEA Investigators visited it prior to granting its initial application, let alone that they failed to conduct a briefing on red flags associated with unlawful prescriptions. Second, even if Respondent had established that it was treated differently than chain pharmacies because it was an independent pharmacy, the Government's basis for treating it differently would only be subject to rational basis review. *Cf. FCC* v. *Beach Comm., Inc.,* 508 U.S. 307, 316–17 (1993). Finally, because the regulation provides constitutionally adequate notice of a pharmacist's legal obligation to not knowingly dispense prescriptions which lack a legitimate medical purpose, *see United States* v. *Hayes,* 595 F.2d 258, 260–61 (5th Cir. 1979), and the red flags themselves are simply factual circumstances which provide evidence to suspect that a prescription was not issued for a legitimate medical purpose, Respondent cannot claim that it has been denied fair notice that its filling of the prescriptions at issue was unlawful.

[33] Indeed, the Government's Expert in *Volkman* discussed at length six patients who received multiple controlled substance prescriptions from the doctor and died of overdoses only a few days later. *See* 73 FR at 30637 n.23.

[34] In this exception, Respondent also repeats its argument that the Government's Expert ''provided no credible evidence that the term [red flags] was known by pharmacists [sic] the State of Florida other than her unsubstantiated testimony.'' *Id.* at 27. Respondent also relies on the discredited testimony of its Expert to the effect that the first reference she found on the Agency's website to the term red flag was in the *Holiday CVS* decision and that she did not believe that in 2010, such circumstances as patients paying cash or traveling to obtain prescriptions was widely known by pharmacists to be an indicator of abuse or diversion. *Id.* at 28. I reject these arguments for the reasons explained in my discussion of Respondent's exceptions to the ALJ's factual findings and credibility determinations regarding the parties' experts.

the pharmacy is charging those prices because it knows it is supplying persons who are seeking the drugs to either abuse them or divert them to others. *See United States* v. *Leal,* 75 F.3d 219, 223 (6th Cir. 1996) (holding that evidence that pharmacist ''marked up controlled substance prices 788% as compared to a national average of 86%'' supported finding that pharmacist knew prescriptions were unlawful''); *United States* v. *Cooper,* 868 F.2d 1505, 1512 (6th Cir. 1989) (evidence that pharmacy charged prices well in excess of average prices supports an inference that the pharmacist knew drugs were prescribed illegally); *Hayes,* 595 F.2d at 261 (holding that evidence that ''the prices charged by [pharmacist] for drugs were unusually high'' supported conclusion that pharmacist ''knew that the prescriptions were not issued for a legitimate medical purpose'').

Here, the evidence shows that Respondent was charging prices as high as $1620 for 180 dosage units of oxycodone 30 mg when it paid $58.66 for the drugs. *See, e.g.,* GX 2 (line entries Nos. 3172, 3192, 3249). Moreover, the DOH Inspector, who had inspected approximately 1,500 pharmacies in Broward and Dade counties and who had 33 years of experience as a practicing pharmacist, testified that the typical price for 180 oxycodone 30 was ''less than $200'' and ''at most $250.'' Tr. 168. The Inspector further testified that the $1620 price Respondent was charging at the time of the 2012 DOH Inspection was ''extraordinary'' and that ''in charging that amount of money,'' Respondent's owner knew the prescriptions were not issued for a legitimate medical purpose. *Id.* at 167. I agree and I reject Respondent's contention to the contrary.

Respondent's Contention That This Proceeding May Have Been Brought For Punitive Reasons

Respondent further argues that ''the objective evidence indicates that the instant action may have been brought for punitive reasons.'' Exceptions, at 30. As support for its contention, Respondent cites to the evidence showing that in March 2012, Ms. Jones leased a new location; that on June 2, 2012, she applied to change her registered address to her new location; and that in both July and October 2012 she had sent DEA Investigators the dispensing report (GX 2), but that DEA did not approve the modification until April 2, 2013, several weeks after Respondent's owner had written her congressional representatives to complain about the delay. *Id.* at 30–33.

In its Exceptions, Respondent further quotes from Ms. Jones' letter to her congressional representatives in which she asserted that ''I can only think of negative reason of why someone would sit on our file so long,'' that ''[i]t feels like an abuse of power for someone in this position,'' and ''I feel this is an adult version of being bullied. I am emailing and calling and I can't get any response on the status of our application and why it is taking so long.'' RX 7 (quoted in Exceptions, at 32–33). Noting that one of the Government's Investigators testified that when he conducted the April 2, 2013 inspection, he was aware that Ms. Jones had sent this letter to her congressional representatives, Respondent thus suggests that the proceeding was brought to retaliate against Ms. Jones for complaining to her representatives. Exceptions, at 32–33 & n.33.

I reject the contention that the proceedings were brought to retaliate against Respondent's owner. Here, notwithstanding that Ms. Jones engaged in constitutionally protected speech when she complained to her congressional representatives, the Government's case for seeking the revocation of Respondent's registration is amply supported by the evidence showing that Respondent's pharmacists filled numerous controlled substance prescriptions in violation of 21 CFR 1306.04(a) thus rendering its registration inconsistent with the public interest. In the related context of a *Bivens* action for a retaliatory criminal prosecution, the Supreme Court has held that a plaintiff must show that the prosecutor lacked probable cause. *See Hartman* v. *Moore,* 547 U.S. 250, 265–66 (2006); *see United States* v. *Armstrong,* 517 U.S. 456, 464 (1996) (holding that ''a presumption of regularity'' supports prosecutorial decisionmaking, and where probable cause exists the decision to bring a charge ''generally rests entirely'' in the prosecutor's ''discretion'') (int. quotations and citations omitted). Because there is no evidence in the record, other than Ms. Jones' assertion, that the proceeding was brought to punish her for having complained to her congressional representative, and because the case against Ms. Jones is amply supported by the evidence in the record, I reject her contention.

Respondent's Exception That the ALJ Failed To Consider Respondent's Evidence as to Ms. Jones' Acceptance of Responsibility and Remedial Actions

The ALJ further found ''that Ms. Jones has not unequivocally accepted responsibility for'' the ''unlawful dispensing that occurred at [Respondent] from 2010 [through] 2012.'' R.D. at 73. Based on this finding, the ALJ applied Agency precedent which holds that a registrant's acceptance of responsibility and showing that it has undertaken adequate remedial measures are independent and ''essential requirements for rebutting the Government's *prima facie* showing that continuing an existing registration would be 'consistent with the public interest,''' and declined to consider Respondent's evidence of remedial measures. *Id.* (citing *Holiday CVS,* 77 FR at 62346 (quoting 21 U.S.C. § 823(f))).

Respondent takes exception to the ALJ's finding that Ms. Jones failed to unequivocally accept responsibility for its misconduct. It argues that the ALJ erred in concluding that Ms. Jones' testimony that she believed ''that she was dispensing in accordance with appropriate methods, demonstrates a lack of acceptance of responsibility.'' *Id.* at 33–34. Respondent argues that ''there is no specific language that is required to 'unequivocally accept responsibility'' because ''not all individuals are the same and different individuals express themselves in different ways.'' *Id.* at 34. Respondent then argues that ''Ms. Jones repeatedly indicated that she accepted responsibility for her actions that she felt bad in that she would not want to have done something to hurt anyone.'' *Id.* Respondent further points to Ms. Jones' testimony ''that knowing what she knows now, she could have done more to determine if prescriptions were written for legitimate purposes'' but that ''she did not believe any of the prescriptions in 2010 that were issued were not for legitimate medical purpose at that time . . . [a]lthough knowing what she knows now, she concedes it is possible they may not have been.'' *Id.* After discussing two older agency cases which Respondent asserts stand for the proposition ''that there is no specific way in which a party may accept responsibility,'' Respondent all but acknowledges the insufficiency of its showing on this issue when it argues that ''[i]n the instant action, there was substantial evidence on the record that Ms. Jones *equivocally* took responsibility for her actions.'' Exceptions, at 34–36 (emphasis added and citing *Barry H. Brooks,* 66 FR 18305 (2001) and *Mary Thomson,* 65 FR 75969 (2000)).

While it is true that in these two cases the Agency granted registrations to persons whose acceptance of responsibility was less than unequivocal, in subsequent cases the Agency has made clear that where the Government has proved that a registrant

has engaged in intentional or knowing misconduct, revocation is warranted in the absence of the registrant's unequivocal acceptance of responsibility for its misconduct. *See Jayam Krishna-Iyer,* 74 FR 459, 464 (2009). As the former Administrator explained:

> While some isolated decisions of this Agency may suggest that a practitioner who committed only a few acts of diversion was entitled to regain his registration even without having to accept responsibility for his misconduct, the great weight of the Agency's decisions are to the contrary. . . . Because of the grave and increasing harm to public health and safety caused by the diversion of prescription controlled substances, even where the Agency's proof establishes that a practitioner has committed only a few acts of diversion, this Agency will not grant or continue the practitioner's registration unless he accepts responsibility for his misconduct.[35]

Id. See also Michael A. White, 79 FR 62957, 62958, 62967–68 (2014) (adopting ALJ's finding that physician did not accept responsibility when his ''acceptance of responsibility was tenuous at best,'' ''not once during the hearing did [he] unequivocally admit fault for his improper . . . prescriptions,'' and he ''minimized the severity of his misconduct''); *The Medicine Shoppe,* 79 FR 59504, 59508–10 (2014) (adopting ALJ's finding that pharmacy had not accepted responsibility for its misconduct when its owner/pharmacist initially testified that he accepted responsibility but on cross-examination denied ever having filled an unlawful prescription notwithstanding proof to the contrary); *Holiday CVS,* 77 FR at 62323 (rejecting challenge to ALJ finding that pharmacy registrants had failed to acknowledge their misconduct when corporate official testified only that company ''takes its responsibility seriously, and given . . . the elevated level of drug abuse that's being observed broadly in Florida, we don't want to contribute to that'').[36]

Here, Respondent's evidence falls well short of the mark and even putting aside the egregious nature and scope of Respondent's misconduct, Ms. Jones' testimony establishes that she still does not understand what her obligations are under the CSA. Notably, when asked on cross-examination about specific sets of prescriptions, Ms. Jones maintained that at the time she dispensed the prescriptions she thought she was properly exercising her corresponding responsibility. Tr. 578–79. She further denied that she had reason to believe the prescriptions were not issued for a legitimate medical purpose, explaining that ''I did what I had done at other pharmacies and I thought that was enough.'' *Id.* Ms. Jones further testified that her process for checking the legitimacy of the prescriptions was limited to ''calling the doctor and verifying that the prescription was written by the office.'' [37] *Id.* at 581.

While Ms. Jones further testified that ''[k]nowing what I know today, I think I could have done more digging to test the legitimacy of the prescriptions,'' *id.* at 583, she then explained that ''there are doctors who will still write prescriptions like this and who are still practicing. So, I feel like we have to be the police of the legitimacy of the prescriptions, *even though that should be their responsibility to make sure legitimate prescriptions are written based on the diagnosis of the patient.*'' *Id.* at 585 (emphasis added).

Throughout the cross-examination, Ms. Jones continued to maintain her belief that she had complied with her obligations under 21 CFR 1306.04(a) when she filled the prescriptions while denying that she had any obligation to do anything other than call the doctor's office. For example, when asked if her ''due diligence include[d] assessing whether'' the prescriptions in Government Exhibit 17 and 45 [38] (which were presented by two persons who provided the same address in Tennessee and were for three controlled substances) were issued ''for legitimate medical purposes,'' Ms. Jones answered: ''Well we call the office to verify the prescription and to make sure it was valid. I disagree with what you're saying that we didn't make sure that the prescription was legitimate. I don't agree to that. I'm sorry, I don't.'' Tr. 593–94. When then asked whether there was ''reason to believe that'' the prescriptions were not issued for a legitimate medical purpose, Ms. Jones answered:

> At face value of the prescription, no, because they're actual medications. They're written by a doctor. I've done a lot of training. Pain is what the patient says it is. Someone can, I have a patient who has sickle cell and has told me he's went to the hospital and sat there and waited and they asked him what his pain level was and he told them ten and it wasn't until they took his vitals that they actually believed him. So, I don't think you could look at someone to say you're not in pain and that's not a legitimate prescription.

Id. at 595. However, even if a pharmacist cannot look someone in the eye and determine whether she is actually in pain, a pharmacist can certainly evaluate the likelihood that prescriptions are legitimate when two patients, who provided the same address in Tennessee, presented essentially identical prescriptions for large quantities of oxycodone 30 and 15, as well as alprazolam 2, which they obtained from the same doctors, paid cash for the prescriptions and just happened to drop by her pharmacy to fill the prescriptions.

Next, the Government pursued the same line of questioning regarding the 49 prescriptions which were presented by 22 patients and filled by Respondent on April 19 and 20, 2010. Tr. 596; GXs 46 and 18. Of note, none of the 22

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[35] In *Krishna-Iyer,* the Agency further overruled any case to the contrary. 74 FR at 464 n.9.

[36] The Agency's rule has been upheld on review. *See MacKay* v. *DEA,* 664 F.3d 808, 820 (10th Cir. 2011) (''The DEA may properly consider whether a physician admits fault in determining if the physician's registration should be revoked. When faced with evidence that a doctor has a history of distributing controlled substances unlawfully, it is reasonable for the . . . Administrator to consider whether that doctor will change his . . . behavior in the future. And that consideration is vital to whether continued registration is in the public interest.''); *Chein* v. *DEA,* 533 F.3d 828, 837 (D.C. Cir. 2008) (upholding revocation of physician's registration based on physician's failure to accept responsibility where physician ''continued [to] insist[] that his dispensing of anabolic steroids to the undercover agents was proper''); *Hoxie* v. *DEA,* 419 F.3d 477, 483 (6th Cir. 2005).

[37] Contrary to Ms. Jones' understanding, it has been settled law for years that a pharmacist's obligations under the corresponding responsibility rule requires more than just calling the prescriber. As the Fifth Circuit has explained:

> Verification by the issuing practitioner on request of the pharmacist is evidence that the pharmacist lacks knowledge that the prescription was issued outside the scope of professional practice. But it is not an insurance policy against a factfinder's concluding that the pharmacist has the requisite knowledge despite a purported but false verification. . . . What is required by [a pharmacist] is the responsibility not to fill an order that purports to be a prescription but is not a prescription within the meaning of the statute because he knows that the issuing practitioner issued it outside the scope of medical practice.

United States v. *Hayes,* 595 F.2d 258, 261 (5th Cir. 1979). *See also United States* v. *Seelig,* 622 F.2d 207, 213 (6th Cir. 1980) (violation of 21 CFR 1306.04(a) ''may be inferred from proof that [pharmacists] deliberately closed their eyes to what would otherwise be obvious to them''); *Medicine Shoppe-Jonesborough* v. *DEA,* 300 Fed. Appx. 409 (2008). And not only is ignorance of the law no excuse, those who choose to participate in a highly regulated profession cannot reasonably claim ignorance of the legal obligations imposed on them as a practitioner in that profession. *See David A. Ruben;* 78 FR 38363, 38387 n.54 (2013); *cf. Hageseth* v. *Superior Court,* 59 Cal. Rptr.3d 385, 403 (Ct. App. 2007).

[38] These prescriptions were obtained by two patients (D.H. and K.S.) who provided the same residence address in Harriman, Tennessee and obtained prescriptions on same day (on two occasions) from a clinic in Opa Locka which Respondent filled for oxycodone 30 (three of the prescriptions being for 180 du, one being for 150 du), oxycodone 15 (all four prescriptions being for 90 du), and alprazolam 2 (all four prescriptions being for 60 du). GXs 17, 45. D.H. and K.S. paid for each prescription with cash. GX 45, at 2.

patients who filled these controlled substance prescriptions was from Florida. Rather, the patients were from Ohio, West Virginia, Georgia, Tennessee, Kentucky, and Mississippi. Moreover, 40 of the prescriptions were written by Dr. Wolff of Deerfield Beach, who registration was revoked by this Agency following a hearing at which he was found to have violated 21 CFR 1306.04(a).[39] Each of the patients filled a prescription for oxycodone 30, with sixteen of the patients obtaining 180 dosage units or more, fourteen of the patients also obtained prescriptions for alprazolam 2mg, and thirteen of the patients also obtained a third prescription for oxycodone 15. *See* GX 46. Moreover, each of the patients paid cash for their prescriptions. *Id.* at 3–4. Here, as well, these out-of-state patients just happened to know to go to Respondent, out of all the pharmacies in South Florida, and which had been opened for just over two months, to fill their prescriptions.[40]

Asked whether she thought she was exercising her corresponding responsibility to ensure that these prescriptions were issued for a legitimate medical purpose, Ms. Jones testified: ''I think I was at the time, yes.'' Tr. 599. When subsequently asked if she ''understand[s]s those responsibilities differently today,'' Ms. Jones answered:

> Differently today—differently in the sense of I can do more; differently, no, in the sense if the prescription is written by the prescriber, I don't think it makes it an illegitimate, not a legitimate prescription for medical purposes. I think I can do more digging to make sure that the patient is going to use it appropriately and not make it so that somebody else has access to it. I do that by looking at their history that the inspector made me aware of in August of 2014, but I still do rely on the prescriber to write prescriptions for legitimate medical purposes.

Id. at 599–600. Here again, notwithstanding the obvious and compelling evidence that the prescriptions lacked a legitimate medical purpose, Respondent continued to deny that the prescriptions were unlawfully dispensed.[41]

Moreover, at other points in her testimony, Ms. Jones left no doubt that she still does not understand her obligations under 21 CFR 1306.04(a). To be sure, Ms. Jones testified that she ''would shy away'' from filling a prescription for a patient who is paying cash. *Id.* at 623. However, when then asked if she ''believe[s] there are circumstances where a pharmacist should refuse to fill a prescription after making the judgment that it is not issued for [a] legitimate medical purpose,'' she testified:

> That still leaves us diagnosing whether the patient has pain or not. I wouldn't say for legitimate medical purpose. I would say by looking at the totality of what the situation is and as much information as you can collect and then deciding if you're okay, if you feel comfortable filling it or not.

Id. at 624. While on further questioning Ms. Jones testified that ''[t]here are circumstances that would cause me to reject a prescription,'' she then added that ''I don't think I can make the determination whether it's for legitimate medical purposes because I would have to say that I'm in that person's body and I know how they feel if we're just speaking about pain medications.'' *Id.* at 625. And subsequently, Ms. Jones testified that with respect to pain medications, ''I might question the quantity, maybe the duration, but for legitimate medical purpose, that would lead me into me having to diagnose because I'm someone who will give recommendations and tell you what I think, but I can't, I don't think it's a fair statement that you could say someone is not in pain.'' *Id.* at 628.[42]

Subsequently, Ms. Jones was asked after if she understood her corresponding responsibility under the Controlled Substances Act. *Id.* at 639. Ms. Jones answered:

> Well, I understand that I have a responsibility to make sure that patients are safe with the medication they receive. But, you, you're saying medical legitimacy. The law is saying that we had a—to make sure it says medical, it's—the law says medical legitimacy? That's what I'm not understanding.

Id.

When then asked whether she knew ''one way or another'' if she had a corresponding responsibility, Ms. Jones answered: ''I did not know that the law said that I had to make sure that prescriptions said it was legitimate, medically legitimate.'' *Id.* at 639–40. Ms. Jones then admitted that she did not know this even while ''sitting here today.'' *Id.* at 640. When then asked for her ''understanding of what the law requires of . . . a pharmacist [who] dispens[es] controlled substances,'' Ms. Jones testified ''that I need to make sure that the patients are safe and that I need to make sure that the prescription is a, a true and correct prescription. That's my understanding of my responsibilities.'' *Id.* at 640–41. And when asked if she has ''any responsibility to ensure that the prescription is issued for a legitimate medical purpose,'' Ms. Jones testified: ''I thought that was the prescriber's responsibility. The person actually writing the prescription.'' *Id.* at 641.

Thereafter, Ms. Jones was asked whether she ''acknowledge[s]'' that she did not exercise her responsibility to ensure that that prescriptions at issue ''were issued for a legitimate medical purpose?'' *Id.* at 642. Ms. Jones answered: ''[i]n my scope of what I did I, that was not a part of what I was doing anyway if that makes sense. That was not something that I thought was my responsibility to make sure they were medically legitimate.'' *Id.* Indeed, when asked whether there was any category of the prescriptions discussed in the hearing that she thought were medically legitimate, Ms. Jones replied: ''I can't say that they weren't medically legitimate because I didn't have conversations with the patients. So, I can't say that they were or were not.'' *Id.* at 646.

The ALJ was not impressed by Ms. Jones' testimony. As the ALJ explained:

> Ms. Jones purported to accept responsibility for [Respondent's] dispensing practices by repeatedly asserting that she did

[39] The other nine prescriptions were written by a doctor in Miami. GX 46, at 12.

[40] A review of the spreadsheet of Respondent's controlled substance dispensings shows that even in the initial months of its dispensing activity, filling prescriptions for persons who provided non-Florida addresses predominated over filling prescriptions for Florida residents. For example, from February 15, 2010 through the end of May 2010, Respondent filled 706 controlled substance prescriptions for persons who provided a non-Florida address and only 152 prescriptions for Florida residents. *See* GX 2 (line entries 2–706). Indeed, between February 15 and March 12, 2010 (its first month of dispensing as no dispensings occurred on March 13–14), it filled controlled substance prescriptions for 42 persons who provided addresses in Kentucky, Ohio, West Virginia, Tennessee, and North Carolina but only eight Florida residents. *Id.* (line entries 2–102). With the exception of three carisoprodol prescriptions, the prescriptions were comprised entirely of oxycodone in both 30 and 15 milligram dosage forms and alprazolam in either the 2 or 1 milligram dosage form. Of the patients who filled controlled substance prescriptions at Respondent during its first month of dispensing, 43 of them obtained prescriptions for oxycodone 30 and each paid cash.

[41] Asked about additional sets of prescriptions, Ms. Jones adhered to the same theme that she believed that when she filled the prescriptions she properly exercised her corresponding responsibility, but today, she ''would do more digging.'' Tr. 606. She did so no matter how strong the indicia of suspicion were with respect to the prescriptions, such as when she was asked about an oxycodone prescription that cost her $58.56 and for which she charged the patient $1620. *Id.* at 611–12.

[42] The federal courts have also rejected this view. As the Fifth Circuit has further explained: '' 'a pharmacist can fulfill [her] responsibility under [21 CFR] 1306.04 without practicing medicine. . . . [A] pharmacist can know that prescriptions are issued for no legitimate medical purpose without [her] needing to know anything about medical science.' '' *United States* v. *Henry,* 727 F.2d 1373, 1378 (5th Cir. 1984) (quoting *Hayes,* 595 F.2d at 261 n.6).

what she knew at the time, but now she knows she could have done more. But then Ms. Jones demonstrated by her statements that she does not fully understand her corresponding responsibility even yet today. Thus, there remains no excuse for the Respondent's past dispensing conduct and continued lack of knowledge of [her and her pharmacists'] corresponding responsibility. . . .

R.D. 72–73 (citing 21 CFR 1306.04(a)).

I agree. And because Respondent has not credibly accepted responsibility for its misconduct, the ALJ did not err when she declined to consider Respondent's evidence of its remedial measures. *See* R.D. at 73 (citing cases).

As found above, the evidence shows that Respondent filled nearly 3,300 controlled substance prescriptions, the vast majority of which presented such compelling evidence that the prescriptions lacked a legitimate medical purpose as to support a finding that Respondent's pharmacists either knew or were willfully blind to the fact that the prescriptions were issued in violation of 21 CFR 1306.04(a). Given the scope and duration of Respondent's misconduct, Ms. Jones' failure to acknowledge its misconduct, as well as Ms. Jones' testimony which demonstrates that notwithstanding this proceeding, she still does not understand the scope of a pharmacist's obligations under the CSA, I have no confidence that either of Ms. Jones' entities (Total Health Pharmacy, L.L.C., and SND Healthcare, L.L.C.) will faithfully comply with the CSA if it was granted a registration.[43] Accordingly, I reject Respondent's exceptions and will adopt the ALJ's recommendation that I deny the application of Jones Total Health Pharmacy, L.L.C., to renew its registration and the application of SND Healthcare, L.L.C., for a registration. *See* R.D. at 75.

Order

Pursuant to the authority vested in me by 21 U.S.C. § 823(f) and 28 CFR 0.100(b), I order that the application of Jones Total Health Pharmacy, L.L.C., for a DEA Certificate of Registration as a retail pharmacy be, and it hereby is, denied. I further order that the application of SND Healthcare, L.L.C., for a DEA Certificate of Registration as a retail pharmacy be, and it hereby is, denied. This Order is effective immediately.

Date: October 31, 2016.

Chuck Rosenberg,

Acting Administrator.

[43] Indeed, this is a case where the proven misconduct is so extensive and egregious that even if the ALJ had found that Ms. Jones had credibly accepted responsibility (and given weight to the evidence of remedial measures), I still would have concluded that allowing Respondents to be registered ''would be inconsistent with the public interest.'' 21 U.S.C. §§ 823(f) and 824(a)(4). *See also Hatem M. Ataya,* 81 FR 8221, 8244 (2016) (''[W]hile proceedings under 21 U.S.C. §§ 823 and 824 are remedial in nature, there are cases in which, notwithstanding a finding that a registrant has credibly accepted responsibility, the misconduct is so egregious and extensive that the protection of the public interest nonetheless warrants the revocation of a registration or the denial of an application.'') (citing *Fred Samimi,* 79 FR18698, 18714 (2014)).

Dana Hill, Esq., for the Government.

Daniel S. Newman, Esq., for the Respondent.

Findings of Fact, Conclusions of Law, and Recommended Decision

I. Introduction

Administrative Law Judge Gail A. Randall. This proceeding is an adjudication governed by the Administrative Procedure Act, 5 U.S.C. §§ 551 *et. seq.,* to determine whether the Drug Enforcement Administration (''DEA'') should deny a pharmacy's application, and revoke an associated pharmacy's registration with pending applications for renewal of such registration denied under the Controlled Substances Act, 21 U.S.C. §§ 824(a)(4) and 823(f).

II. Procedural Background

The Deputy Assistant Administrator, Drug Enforcement Administration (''DEA'' or ''Government''), issued an Order to Show Cause (''Order'') dated October 6, 2014, proposing to deny the application, number W13031979A, for SND Healthcare, LLC, (''SND''), pursuant to 21 U.S.C. § 823(f), and to revoke the DEA Certificate of Registration, number FJ1733725 for Jones Total Health Pharmacy, LLC, (''Jones Pharmacy''),[44] pursuant to 21 U.S.C. § 824(a)(4), because the registration of each entity is inconsistent with the public interest, as that term is defined in 21 U.S.C. § 823(f).[45] [Administrative Law Judge Exhibit (''ALJ Exh.'') 1].

On November 5, 2014, the Respondents, through counsel, timely filed a request for a hearing in the above-captioned matter. [ALJ Exh. 2].

[44] The Order to Show Cause in this matter refers to a Jones Total Health Care Pharmacy, but the DEA certificate of registration history documents indicate the pharmacy's name as Jones Total Health Pharmacy. [*cf.* ALJ Exh 1 *with* Gov't Exh. 8]. DI Gonzales testified at the hearing that the Order to Show Cause misstated Jones Pharmacy's name. [Tr. 111–112]. Therefore, the correct full name of the entity involved in this matter is Jones Total Health Pharmacy, LLC. [Tr. 112; Gov't Exh. 8].

[45] SND Healthcare, LLC, and Jones Total Health Pharmacy, LLC, together will be referred to as ''Respondents.''

I, Gail A. Randall, Administrative Law Judge, have been designated as the presiding officer in the above-captioned case.

On January 14, 2015, a Protective Order was issued in this matter. [ALJ Exh. 17]. Upon joint request, I issued my Order Modifying The Protective Order on January 30, 2015. [ALJ Exh. 18].

On January 12, 2015, I issued a Prehearing Ruling, which includes the parties' stipulations. [ALJ Exh. 16]. On February 4, 2015, I issued the Notice of Hearing, informing both parties of the time and place for the hearing. [ALJ Exh. 20].

The hearing was conducted in this matter on March 3, 2015 through March 6, 2015, at the Miami Dade Courthouse, Miami, Florida. [*Id*].

On April 20, 2015, the Government filed its Proposed Findings of Fact and Conclusions of Law (''Govt. Brief''). Also on April 20, 2015, the Respondents filed their Proposed Findings of Fact and Conclusions of Law (''Resp. Brief'').

III. Issues

The issues in this proceeding are:

(1) Whether the record as a whole establishes by a preponderance of the evidence that the Drug Enforcement Administration (''DEA'' or ''Government'') should revoke the DEA Certificate of Registration, number FJ1733725, of Jones Total Health Care Pharmacy as a retail pharmacy, pursuant to 21 U.S.C. § 824(a) (2006), and deny any pending applications for renewal or modification of such registration, pursuant to 21 U.S.C. § 823(f) (2006), because its continued registration would be inconsistent with the public interest, as that term is defined in 21 U.S.C. § 823(f).

(2) Whether or not the record as a whole establishes by a preponderance of the evidence that the DEA should deny the application, number W13031979A for a DEA Certificate of Registration for SND Healthcare, LLC, as a retail pharmacy pursuant to 21 U.S.C. § 823(f), because to grant its application would be inconsistent with the public interest, as that term is defined in 21 U.S.C. § 823(f). [ALJ Exh. 16; Tr. 6].

IV. Findings of Fact

I find by a preponderance of the evidence the following facts:

A. Stipulated Facts

1. Stipulations About Controlled Substances Dispensed to B.F. and K.W.

1. On February 17, 2010, Jones Pharmacy dispensed 240 tablets of Oxycodone HCL 30 mg, 30 tablets of

Xanax 2 mg, and 120 tablets of Carisoprodol 350 mg to B.F.

2. On February 17, 2010, Jones Pharmacy dispensed 240 tablets of Oxycodone HCL 30 mg, 30 tablets of Xanax 2 mg, and 180 tablets of Oxycodone HCL 15 mg to K.W.

3. On March 17, 2010, Jones Pharmacy dispensed 240 tablets of Oxycodone HCL 30 mg, 180 tablets of Oxycodone HCL 15 mg, 60 tablets of Carisoprodol 350 mg, and 30 tablets of Xanax 2 mg to B.F.

4. On March 17, 2010, Jones Pharmacy dispensed 240 tablets of Oxycodone HCL 30 mg, 180 tablets of Oxycodone HCL 15 mg, and 30 tablets of Xanax 2 mg to K.W.

5. On April 14, 2010, Jones Pharmacy dispensed 240 tablets of Oxycodone HCL 30 mg, 180 tablets of Oxycodone HCL 15 mg, 60 tablets of Carisoprodol 350 mg, and 30 tablets of Xanax 2 mg to B.F.

6. On April 14, 2010, Jones Pharmacy dispensed 240 tablets of Oxycodone HCL 30 mg, 180 tablets of Oxycodone HCL 15 mg, and 30 tablets of Xanax 2 mg to K.W.

2. Stipulations About Controlled Substances Dispensed to L.S. and J.S.

7. On March 12, 2010, Jones Pharmacy dispensed 210 tablets of Roxicodone (Oxycodone HCL) 30 mg, 90 tablets of Roxicodone 15 mg, and 75 tablets of Xanax 2 mg to L.S.

8. On March 12, 2010, Jones Pharmacy dispensed 210 tablets of Roxicodone 30 mg, 90 tablets of Roxicodone 15 mg, and 75 tablets of Xanax 2 mg to J.S.

9. On April 9, 2010, Jones Pharmacy dispensed 210 tablets of Roxicodone 30 mg and 90 tablets of Roxicodone 15 mg to L.S.

10. On April 9, 2010, Jones Pharmacy dispensed 210 tablets of Roxicodone 30 mg and 90 tablets of Roxicodone 15 mg to J.S.

11. On May 6, 2010, Jones Pharmacy dispensed 210 tablets of Roxicodone 30 mg, 90 tablets of Roxicodone 15 mg, and 60 tablets of Xanax 2 mg to L.S.

12. On May 6, 2010, Jones Pharmacy dispensed 180 tablets of Roxicodone 30 mg, 90 tablets of Roxicodone 15 mg, and 60 tablets of Xanax 2 mg to J.S.

13. On June 2, 2010, Jones Pharmacy dispensed 180 tablets of Roxicodone 30 mg, 90 tablets of Roxicodone 15 mg, and 60 tablets of Xanax 2 mg to L.S.

14. On June 2, 2010, Jones Pharmacy dispensed 180 tablets of Roxicodone 30 mg, 90 tablets of Roxicodone 15 mg, and 60 tablets of Xanax 2 mg to J.S.

3. Stipulations About Controlled Substances Dispensed to D.H. and K.S

15. On April 13, 2010, Jones Pharmacy dispensed 150 tablets of Oxycodone HCL 30 mg, 90 tablets of Oxycodone HCL 15 mg, and 60 tablets of Alprazolam 2 mg to D.H.

16. On April 13, 2010 Jones Pharmacy dispensed 180 tablets of Oxycodone HCL 30 mg, 90 tablets of Oxycodone HCL 15 mg, and 60 tablets Alprazolam 2 mg to K.S.

17. On May 17, 2010, Jones Pharmacy dispensed 180 tablets of Oxycodone HCL 30 mg, 90 tablets of Oxycodone HCL 15 mg, and 60 tablets of Alprazolam 2 mg to D.H.

18. On May 17, 2010, Jones Pharmacy dispensed 180 tablets of Oxycodone HCL 30 mg, 90 tablets of Oxycodone HCL 15 mg, and 60 tablets of Alprazolam 2 mg to K.S.

4. Stipulations About Controlled Substances Dispensed on April 19 and 20

19. On April 19, 2010, Jones Pharmacy dispensed 210 tablets of Oxycodone HCL 30 mg to J.C.

20. On April 19, 2010, Jones Pharmacy dispensed 210 tablets of Oxycodone HCL 30 mg to S.H.

21. On April 19, 2010, Jones Pharmacy dispensed 210 tablets of Oxycodone HCL 30 mg to C.L.

22. On April 19, 2010, Jones Pharmacy dispensed 210 tablets of Oxycodone HCL 30 mg to J.B.

23. On April 19, 2010, Jones Pharmacy dispensed 180 tablets of Oxycodone HCL 30 mg to J.S.

24. On April 19, 2010, Jones Pharmacy dispensed 180 tablets of Oxycodone HCL 30 mg to C.H.

25. On April 19, 2010, Jones Pharmacy dispensed 210 tablets of Oxycodone HCL 30 mg, 90 tablets of Oxycodone HCL 15 mg, and 60 tablets of Alprazolam 2 mg to J.A.

26. On April 19, 2010, Jones Pharmacy dispensed 210 tablets of Oxycodone HCL 30 mg, 90 tablets of Oxycodone HCL 15 mg, and 60 tablets of Alprazolam 2 mg to M.T.

27. On April 20, 2010, Jones Pharmacy dispensed 180 tablets of Oxycodone HCL 30 mg, 30 tablets of Oxycodone HCL 15 mg, 30 tablets of Endocet 10/650 mg, and 30 tablets of Alprazolam 2 mg to R.F.

28. On April 20, 2010, Jones Pharmacy dispensed 60 tablets of Oxycodone HCL 15 mg and 30 tablets of Alprazolam 2 mg to S.F.

29. On April 20, 2010, Jones Pharmacy dispensed 150 tablets of Oxycodone HCL 30 mg, 60 tablets of Oxycodone HCL 15 mg, and 30 tablets of Alprazolam 2 mg to S.T.

30. On April 20, 2010, Jones Pharmacy dispensed 150 tablets of Oxycodone HCL 30 mg and 30 tablets of Alprazolam 2 mg to J.K.

31. On April 20, 2010, Jones Pharmacy dispensed 180 tablets of Oxycodone HCL 30 mg, 60 tablets of Oxycodone HCL 15 mg, and 30 tablets of Alprazolam 2 mg to G.O.

32. On April 20, 2010, Jones Pharmacy dispensed 180 tablets of Oxycodone HCL 30 mg to J.T.

33. On April 20, 2010, Jones Pharmacy dispensed 150 tablets of Oxycodone HCL 30 mg, 60 tablets of Oxycodone HCL 15 mg, and 60 tablets of Alprazolam 2 mg to B.C.

34. On April 20, 2010, Jones Pharmacy dispensed 20 tablets of Oxycodone HCL 30 mg to E.C.

35. On April 20, 2010, Jones pharmacy dispensed 150 tablets of Oxycodone HCL 30 mg, 60 tablets of Oxycodone HCL 15 mg, and 60 tablets of Alprazolam 2 mg to J.H.

36. On April 20, 2010, Jones Pharmacy dispensed 120 tablets of Oxycodone HCL 30 mg, 60 tablets of Oxycodone HCL 15 mg, and 30 tablets of Alprazolam 2 mg to M.R.

37. On April 20, 2010, Jones Pharmacy dispensed 180 tablets of Oxycodone HCL 30 mg, 120 tablets of Oxycodone HCL 15 mg, and 60 Tablets Alprazolam 2 mg to R.J.

38. On April 20, 2010, Jones Pharmacy dispensed 200 tablets of Oxycodone HCL 30 mg, 100 tablets of Oxycodone HCL 15 mg, and 75 tablets of Alprazolam 2 mg to J.D.

39. On April 20, 2010, Jones Pharmacy dispensed 180 tablets of Oxycodone HCL 30 mg, 90 tablets of Oxycodone HCL 15 mg, and 30 tablets of Alprazolam 2 mg to L.N.

40. On April 20, 2010, Jones Pharmacy dispensed 180 tablets of Oxycodone HCL 30 mg, 90 tablets of Oxycodone HCL 15 mg, and 60 tablets of Alprazolam 2 mg to A.T.

5. Stipulations About Controlled Substances Dispensed to R.H.

41. On October 26, 2010, Jones Pharmacy dispensed 90 tablets of Carisoprodol 350 mg, 180 tablets of Oxycodone HCL 30 mg, and 112 tablets of Oxycodone-APAP 10/325 mg to R.H.

6. Stipulations About Controlled Substances Dispensed to D.T.

42. On February 28, 2011, Jones Pharmacy dispensed 107 tablets of Oxycodone HCL 30 mg, 41 tablets of Oxycodone HCL 15 mg, and 30 tablets of Xanax 2 mg to D.T.

7. Stipulations About Controlled Substances Dispensed to R.C., J.C., and T.M.

43. On July 27, 2011, Jones Pharmacy dispensed 180 tablets of Oxycodone HCL 30 mg and 30 tablets of Xanax 2 mg to R.C.

44. On July 27, 2011, Jones Pharmacy dispensed 180 tablets of Oxycodone HCL 30 mg and 30 tablets of Xanax 2 mg to J.C.

45. On July 27, 2011, Jones Pharmacy dispensed 180 tablets of Oxycodone HCL 30 mg and 30 tablets of Xanax 2 mg to T.M.

8. Stipulations About Controlled Substances Dispensed to M.H., J.R., and W.F.

46. On August 1, 2011, Jones Pharmacy dispensed 180 tablets of Oxycodone HCL 30 mg and 30 tablets of Xanax 2mg to M.H.

47. On August 1, 2011, Jones Pharmacy dispensed 180 tablets of Oxycodone HCL 30 mg and 30 tablets of Xanax 2 mg to J.R.

48. On August 2, 2011, Jones Pharmacy dispensed 180 tablets of Oxycodone HCL 30 mg and 30 tablets of Xanax 2 mg to W.F.

9. Stipulations About Controlled Substances Dispensed to D.O.

49. On May 4, 2012, Jones Pharmacy dispensed 30 tablets of Clonazepam 1 mg and 180 tablets of Dilaudid (Hydromorphone) 8 mg to D.O.

50. On July 2, 2012, Jones Pharmacy dispensed 30 tablets of Clonazepam 1 mg and 180 tablets of Roxicodone HCL 30 mg to D.O.

10. Stipulations About Controlled Substances Dispensed to M.S./S.M [46]

51. On January 11, 2012, Jones Pharmacy dispensed 180 tablets of Oxycodone 30 mg to M.S./S.M.

52. On February 8, 2012, Jones Pharmacy dispensed 180 tablets of Oxycodone 30 mg to M.S./S.M.

53. On March 7, 2012, Jones Pharmacy dispensed 180 tablets of Oxycodone 30 mg to M.S./S.M.

54. On April 4, 2012, Jones Pharmacy dispensed 180 tablets of Oxycodone 30 mg to M.S./S.M.

55. On May 1, 2012, Jones Pharmacy dispensed 180 tablets of Oxycodone 30 mg to M.S./S.M.

56. On May 29, 2012, Jones Pharmacy dispensed 180 tablets of Oxycodone 30 mg to M.S./S.M.

57. On June 26, 2012, Jones Pharmacy dispensed 180 tablets of Oxycodone 30 mg to M.S./S.M.

11. Stipulations About Jones Pharmacy's Dispensing of Controlled Substances as Enumerated in the Order to Show Cause.

58. The prescriptions enumerated in the Order to Show Cause were issued and filled in the time period of February 15, 2010 through July 3, 2012.

59. There are no prescriptions enumerated in the Order to Show Cause that were issued or filled after July 3, 2012.

60. The controlled substances dispensed by Jones enumerated in the order to Show Cause were prescribed by physicians who were licensed to practice medicine in Florida at the time the prescriptions were written

61. The controlled substances referenced in Stipulations 1–57 were prescribed by physicians who were licensed to practice medicine in Florida at the time the prescriptions were written. [ALJ Exh. 21].

B. DEA Investigation

62. Domingo Gonzales is a Diversion Investigator (''DI'') who has worked for the DEA for two and a half years. [Transcript (''Tr.'') 25]. DI Gonzales works at the Miami Field Division in Miami, Florida. [*Id.*]. DI Gonzales has completed between 15–20 pharmacy inspections during his tenure with the DEA. [Tr. 26–27]. DI Gonzales was tasked with conducting an onsite inspection of Jones Total Health Pharmacy in April of 2013. [Tr. 27].

63. Group Supervisor Gayle Lane is a Miami Diversion Group Supervisor who has worked for the DEA for 38 years. [Tr. 115–117]. Group Supervisor Lane supervises six Diversion Investigators conducting investigations of pharmaceutical drug diversion. [Tr. 115]. Group Supervisor Lane's supervisory territory includes Monroe, Miami Dade, and Broward counties. [Tr. 116]. Recently Group Supervisor Lane has also done investigations in the Fort Meyers and Naples area. [Tr. 116]. In the last five years, Group Supervisor Lane has conducted close to 200 investigations. [Tr. 117]. Group Supervisor Lane testified that the DEA DI's look for red flags such as people coming in to the pharmacy at the same time with identical prescriptions from the same doctor, or exorbitant prices for controlled substances. [Tr. 124–125].[47] Exorbitant prices would indicate abuse or diversion because normally ''people pay with insurance. And these type of narcotics don't cost that much money, so that is usually an indication that the patient and the pharmacist know that these drugs are going to be diverted, that they'd be willing to pay more than $1,000 for one prescription, for instance.'' [Tr. 125]. Group Supervisor Lane assigned the Jones Pharmacy case to DI Gonzales. [Tr. 122].

64. Brian Curtis is a Diversion Investigator who works for the DEA in the Miami Field Division. [Tr. 148]. DI Curtis filled in for Investigator Gonzales when DI Gonzales was on military leave. [Tr. 148–149]. DI Curtis was asked to assist with pulling prescriptions, and providing them to the pharmacist expert, Dr. Gordon, for review. [Tr. 149].

65. DI Curtis pulled all of the prescriptions for the respective customers indicated in Government Exhibits 15–24. [Gov't Exh. 15–24].

C. Florida Department of Health Inspector Mary Crane

66. Mary Crane is a Pharmacy Inspector for the Florida Department of Health who works in Broward County and Dade County, Florida. [Tr. 159]. Ms. Crane inspects pharmacies for compliance with the laws and rules of the State of Florida and for a pharmacy's adherence to federal laws as well. [Tr. 159]. Ms. Crane also checks to ensure that pharmacies are operating in a clean and safe manner, and that they comply with the standards of practice in Florida. [Tr. 160]. In the past three and a half years, Ms. Crane has completed close to 1,500 pharmacy inspections in Broward County and Dade County. [Tr. 160]. Before she was a pharmacy inspector, Ms. Crane practiced retail pharmacy for 33 years. [Tr. 161].

67. When Ms. Crane inspects prescriptions in the course of her duties, she looks for red flags. [Tr. 162]. In determining whether a red flag is present on a prescription, Ms. Crane looks at the pattern of prescribing, the profile of the patient to see if there is a progression from a low to high dose, other medications the individual is taking, type of physician that wrote the prescription, and other factors such as the patient's age, type of medication, and whether or not the prescription was purchased with cash. [Tr. 162]. Ms. Crane further testified that there is not a definitive list of things a pharmacist is supposed to check. [Tr. 163]. Ms. Crane stated that the concept of ''red

[46] The parties agree on the stipulations related to the patient in question. There is some conflicting documentary evidence as to the ordering of this patient's first and last names.

[47] As a caveat, Group Supervisor Lane also testified that she did not have any personal knowledge of the controlled substances listed in the Order to Show Cause being diverted by the individuals to whom they were dispensed to. [Tr. 140].

flags,'' not the term, has been present for her entire tenure as a pharmacist, 36 years. [Tr. 206, 210].

68. In 2012, Ms. Crane inspected Jones Pharmacy. [Tr. 164]. Ms. Jones told Ms. Crane that she was moving her pharmacy because she was going to be compounding creams for the Miami Heat basketball team, and needed a store that looked better in a better area. [Tr. 167, 451, 671].

69. During the inspection, Ms. Crane found that the majority of Jones' business was for Schedule II controlled substances which the pharmacy was filling for cash. There was little of the business that was for non-controlled substances. [Tr. 164]. Ms. Crane noted that when she drove up to Jones pharmacy ''people were loitering in the parking lot. It was not in a really nice area, and I was a little bit, when I got out of my car, kind of looked around.'' [Tr. 164]. During her discussion with Ms. Jones about the pharmacy's proposed move, Ms. Crane told Ms. Jones ''you need to leave these pill seekers at the old store because that clientele will not come if you have a lot of people hanging around that want narcotics.'' [Tr. 167].

70. Pursuant to her inspection, Ms. Crane filled out an inspection form. [Tr. 165–166; Gov't Exh 12]. Ms. Jones signed the first page of the report, but the second page including Ms. Cranes' remarks was not provided to Ms. Jones. [Tr. 165, 181–182; Gov't Exh 12]. Ms. Crane wrote that the ''primary business of the pharmacy is the cash sale of narcotics.'' [Tr. 166–167]. Ms. Crane also annotated in her report that Jones Pharmacy sold a 180 pill prescription for $1,620. [Tr. 167]. Ms. Crane said that a more reasonable price to pay for this type of prescription would be $200-$250. [Tr. 168]. Ms. Crane stated that the ''extraordinary price that people were paying cash for that prescription stood out to [her], that not only were the prescriptions . . . not [written] for [a] legitimate means but that [Ms. Jones] knew it in charging that amount of money.'' [Tr. 167]. Ms. Crane did not note any deficiencies with Ms. Jones' biennial inventory. [Tr. 185–186].

71. Ms. Crane testified that high prices were an indicator of abuse and/or diversion because addicts will often sell part of their prescription in order to pay the exorbitant amount of money the addicts paid to purchase the prescription. [Tr. 169–170]. Ms. Crane also testified that she never prepared a written analysis regarding the prevailing prices of controlled substances that were sold during the period February 2010 through July 2012. [Tr. 181]. Nor was Ms. Crane aware of the prices Ms. Jones paid per pill for Oxycodone 30 mg in June of 2012. [Tr. 183].

72. During Ms. Crane's inspection of Jones Pharmacy in August 2014, she asked Ms. Jones to produce a drug utilization report. [Tr. 174; Gov't Exh 14]. The drug utilization report Ms. Jones produced listed the drugs Jones Pharmacy had dispensed by NDC number, and it also had the total number of units the pharmacy has dispensed. [Tr. 174; Gov't Exh 14]. The report indicated that controlled substances were in the top 10 products that Jones Pharmacy sold from January 1, 2010 to August 29, 2014. [Tr. 175; Gov't Exh. 14]. The amount of profit Ms. Jones made from schedule II narcotics during the three and a half year period was in excess of $1.2 million. [Tr. 176].

73. Ms. Crane noted that there was an inspection conducted on April 14, 2011, where inspector Allen Miller noted that Jones Pharmacy was filling controlled substance prescriptions for patients whose home addresses were out of state. [Tr. 170–172; Gov't Exh. 13]. Ms. Crane said that filling prescriptions for people traveling from out of state was a problem indicating diversion. [Tr. 173].

74. Ms. Crane noted during her inspection that Ms. Jones had reported a suspected forgery, and notified the police. [Tr. 186–187]. Ms. Crane advised Ms. Jones to keep her file and narrative of the event. [Tr. 186; Gov't Exh. 12].

75. In August of 2014, Ms. Crane inspected Jones Pharmacy again and noted that there were no remarks relating to DEA 222 forms, the biennial inventory, filling prescriptions for out of state clients, or that the pharmacy was dispensing mostly controlled substances. [Tr. 190–191; Resp. Exh. 8].

76. During the four inspections conducted by the Florida Department of Health, Jones Pharmacy's dispensing and corresponding responsibilities were discussed. [Tr. 204; Resp. Exh. 8].

D. 2013 DEA Inspection

77. The April 2013 inspection of Jones Pharmacy was prompted by Ms. Jones' submittal of a request for a change of address. [Tr. 28].

78. When a registrant wishes to move location, the registrant is required to request a change of address with the DEA. [Tr. 28]. When a registrant sends a request for change of address to the Miami DEA office, the DEA will review data from the automated consolidation ordering system (''ARCOS'') [48] to see if there is any issue with the respective pharmacy's Schedule 2 and 3 narcotic ordering practices. [Tr. 29, 118]. Looking at the ARCOS data, the DEA reviews the quantity and type of controlled substances the pharmacy is ordering. [Tr. 120]. After the review of ARCOS data, DEA reviews the prescriptions at the pharmacy. [Tr. 118].

79. In April of 2013, the DEA approved the address change and Ms. Lane assigned the pharmacy to Domingo Gonzales. [Tr. 121].

80. In the summer of 2014, Domingo Gonzales was not able to take the lead role on the investigation due to military leave, so Ms. Lane assigned DI Brian Curtis to fill in for DI Gonzales. [Tr. 122].

81. During the April 2013 inspection, DI Gonzales presented Ms. Jones with a DEA 82, Notice of Inspection form. [Tr. 32]. Ms. Jones reviewed the document and declined to ask questions. [*Id.*]. DI Gonzales and Ms. Richards then asked Ms. Jones for her biennial inventories, invoices for schedule 2 or DEA 222 forms for purchases of Schedule 2 controlled substances, and her schedule 2 controlled substance prescriptions. [*Id.*].

82. DI Gonzales proceeded to review Ms. Jones' biennial inventories, order forms, and invoices. [Tr. 32]. DI Gonzales was not able to review all of the orders, because Ms. Jones could not produce all of the orders. [*Id.*].

83. During his inspection, DI Gonzales reviewed the prescriptions for possible red flags. [Tr. 33]. DI Gonzales noticed that on the back of some of the prescriptions there was a copy of the purchaser's driver's license. In some instances, the license was an out of state license. [Tr. 33]. Also with some prescriptions, DI Gonzales noticed that they were paid for with cash. [Tr. 33–34]. These were an indication of red flags. [Tr. 34].

84. DI Gonzales also noted that Ms. Jones' biennial inventory was missing some of the required information. [Tr. 35]. The inventory was supposed to indicate amounts of finished form in each container and the amount of commercial bottles that she had on hand during her inventory. [*Id.*]. Ms. Jones' inventory only indicated the name of the controlled substances, the strength of the controlled substances, the quantity, and one of the NDC numbers. [*Id.*].

85. Specifically, Ms. Jones produced two inventories that she conducted on November 3, 2011, and April 13, 2013,

[48] DI Gonzales testified that the ARCOS system is a system in which manufacturers and distributors are required to input ''their transactions of Schedule 2 controlled substances and Schedule 1 in small cases and at the time any Schedule 3 narcotic drugs. [The manufacturers and distributors] are required to indicate all their sales and purchases of controlled substances in those fields.'' [Tr. at 30].

respectively. [Tr. 36; Gov't Exh. 5]. In the November 3, 2011 inventory, Ms. Jones did not indicate whether the inventory was conducted at the beginning, or close of business, as required by the Federal Code of Regulations. [*Id.*]. The time the inventory is taken is important for auditing purposes. [Tr. 37]. Ms. Jones also did not ''indicate the number of tablets per commercial container, that come in each commercial container, or the number of commercial containers in each that she had on hand.'' [Tr. 36; Gov't Exh. 5]. The number of tablets is important for auditing reasons and the prevention of diversion. [Tr. 36].

86. With regard to the April 13, 2013 inventory, the same deficiencies as noted in the November 3, 2011 inventory were present. [Tr. 38; Gov't Exh. 5].

87. Ms. Jones was not able to produce all of her orders for invoices, because a great deal of the invoices were saved in coded electronic format on her computer's desktop.[49] [Tr. 421; 687–690].

88. At the conclusion of the inspection, DI Gonzales took all of Ms. Jones' controlled substances prescriptions, her invoices for schedule 2 controlled substances, and all of Ms. Jones' DEA 222 forms for purchases of schedule 2 controlled substances. [Tr. 33].

89. DI Gonzales testified to orders that were indicated on DEA E222 forms. [Tr. 39]. These orders were three different orders placed on May 22, 2012, May 18, 2012, and November 15, 2011. [Tr. 39; Gov't Exh. 6]. DI Gonzales prepared the exhibit indicating the individual orders. [Tr. 39]. DI Gonzales indicated that the May 22, 2012 order, reflected on pages 7–10, was done correctly. [Tr. 40].

90. The order placed on November 15, 2011, was done incorrectly. There was no record of how much Ms. Jones received or the date on which the order was received. [Tr. 42–43; Gov't Exh. 6 at 1–2]. Likewise, the order placed on May 18, 2012, was also deficient. [Gov't Exh. 6 at 3–6]. It did not indicate how many packages Ms. Jones received or the date that she received the ordered packages. [Tr. 43; Gov't Exh. 6 at 3–6].

91. In total, there were 480 line items that were done incorrectly on Ms. Jones' orders. [Tr. 44].

92. DI Gonzales testified to reviewing Jones pharmacy's dispensing report from February 15, 2010, until July 3, 2012. [Tr. 46; Gov't Exh 2]. The report was provided in an electronic excel spreadsheet format. [Gov't Exh. 2]. Ms. Rodriguez, attorney for Ms. Jones at the time, provided DI Gonzales with the dispensing report, which included Jones Pharmacy's dispensing history as far back as the day the pharmacy opened. [Tr. 46; Gov't Exh. 3].

93. The dispensing report indicated line item numbers 1 through 3,300, and ranged from February 15, 2010 until July 3, 2012. [Tr. 47]. The report provides prescription information such as the date it was filled, the date it was written, the drug and patient information, to include the patient's name and date of birth, information regarding how much the prescription cost to the pharmacy, and how much the customer paid. [Tr. 47]. There were 834 instances where the patient paid above $5.00 per pill. [Tr. 61; Govt. Exh. 4]. There were 415 instances where the markup was over 1,000 percent. [Tr. 61–62].

94. When reviewing information of this nature, DI Gonzales looks for red flags that stick out. [Tr. 49]. For example, DI Gonzales looks for the most popular drug dispensed from the pharmacy, the information regarding the customer, the price the pharmacy is actually charging, and what the DEA considers ''cocktail drugs.'' [50] [Tr. 49–50].

95. DI Gonzales and the DEA hired Dr. Tracey Gordon to review the dispensing records.[51] [Tr. 50]. To enable Dr. Gordon's analysis of the records, DI Gonzales created charts and pivot tables [52] to succinctly display the information. [Tr. 55; Gov't Exh 4].

96. Before Dr. Gordon reviewed the dispensing records, DI Gonzales discovered through his analysis of the information that 99% of the controlled substances Jones Pharmacy filled were for immediate release controlled substances, and 89% of the drugs were for pain medications that the DEA considers ''cocktail drugs.'' [Tr. 48, 50; Gov't Exh. 4]. DI Gonzales further determined that 49% of the ''cocktail drug'' controlled substances were dispensed to out of state customers. [Tr. 57].

97. DI Gonzales also determined in his analysis of the dispensing records that 93% of the prescriptions for controlled substances were paid for with cash. [Tr. 57]. DI Gonzales calculated the markup on the controlled substances, and created a spreadsheet to display this information. [Tr. 58–59; Gov't Exh. 4]. DI Gonzales determined that there were 415 instances where Ms. Jones charged a 1,000% markup on these controlled substances. [Tr. 61–62; Gov't Exh. 4].

98. DI Gonzales also reviewed the top 10 doctors Jones Pharmacy dispensed for during the time frame covered in the dispensing report. [[Tr. 62; Gov't Exh. 32]. The information revealed that Dr. Randall Wolff prescribed 261 prescriptions that Jones Pharmacy subsequently filled. [Tr. 63]. DI Gonzales then looked up Dr. Wolff's profile on the Florida Department of Health License Certification website, and he printed the profile. [Tr. 66; Gov't Exh. 42 at 2–5]. DI Gonzales then created a packet for Doctor Wolff that consisted of a printout from DEA's internal CSA2 database, and the report from the Florida Department of Health License Verification website. [Tr. 66; Gov't Exh. 42]. In total, the packet was five pages. [Gov't Exh. 42].

99. DI Gonzales created documents similar to Government Exhibit 42 for all of Jones Pharmacy's top ten prescribing physicians, including Randall Wolff. [Tr. 66–67; Gov't Exh. 33–42]. The purpose for compiling this data was to aide Dr. Gordon's analysis of the prescriptions. [Tr. 63]

100. DI Gonzales prepared individual dispensing histories for customers B.F. and K.F. from Ohio for the purpose of aiding Dr. Gordon's analysis of Jones Pharmacy's prescribing practices. [Tr. 69–70; Gov't Exh. 43].

101. DI Gonzales prepared similar documents in the same manner for the patients listed in Government Exhibits 44–52. [Tr. 72; Gov't Exh. 44–52]. These documents are printouts of the dispensing report for the individuals identified in the Government's Order to Show Cause. [Tr. 72; Gov't Exh. 44–52; ALJ Exh. 1]. The documents include records of all the prescriptions the respective patients obtained from Jones Pharmacy. [Tr. 72; Gov't Exh. 44–52].

[49] DI Gonzales testified that the electronic copy of orders for invoices appeared as a string of numbers followed by a little bit of information, followed again by a string of numbers. This sequence would then repeat itself. [Tr. 35].

[50] DI Gonzales defined the term ''cocktail drug'' as pain medications such as Oxycodone or Hydromorphone combined with an Alprazolam 2 milligram or Soma 350 milligram or Carisoprodol. [Tr. 56]. When DI Gonzales did his calculation, he only used these drugs to calculate the total aggregate number of cocktail drugs dispensed. [Tr. 56–57].

[51] Dr. Tracey Gordon holds a Bachelor's of Science degree in pharmacy from Florida A&M University, and a Doctorate in pharmacy from the University of Florida. [Tr. 216–217; Gov't Exh. 25]. Dr. Gordon currently works as a Clinical Hospice Pharmacist. [Tr. 214]. Prior to her Hospice experience, Dr. Gordon worked in retail pharmacy for 17 years as a pharmacist for Eckerd, Walgreens, and Publix in certain Florida Counties. [Tr. 214–215]. Dr. Gordon was recognized at the hearing as an expert in retail pharmacy. [Tr. 224; *see Infra* FOF 106–111].

[52] DI Gonzales explained that a pivot table is a tool available in Microsoft Excel software that allows the user to sort through information by topic heading and establish a chart from the desired information. [Tr. 54–55].

102. Ms. Jones applied for a DEA license in 2013 for another pharmacy, SND Healthcare. [Tr. 73]. DI Gonzales was alerted to SND Healthcare's application by DEA Group Supervisor Gayle Lane. [Tr. 73]. DI Gonzales confirmed that Ms. Jones was the owner of both Jones Pharmacy and SND Healthcare by searching the Florida Division of Corporations' website, Sunbiz. [Tr. 74–75]. Sunbiz's records are publicly available. [Tr. 75].

103. DI Gonzales also reviewed the Certification of Authenticity from the Florida Department of State Division of Corporations for Jones Pharmacy, and SND Healthcare, LLC. [Tr. 76; Gov't Exh. 9]. These documents showed that Cherese Jones is the only corporate officer for both corporations. [Tr. 77; Gov't Exh. 9]. These corporations also share a mailing address. [Tr. 77].

104. DI Gonzales then searched the Florida Department of Health database which specifies the pharmacists in charge or pharmacists affiliated to the pharmacy. [Tr. 78; Gov't Exh. 10, at 34]. DI Gonzales procured these documents to verify the licenses and the owners of anyone affiliated with the pharmacy. [Tr. 79] The documents indicate that Cherise Jones was the individual applying for the license. [Tr. 79; Gov't Exh 10, at 6].

105. In July of 2013, DI Gonzales had a meeting with Ms. Jones and her then attorney, Ms. Monica Rodriguez. [Tr. 79–80]. The purpose of the meeting was to discuss the red flags and issues that were found during DI Gonzales's inspection. [Tr. 80]. At the meeting, DI Gonzales offered Ms. Jones an opportunity to surrender her DEA number and withdraw the application that she had pending. [Tr. 80]. Ms. Jones declined. [Tr. 80].

E. Dr. Tracy Gordon (Government Expert)

106. Dr. Tracey Gordon is a Clinical Hospice Pharmacist, with a little over two years of practice. [Tr. 213–214]. Dr. Gordon works on an interdisciplinary team consisting of doctors and nurses. [Tr. 214]. The team works to help manage pain and symptoms in hospice patients. [*Id.*].

107. Dr. Gordon works alongside physicians and makes recommendations of controlled substances based on patient symptoms. [*Id.*]. Prior to becoming a clinical hospice pharmacist, Dr. Gordon worked in retail pharmacy for 17 years as a pharmacist. Before that, Dr. Gordon was a pharmacy tech, clerk, and an intern. [*Id.*]. As a retail pharmacist, Dr. Gordon worked for Eckerd, Walgreens, and Publix. [*Id.*]. Dr. Gordon worked in Leon, Broward, Palm Beach, and Dade counties, respectively. [Tr. 215]. Dr. Gordon worked as a pharmacy manager and assistant pharmacy manager in some stores. [*Id.*]. For some employers, Dr. Gordon floated from one store to the next.[53] [*Id.*]. Dr. Gordon testified that she has probably worked in 200 pharmacies. [*Id.*]. Dr. Gordon estimated that she worked alongside at least 100 pharmacists during her career. [Tr. 215–216].

108. In her role as a retail pharmacist, Dr. Gordon interacted frequently with other pharmacists in the area. [Tr. 216]. Dr. Gordon currently holds a consultant license, and regular pharmacy license in Florida.[54] [Tr. 216]. Dr. Gordon obtained her Bachelors of Science degree in pharmacy at Florida A&M University, and a Doctorate in pharmacy from the University of Florida. [Tr. 216–217; Gov't Exh. 25].

109. In her professional experience, Dr. Gordon has become familiar with issues surrounding the abuse or diversion of controlled substances. [Tr. 218]. Dr. Gordon acknowledged that there is no comprehensive written list of issues a pharmacist may encounter during his practice. [Tr. 218]. Dr. Gordon stated ''it's just what you do. You just see, you have to determine whether a prescription is for a legitimate medical purpose to protect your patient because that's what we're here to do.'' [Tr. 218].[55]

110. Dr. Gordon has not sat on any boards of pharmacy, a board or organization that sets educational policy for pharmacists, and is not currently dispensing pharmaceuticals. [Tr. 220–222].

111. Dr. Gordon was recognized as an expert in retail pharmacy.[56] [Tr. 224].

112. Dr. Gordon testified that in order to ensure that a prescription was issued for a legitimate medical purpose, a pharmacist must check the dose, check the quantity, see what type of doctor wrote the prescription, and look at the patient's address. [Tr. 226]. Dr. Gordon stated that in order to properly check the prescription, the pharmacist must be a ''judge of the person too, to see the person, to make sure that's what they need.'' [57] [*Id.*].

113. Another concern to Dr. Gordon is when patients ask you not to bill their insurance company and to pay cash for the prescription instead. [*Id.*]. That to Dr. Gordon is one of the biggest signs of possible abuse or diversion. [*Id.*].

114. Dr. Gordon explained the tools that are available to the pharmacist in preventing diversion. [Tr. 227]. One such tool is E–FORCSE. [*Id.*]. E–FORCSE is a program that was created

[53] Dr. Gordon explained that in retail pharmacy, you can either have your own home store, or you can ''float'' to different stores. [Tr. 215]. In her retail experience, Dr. Gordon did both. [Tr. 215].

[54] At the hearing, Dr. Gordon testified that she was licensed as a pharmacist in Florida and Georgia. [Tr. 216; Gov't Exh. 25]. Dr. Gordon's Georgia license lapsed on December 31, 2014, however. [Tr. 290] When confronted on cross examination about this fact, Dr. Gordon became hostile and stated that ''her Georgia license has nothing to do with this case.'' [Tr. 291]. At one point, Dr. Gordon interrupted a dialogue between counsel and the Judge attempting to show how her lack of a Georgia pharmacy license was irrelevant to this case. [Tr. 292]. As counsel for Respondents rightly pointed out, the Government highlighted certain credentials of Dr. Gordon on direct examination; one of those being that Dr. Gordon is licensed as a pharmacist in Georgia. While I recognize that this case deals with Dr. Gordon's expertise as a retail pharmacist in Florida, I find paramount to Dr. Gordon's credibility that her credentials accurately reflect the licenses she currently holds. If Doctor Gordon's Georgia Pharmacy license was so idle and irrelevant that she let it lapse, then surely it should be left off of her curriculum vitae. Despite this fact, I find Dr. Gordon's opinions credible to the limited extent that they deal with the practice of retail pharmacy in Florida.

[55] In a related part of her testimony, Dr. Gordon stated ''[p]harmacists have known from the beginning of time that a prescription should be for a legitimate medical purpose. That's our purpose. That's one of our jobs.'' [Tr. 234]. Dr. Gordon also testified that Florida pharmacists were aware of red flags of abuse and diversion in 2010. [Tr. 240].

[56] During her cross examination, Dr. Gordon was asked about Florida pharmacists' general knowledge of red flags. [Tr. 323]. Dr. Gordon stated that she knew of Florida pharmacists' general knowledge of red flags because she spoke to pharmacists in her network, and watched a reality show broadcast on national television that depicted diversion in Broward and Dade Counties. [*Id.*]. When asked about the identities of the independent pharmacists Dr. Gordon spoke to in 2010, Dr. Gordon became hostile stating ''Well let's see, do you remember everyone you speak to back in 2010? I do remember there's this one pharmacist who used to come into Publix all the time and we talked about it all the time'' and ''[h]ow about my father? . . . My father is an independent. He worked for independent for years.'' [Tr. 324]. Notwithstanding the above listed statements, Dr. Gordon's experience infers that she had a great deal of interaction with Florida Pharmacists during her career, including the years 2010 through 2012. And despite her inability to articulate specific examples, it follows that Dr. Gordon was generally aware of Florida pharmacists' knowledge of red flags because she had extensive interaction with many pharmacists during the applicable time period. For this reason, I find Dr. Gordon's testimony regarding what Florida pharmacists knew from 2010–2012 credible and persuasive.

[57] Dr. Gordon testified that it was possible some of Jones' patients were drug dealers or drug addicts. [Tr. 340]. When asked about her experience with drug addicts or drug users, Dr. Gordon stated ''[a]ctually I was in a group with a bunch of drug addicts in my church. Yes, I was with them for two years and I helped them.'' [Tr. 342]. Dr. Gordon admitted that she did not have any formal social work degrees or drug counseling training. [*Id.*]. In this vein, I afford Dr. Gordon's testimony no weight as it relates to whether or not Jones' patients were drug dealers or addicts because Dr. Gordon has no personal knowledge of Jones' patients. Dr. Gordon's testimony is only credible in that it shows the prescriptions Jones Pharmacy filled presented red flags for a variety of reasons. [Tr. 342].

by the state of Florida so that a pharmacist could see if a patient was either doctor shopping or pharmacy shopping. [*Id.*]. The program shows other pharmacies where the patient went to fill prescriptions, and the medication and controlled substances he received. [Tr. 228]. Dr. Gordon's normal procedure when she receives a prescription is to check if the patient has visited her pharmacy before. If the patient has not, then Dr. Gordon will look for the patient's profile in the E–FORCSE program. [Tr. 227–228].

115. Dr. Gordon also stated that it was important to know the scope of a physician's practice, because deviation from the practice area could indicate a possible red flag.[58] [Tr. 228–229]. Dr. Gordon stated that if a pharmacist does not know the prescriber, there are other tools the pharmacist can use to view a prescriber's specialty. [Tr. 228]. Dr. Gordon explained that Publix had a National Provider Identifier (''NPI'') system which allowed the pharmacist to look up a doctor and their specialty. [*Id.*]. For pharmacies without an NPI, Dr. Gordon stated that a pharmacist could also go to the Department of Health website and look up the prescriber's specialty as well. [Tr. 228].

116. Dr. Gordon explained that with proper pain management, ''the patient should present a prescription for a long acting plus a short acting [medication]. And the rule of thumb is, you know, usually no more than two to three breakthrough doses per day. So really a short acting prescription if the patient is being managed chronically should not exceed maybe three tablets a day or 90 pills a month.'' [Tr. 229].

117. Dr. Gordon further testified that some drugs, like Oxycodone and Hydromorphone can be a red flag themselves. [Tr. 230]. Dr. Gordon testified to an IMS Institute of Healthcare Informatics report that was admitted at the hearing. [Tr. 287–288; Gov't Exh. 29]. Dr. Gordon stated that the IMS report indicates that the national average for cash sales of prescriptions dispensed between the years 2007 to 2011 is six percent. [Tr. 288; Gov't Exh at 42].

118. Dr. Gordon testified that there are circumstances where a pharmacist can fill prescriptions despite the presence of one or more of these red flags. [Tr. 231]. This can be accomplished by speaking to the patient, speaking to the caregiver, speaking to the physician's office. [Tr. 231].

119. Dr. Gordon stated that as a retail pharmacist, she never set prices for any medications. [Tr. 297].

120. In 2010, Dr. Gordon was asked by Group Supervisor Gayle Lane and DI Domingo Gonzales to look at Jones Pharmacy's prescriptions to determine if Cherise Jones did anything wrong in filling them. [Tr. 240]. Dr. Gordon was asked to look at Jones Pharmacy's prescriptions and dispensing report, and determine whether or not she would have filled the prescriptions at issue. [Tr. 240–241, 301]. Dr. Gordon prepared a report that described certain red flags that she saw with Jones Pharmacy's prescriptions. [Tr. 305]. Dr. Gordon testified that some of the prescriptions presented red flags that could not be conclusively resolved. [Tr. 241].

F. Red Flags Within Jones Pharmacy's Prescriptions

121. There is no one place where a registrant can go to view a published list of ''red flags.'' [Tr. 140]. This includes the DEA Pharmacy Manual, or the DEA's instructions on operating a pharmacy. [Tr. 140–141]. Supervisor Lane testified that there is no place where pharmacists can find a comprehensive list of ''red flags'' because the red flags are changing in various parts of the country. [Tr. 142]. Supervisor Lane said that recognizing these flags was ''common sense on a pharmacist's part,'' and that DEA cannot publish a definitive list of red flags because ''[p]harmacy practice isn't a checkoff list, and the red flags change.'' [Tr. 142–143].

122. Jones Pharmacy filled prescriptions for patients B.F. and K.W. These two individuals presented identification from Ohio on the same street. [Tr. 243; Gov't Exh. 15, 43].[59] The patients were seeing the same doctor in Fort Lauderdale, the prescriptions were written on the same date, and the prescriptions were filled at the same time for common cocktail medications: Oxycodone 30, Oxycodone 15, Xanax 2, and Carisoprodol. Dr. Gordon stated that the dosing in these prescriptions were red flags because with proper pain management, a person normally has a long acting medication plus a short acting pain medication. [Tr. 244; Gov't Exh. 15, 43] In this case, both Oxycodone 30 and Oxycodone 15 were dispensed. [Tr. 244]. There is no need, however, to issue these two different strengths of this prescription because Oxycodone 30 could be split in half to achieve the proper dose. [Tr. 244–245; Gov't Exh. 15, 43]. Further, Dr. Gordon testified that a combination of Oxycodone and Xanax was a red flag because the two medications accentuate each other making euphoric effects. Dr. Gordon testified that there was nothing Jones Pharmacy could have done to resolve all of these red flags when presented together.[60] [Tr. 243; Gov't Exh. 15, 43].

123. Jones Pharmacy filled prescriptions for patients that traveled from North Carolina to see doctors in Deerfield Beach. [Tr. 247–248; Gov't Exh. 16, 44]. Dr. Wolff, a pulmonologist, and Dr. Nuanger, a urologist, issued multiple prescriptions for Oxycodone 15 mg, 30 mg, and Xanax 2 mg. [Tr. 248 Gov't Exh. 16, 44]. Each time, Jones Pharmacy was paid cash for these prescriptions. [Tr. 248]. Dr. Gordon testified that it was not normal to see prescriptions from a urologist for combinations of Oxycodone and Xanax month after month. [Tr. 249; Gov't Exh. 16, 44]. Likewise, Dr. Gordon testified that it was not typical to see a pulmonologist issue prescriptions for Oxycodone and Xanax, especially since these patients were receiving these prescriptions repeatedly, month after month. [Tr. 249; Gov't Exh. 16, 44]. Dr. Gordon testified that there was nothing Jones Pharmacy could have done to resolve the red flags present in these prescriptions. [Tr. 248; Gov't Exh. 16, 44].

124. Jones Pharmacy filled prescriptions for D.H. and K.S. [Tr. 250; Gov't Exh. 17, 45]. These patients

[58] During her cross-examination Dr. Gordon stated that it is ''frowned upon'' and ''unethical'' for a doctor to write a prescription for a reason outside of his particular scope of practice. [Tr. 334–335]. When questioned along these lines, Dr. Gordon could not produce a rule or authority for these contentions. [*Id.*]. Here, I afford no weight to Dr. Gordon's conclusions that it is ''unethical'' or ''frowned upon'' for a physician to write a prescription outside his normal scope of practice, for Dr. Gordon presented no authority, rule, or basis for her knowledge that would corroborate these assertions. I do, however, recognize and find credible Dr. Gordon's testimony that a physician prescribing outside their normal scope of practice presents a ''red flag'' when there is a high volume of controlled substances prescribed by a doctor repeatedly operating outside his scope of practice. [Tr. 228–229; 379]. In this instance, Dr. Gordon noted such a pattern by utilizing and sorting through DI Gonzales' Microsoft excel pivot tables. [Tr. 379–380].

[59] Government Exhibits 43 through 54 are printouts of the dispensing report that indicate the dispensing history for the customers whose prescriptions are identified in the order to show cause. [Tr. 72]. When counsel for the Government introduced a set of prescriptions in Government Exhibits 15 through 24, he also introduced the correlating customer's dispensing history in Government Exhibits 43–54. [Tr. 72] The exhibits were prepared this way to avoid the use of an electronic spreadsheet. [Tr.70].

[60] In Government Exhibit 15 at 1, there was a handwritten notation stating that the prescription was verified by Angie. [Tr. 243–244]. Dr. Gordon testified that this only indicated that someone at Jones pharmacy called to make sure the doctor wrote the prescription, not that Jones Pharmacy tested whether this prescription was for a legitimate medical purpose. [Tr. 244].

presented identification which indicated they lived at the same address in Tennessee. [Tr. 250; Gov't Exh. 17, 45]. Jones dispensed common cocktail drugs, Oxycodone 30 mg, Oxycodone 15 mg, and Xanax 2 mg to D.H. and K.S. [Tr. 250; Gov't Exh. 17, 45]. Both patients were seeing doctors in Opa Locka, Florida. [Tr. 250; Gov't Exh. 17, 45]. The patients paid for these prescriptions with cash. [Tr. 250]. Dr. Gordon testified that there was nothing Jones Pharmacy could have done to resolve the red flags present in these prescriptions. [Tr. 250; Gov't Exh. 17, 45].

125. Ms. Jones testified to prescriptions for patient D.H. and patient K.S. which indicated the patients' diagnosis. [Tr. 515–517; Gov't Exh. 17, at 1, 9]. Both prescriptions listed ''chronic back pain'' on their front side in handwriting. [Gov't Exh. 17, at 1, 9]. The back of these prescriptions indicated that the patients had the same address. [Gov't Exh. 17, at 2, 10]. With regard to the similar addresses, Ms. Jones admitted that at the time these prescriptions were filled it was ''not something that [she] actually probably noticed.'' [Tr. 518]. Ms. Jones stated that looking at the addresses is something now that she looks at more closely. [Tr. 518–519]. Ms. Jones testified that she is not aware of this or any prescription dispensed at the pharmacy being diverted. [Tr. 517].

126. Jones Pharmacy filled prescriptions for patients on two dates in April of 2010 where red flags were present. [Tr. 251; Gov't Exh. 18,46]. All of the prescriptions filled on April 19, 2010 and April 20, 2010, were from patrons who lived out of state. [Tr. 251; Gov't Exh. 18,46]. Specifically, the patrons lived in Ohio, West Virginia, Georgia, Tennessee, Kentucky, and Mississippi. They were prescribed the typical cocktail medications Oxycodone 15, Oxycodone 30, and Xanax 2. [Tr. 251; Gov't Exh. 18, 46]. There was also some Percocet sporadically prescribed therein. [Tr. 251- 252; Gov't Exh. 18,46]. All of the patients were driving to either Miami or Deerfield Beach and seeing a couple of doctors, including Dr. Wolff, the pulmonologist. [Tr. 252; Gov't Exh. 18,46]. Dr. Gordon testified that there was nothing Jones Pharmacy could have done to resolve the red flags present in these prescriptions. [Tr. 251–252; Gov't Exh. 18, 46].

127. Jones Pharmacy filled prescriptions where red flags were present on October 26, 2010. [Tr. 252–253; Gov't Exh. 19, 47]. The patient these prescriptions were dispensed to lived in Panama City, approximately 10 hours away from Jones Pharmacy. [Tr. 253; Gov't Exh. 19, 47]. The medications were prescribed to a 56-year-old man, by a pediatrician, and consisted of Oxycodone 30 mg, Oxycodone-APAP 10/325 mg, and Carisoprodol 350 mg. [Tr. 253; ALJ Exh. 21 at 4]. Dr. Gordon testified that there was nothing Jones Pharmacy could have done to resolve these flags. [Tr. 257–258; Gov't Exh. 19, 47].

128. Jones Pharmacy filled prescriptions for patient D.T. on February 28, 2011. [Tr. 265; Gov't Exh. 20, 48]. The prescriptions were for Oxycodone 30 mg, Oxycodone 15 mg, and Alprazolam 2 mg. [Tr. 266]. The prescription indicated that the patient is from West Virginia. [Tr. 265–266; Gov't Exh. 20, 48]. The prescribing doctor, Dr. Karten, is a Gynecologist, or OB/GYN. [Tr. 268; Gov't Exh. 20, 40, 48]. Patient D.T., however, is a male. [Tr. 268]. This indicates that Dr. Karten is prescribing outside the scope of his practice. [Tr. 268]. Dr. Gordon testified that there was nothing Jones Pharmacy could have done to resolve the red flags present in these prescriptions. [Tr. 268; Gov't Exh. 20, 48].

129. Jones Pharmacy filled prescriptions for three different individuals on July 27, 2011. [Tr. 269; Gov't Exh. 21, 49]. The prescriptions were filled for three different patients from West Palm Beach who traveled to Wilton Manors, Florida, to obtain similar prescriptions. [Tr. 269; Gov't Exh. 21, 49]. The prescriptions were prescribed on the same date for Oxycodone 30, Xanax 2, and Oxycodone 15. [Tr. 269; Gov't Exh. 21, 49]. The patients all paid for the prescriptions in cash. [Tr. 269; Gov't Exh. 21, 49]. Dr. Gordon testified that there was nothing Jones Pharmacy could have done to resolve the red flags present in these prescriptions. [Tr. 270; Gov't Exh. 21, 49].

130. Jones Pharmacy filled prescriptions for three patients on August 1, 2011. [Tr. 270; Gov't Exh. 22, 50]. These prescriptions were filled for patients from West Palm Beach, Florida, who drove to Sunrise, Florida, to obtain these prescriptions for cocktail medications. [Tr. 270; Gov't Exh. 22, 50]. After obtaining identical prescriptions on the same day from the same doctor, these patients drove to Jones Pharmacy to have them filled. [Tr. 270; Gov't Exh. 22, 50]. The patients presented prescriptions for Oxycodone 30 mg and Xanax 2 mg. [Tr. 271; Gov't Exh. 22, 50]. Dr. Gordon stated that this appeared to be an instance where the doctor was ''rubber stamping'' the prescriptions, there was no individualized treatment. [Tr. 271; Gov't Exh. 22, 50]. Dr. Gordon further testified that Xanax 2 mg is a very high dose of Xanax.[61] Dr. Gordon testified that there was nothing Jones Pharmacy could have done to resolve the red flags present in these prescriptions. [Tr. 272; Gov't Exh. 22, 50].

131. Ms. Jones testified that at the time the above described prescriptions were presented, she had no concerns with the prescriptions, including the distances the patients traveled to the pharmacy. [Tr. 528–529]. In fact, Ms. Jones testified that these prescriptions indicated that she and a pharmacy technician wrote on the prescriptions verifying the diagnosis. [Tr. 526–527]. Ms. Jones stated that with her current knowledge, if she was presented with the same prescription today, she would look at the patient's address, look at the type of doctor, the monitoring system E–FORCSE, and have the patient explain the reason for filling the prescription at Jones Pharmacy if he traveled a long distance. [Tr. 529–530].

132. Jones Pharmacy filled prescriptions for repeat customer D.O. on multiple occasions. [Tr. 273; Gov't Exh. 23, 51]. D.O. presented identification that indicated his address is in Pompano Beach, Florida. [Tr. 273; Gov't Exh. 23, 51]. D.O. drove to Miami to see a doctor, and then back up to Fort Lauderdale to Jones Pharmacy to have the prescription filled. [Tr. 273; Gov't Exh. 23, 51]. D.O. obtained Hydromorphone 8 mg and Clonazepam 1 mg. [Tr. 273; Gov't Exh. 23, 51]. Hydromorphone 8 mg and Clonazepam 1 mg are common cocktail medications. [Tr. 273]. The doctor who provided D.O. these medications, Ronald H. Thompson, M.D., specializes as an obstetrics and gynecologist, an OB/GYN. [Tr. 274; Gov't Exh. 38]. D.O. is a male patient. [Tr. at 274]. During his first visit to Jones Pharmacy, D.O. paid $900 for 180 tablets of Hydromorphone. [Tr. 274]. On his second visit, he paid $1620 for 180 tablets of Hydromorphone 8 mg. [Tr. 275]. Dr. Gordon stated that these factors indicated Jones Pharmacy knew that ''these medications were diverted and [that] the patron was taken advantage of'' by Jones Pharmacy by charging such high prices. [*Id.*]. Dr. Gordon testified that there was nothing Jones Pharmacy could have done to resolve the red flags present in these prescriptions, and these prescriptions could not have been filled in compliance with Jones Pharmacy's duties. [Tr. 275; Gov't Exh. 23, 51].

[61] Dr. Gordon testified that in her experience as a Clinical Hospice Pharmacist catering to terminal patients, she rarely sees prescriptions for Xanax 2 mg because it is such a high dose of Xanax. [Tr. 272].

133. Jones Pharmacy filled prescriptions for patient M.S./S.M. who lives in Deerfield Beach, Florida. M.S./S.M. traveled north to Boca Raton, Florida, to see a doctor, then traveled south to Jones Pharmacy to have the prescriptions filled. [Tr. 276; Gov't Exh. 24, 52]. The prescriptions filled were Oxycodone 30 mg, and the doctor's signature appeared to be stamped, not signed. [Tr. 276; Gov't Exh. 24]. Dr. Gordon testified that this indicates that Oxycodone 30 mg is a medication that this Doctor regularly prescribes. [Tr. 277]. M.S./S.M. paid between $1080—$1980 for a 180 pill prescription. [Tr. 277]. Dr. Gordon stated that this indicated that ''the pharmacist was aware of what she was charging and [that she was] taking advantage of patrons, of drug addicts or drug dealers.'' [Tr. 277]. Dr. Gordon further stated that there was nothing Jones Pharmacy could have done to resolve the apparent red flags in these prescriptions. [Tr. 279].

134. Ms. Jones testified about the verifications that were conducted for these prescriptions. [Tr. 533; Gov't Exh. 24]. Ms. Jones confirmed that the prescriptions were verified with the prescriber for the diagnosis. [Tr. 534]. Ms. Jones confirmed that the prescriptions appear to have been stamped with the prescribing Doctor's signature. [Tr. 534–536].

135. With regard to the above listed prescriptions at issue in this matter, Ms. Jones testified that ''we may have made mistakes that people may call dumb, naive, stupid, but it was not our intent to put stuff in the hand of other people.'' [Tr. 531]. Ms. Jones further stated ''I would have done stuff different if it was, if it's now, I would do it different.'' [Tr. 532]. Ms. Jones also expressed confusion about her corresponding responsibility when questioned on the topic. She stated ''I did not know that the law said that I had to make sure that prescriptions said it was legitimate, medically legitimate.'' [Tr. 640]. When asked if there were circumstances that would cause Ms. Jones to reject a prescription, Ms. Jones stated ''[t]here are circumstances that would cause me to reject a prescription. I don't think I can make the determination whether it's for a legitimate medical purposes because I would have to say that I'm in that person's body and I know how they feel if we're speaking just about pain medications.'' [Tr. 625].

136. Ms. Jones admitted that ''she could have done things a lot different.'' [Tr. 579]. Ms. Jones stated that she was aware of her responsibility for public safety, but that she didn't think at the time that the prescriptions were issued for a non-legitimate medical purpose. Ms. Jones stated that she thought what she did was enough in reconciling the prescriptions. [Tr. 579] Now, however, Ms. Jones knows that she could have, and should have, done more.[62] [Tr. 580].

137. In 2010, Jones Pharmacy made a total gross margin of $530,483.06 on the sales of controlled substances. [Tr. 651; Resp. Exh. 13, at 40]. In 2010, Jones pharmacy made a total gross margin of $10,188.89 on the sales of non-controlled substances. [Tr. 652; Resp. Exh. 14, at 25]. Ms. Jones testified that in 2010, controlled substance sales made up the primary sources of her income. [Tr. 653]. Ms. Jones stated that this amount of controlled substance sales for an independent pharmacy was normal in 2010. [Tr. 653]. In 2010, Ms. Jones conversed with a Walmart pharmacist in Jacksonville, an independent pharmacist in Fort Lauderdale, and an independent pharmacist in Miami on this topic. [Tr. 655–656]. These pharmacists told Ms. Jones that this level of controlled substance sales was normal. [Tr. 654–655].

138. In 2011, Jones Pharmacy filled slightly less than 1,100 prescriptions for controlled substances. [Tr. 666]. Jones Pharmacy made a total gross margin of $439,990 on the sales of these controlled substances. [Tr. 666–667; Resp. Exh. 15, at 25]. In 2011, Jones Pharmacy made a total gross margin of $38,241 on the sales of non-controlled substances. [Tr. 667; Resp. Exh. 16, at 66].

139. In 2012, Jones Pharmacy filled 720 controlled substance prescriptions for a profit of $316,942. [Tr. 669–670; Resp. Exh. 17, at 19]. In 2012, Jones Pharmacy made a total gross margin of $58,123 on the sales of non-controlled substances. [Resp. Exh. 18, at 64].

140. From April 2013 to December 2013, Jones pharmacy dispensed 213 prescriptions for controlled substances for a profit of $25,556.69. [Tr. 670–671; Resp. Exh 19, at 8].

141. In 2010, Jones pharmacy did not have any written policies related to the filling of prescriptions for controlled substances as it had to do with the legitimacy of prescriptions. [Tr. 656].

142. In 2011 and 2012, Jones Pharmacy filled more prescriptions for non-controlled substances than controlled substances. [Tr. 708; Resp. Exh. 4, 15, 16,17, 18].

143. In 2013, Jones Pharmacy filled more prescriptions in non-controlled substances than controlled substances. [Tr. 709; Resp. Exh. 4, 19, 20].

G. Ms. Cherese Jones

144. Ms. Jones is the sole owner of Jones Pharmacy and SND Healthcare. [Tr. 570; Gov't Exh 9, 10]. Jones Pharmacy has always been under the management of Ms. Jones. [Tr. 571]. Ms. Jones is the Registered Agent, the Florida Community Pharmacy Permit applicant, managing member, and authorized representative who submitted the Applications By Foreign Limited Liability Company For Authorization To Transact Business in Florida for both Jones Pharmacy and SND Healthcare. [Gov't Exh. 9, 10].

145. Ms. Jones works at Jones Total Health Pharmacy. [Tr. 385]. Jones Pharmacy is a community pharmacy in Fort Lauderdale. [*Id.*]. Ms. Jones holds current pharmacist licenses in Florida, Pennsylvania, Nebraska, Arkansas, Tennessee and Kentucky. [Tr. 385–386; Resp. Exh 1]. Jones Pharmacy has a current license with the Florida Department of Health, Division of Medical Quality Assurance. [Tr. 387; Resp. Exh. 2–3].

146. Ms. Jones sent a letter to her congresswoman and two senators in Florida based on the delay she was experiencing with the DEA approving her move from one location to the other. [Tr. 87]. DI Gonzales was aware of Ms. Jones' congressional inquiries at the time he conducted the pharmacy inspection. [Tr. 87]. In the letters to her congressional representatives urging action on behalf of the DEA to change her pharmacy's address, Ms. Jones stated that she was '' 'lucky' to move her business to a 'better environment' where she could 'go in the parking lot and not worry about smelling urine or seeing people hanging out on the sidewalk.' '' [Resp. Exh. 5 at 2, 6 at 2, 7 at 2].

147. Ms. Jones graduated from Florida A&M University with a doctor of pharmacy degree in 2000. [Tr. 392; Resp. Exh. 1].

148. After graduation, Ms. Jones completed two American Society of Health Systems (ASHP) Pharmacists residencies. [Tr. 392–393]. The ASHP residencies are post-graduate volunteer training that a candidate is matched for. [Tr. 392]. Ms. Jones did her ASHP residency at Jackson Memorial Hospital, Miami, Florida. [Tr. 393–394; Resp. Exh 1].

149. Ms. Jones' first residency was in pharmacy practice, and it focused mainly on adults. [Tr. 394]. The second

[62] On cross examination, Ms. Jones repeatedly stated that there was more she could have done to ensure the legitimacy of the prescriptions at issue. [Tr. 579–580, 582–583, 585–586, 588, 590–591, 593–596, 599–601, 608–609, 620–621, 623–624]. Ms. Jones admitted that her ''process wasn't great for looking at if [a prescription] was issued for [a] legitimate medical purpose.'' [Tr. 580]. The process Ms. Jones used in 2010 only involved her calling the prescribing doctor's office for verification that the doctor wrote the prescription. [Tr. 581].

residency Ms. Jones completed was for pediatrics. [Tr. 395]. Following her residency at Jackson, Ms. Jones moved to Pennsylvania where she worked at a children's hospital and did some part-time rotations at a Walgreens. [Tr. 396].

150. After ten months in Pennsylvania, Ms. Jones moved back to Florida and began working at Miami Children's Hospital. [Tr. 400]. Ms. Jones worked at Miami Children's hospital for two years. [Tr. 407]. Following Miami Children's Hospital, Ms. Jones worked as a pharmacist for various employers, including Target, until she was hired by Community Health of South Florida (''CHI''). [Tr. 408]. CHI is a federally qualified health center. [*Id.*]. At CHI, Ms. Jones supervised three pharmacy managers, and numerous staff pharmacists and technicians. [Tr. 408–409].

151. Ms. Jones has completed poster presentations, and presented her work at the mid-year ASHP meetings. [Tr. 412]. Ms. Jones has also conducted in-service lectures. [Tr. 412–413; Resp. Exh. 1].

152. Ms. Jones started Jones Total Health Pharmacy in February of 2010. [Tr. 410]. Ms. Jones has always had a strong interest in pediatrics, and she desired to bring that interest to her own pharmacy. [Tr. 411]. Ms. Jones had never operated a pharmacy on her own before starting Jones Total Health Pharmacy. [Tr. 414]. Jones Pharmacy's original location was on 300 West Sunrise Boulevard in Fort Lauderdale. [*Id.*].

153. When Jones Pharmacy opened in 2010, it opened using a wholesaler, H.D. Smith. [Tr. 416]. H.D. Smith provided the pharmacy with everything that Jones Pharmacy sold, including controlled substances. [Tr. 416]. After about three months with H.D. Smith, the company informed Jones Pharmacy that its purchase volume was not enough to keep it with H.D. Smith. [Tr. 417]. Jones Pharmacy was then referred to SmartSource, but SmartSource only sold non-controlled substances. [*Id.*]. At that point, Jones Pharmacy started using multiple companies to get everything that it needed for the pharmacy. [Tr. 417–418]. Jones Pharmacy has been using McKesson for its pharmaceutical needs since the end of 2011. [Tr. 417–418].

154. Ms. Jones initiated policies and procedures she had utilized at CHI when she started Jones Pharmacy. [Tr. 420]. These policies included recording a patient's information in the computer system, checking whether a patient had allergies, and recording patient demographics. [Tr. 419]. Then the prescription was scanned into the computer and typed. [Tr. 419]. If a patient presented a prescription for a controlled substance, Ms. Jones would call the doctor's office to ensure the doctor authored and issued the prescription. [Tr. 420] At its inception, Ms. Jones ensured that most of the pharmacy's policies and procedures were in writing. [Tr. 421]. Ms. Jones stated that the policies and procedures change when changes are necessary. [*Id.*]. Later, Ms. Jones started asking the prescribing doctor for a patient's diagnosis. [Tr. 513]. This was not until after the pharmacy had operated for a while, because it was not something that Ms. Jones had done at the other pharmacies she had previously worked at. [*Id.*].

155. Ms. Jones was not present for the State of Florida Department of Health Investigative Services inspection on April 14, 2011. [Tr. 423; Gov't Exh. 13]. In the remarks section of the report, Investigator Alan Miller concluded that Jones pharmacy was ''filling and dispensing what appears to be a large amount of Schedule II Controlled Substances written prescriptions'' from out of state patients. [Tr. 425–426; Gov't Exh. 13].

156. Jones Pharmacy stopped filling out of state prescriptions on April 1, 2011. [Tr. 426]. At that time, Jones Pharmacy's policies and procedures were not modified in writing to reflect this new policy change. [Tr. 428].

157. Jones Pharmacy had a fraud policy in place, for the identification and process of fraudulent prescriptions, in October of 2011. [Tr. 430; Resp. Exh. 25].

158. Pursuant to deficiencies uncovered during inspections from the State of Florida Department of Health Investigative Service, Ms. Jones promptly corrected all noted deficiencies. [Tr. 431–436].

159. The State of Florida Department of Health Investigative Service conducted an inspection on October 12, 2011, at Jones Pharmacy. During this inspection, Ms. Jones was not told that any of Jones Pharmacy's DEA 222 forms were deficient. [Tr. 441; Resp. Exh. 8, at 7].

160. The State of Florida Department of Health Investigative Service conducted an inspection on June 7, 2012, at Jones Pharmacy, for a change of pharmacy location. [Tr. 440; Resp. Exh. 8, at 5–6]. During this inspection, the Florida Department of Health investigator did not tell Ms. Jones that any of Jones Pharmacy's DEA 222 forms were deficient. [Tr. 440–441; Resp. Exh. 8 at 5–6]. Also during the June 7, 2012 inspection, Ms. Jones notified the inspector that the pharmacy had encountered a prescription that had been forged. [Tr. 442; Resp. Exh. 8, at 5]. In response, the pharmacy reported the forgery to the police. [*Id.*].

161. After the State of Florida Department of Health Investigation inspected the new location for a change of pharmacy location, Ms. Jones submitted a request of registration update to the DEA. [Tr. 446]. Ms. Jones called the DEA and was told how to request the change of location. [*Id.*]. Ms. Jones completed her request on June 20, 2012. [*Id.*].

162. Ms. Jones acquired the new location, 1150 West Sunrise Boulevard, Fort Lauderdale, FL, in March of 2012. [Tr. 446; Resp. Exh. 12]. At that time, Ms. Jones was paying rent for two pharmacy locations: the new location awaiting approval from the DEA, and the location where she was operating. [Tr. 446–447].

163. Ms. Jones submitted her application for address change online to the DEA on June 20, 2012. [Tr. 455]. She followed-up on her application on July 3, 2012, by calling the DEA call center. [Tr. 455] The call center transferred Ms. Jones to the DEA's Weston office, and Donna Richards responded to Ms. Jones inquiry. [Tr. 455]. Later that day, Susan Langston called Ms. Jones and asked for a dispensing report for controlled substances. [Tr. 455–456; Gov't Exh. 2]. After Ms. Jones submitted the requested information to Ms. Langston, she waited for a reply. [Tr. 457]. Jones Pharmacy was prohibited from moving its controlled substances to the new location until the DEA approved the registration at the new address. [*Id.*].

164. Because Ms. Jones did not hear anything from Ms. Langston after she submitted her dispensing report, Ms. Jones sent emails to the DEA asking if there was any update on her registration. [Tr. 457]. Then, in October of 2012, Ms. Donna Richards asked Ms. Jones to send her Jones Pharmacy's dispensing report. [Tr. 457]. Ms. Jones sent Ms. Richards the file that same day, and Ms. Richards confirmed receipt. [Tr. 458]. Thereafter, Ms. Jones emailed for updates but did not receive any. [*Id.*].

165. Due to the DEA's inaction on her registration request, on March 7, 2013, Ms. Jones wrote to her U.S. Congresswoman, and U.S. Senators explaining the delay and her frustration. [Tr. 460; Resp. Exh. No 5, 6,7]. Senator Nelson, Senator Rubio, and Congresswoman Wasserman Shultz wrote back to Ms. Jones. [Tr. 464–465; Resp. Exh. 5,6,7].

166. Then, on April 2, 2013, Ms. Jones had a site visit from DI Gonzales and DI Richards. [Tr. 467–468]. During the visit, Ms. Jones was asked for controlled

substance prescriptions and ordering records. [Tr. 469]. Ms. Jones produced a computer file with the controlled substance ordering system (''CSOS'') [63] records. [*Id.*]. The file was saved in a CSV format. [Tr. 470]. Ms. Jones sent a paper copy of the records to DI Gonzales on May 3, 2013, via FedEx. [Tr. 471]. DI Gonzales contended that he could not the read the records, so Ms. Jones wrote a key on the first page of the packet to help DI Gonzales understand the CSV format for the finalized CSOS orders. [Tr. 471, 473–474; Gov't Exh. 53].

167. Ms. Jones testified that during the April 2, 2012 inspection, the meeting ''wasn't a good overall tone. The meeting just, it didn't really—it deteriorated after it started.'' [Tr. 475]. Ms. Jones stated that DI Gonzales took with him Jones Pharmacy's controlled substances prescriptions, schedules II–V. [Tr. 475]. He also took the controlled substance ordering receipts and records. [Tr. 475].

168. Later on April 2, 2012, Ms. Jones received a call from DI Gonzales, DI Langston, and DI Richards. [Tr. 476]. Ms. Langston talked with Ms. Jones about the inspection that had been conducted that day and the letters Ms. Jones wrote to her Senators and Congresswoman. [Tr. 477]. Ms. Langston said the Registration was done, and DI Richards confirmed it. [*Id.*]. The change of address was approved. [Tr. 477; Resp. Exh. 8].

169. The next time Jones Pharmacy was inspected was in June of 2013 by the Florida Department of Health [Tr. 478].

170. In July of 2013, Ms. Jones met with DI Gonzales. [Tr. 481]. At the meeting, DI Gonzales talked about pricing, specialties of prescribers, and drug cocktails. [Tr. 481].

171. Ms. Jones explained that Jones Pharmacy's controlled substances are priced through Average Wholesale Pricing (''AWP''). [Tr. 481–482]. Jones pharmacy has formulas in its software system that are based off of AWP. [*Id.*]. Specifically, Jones Pharmacy uses a Rx30 pharmacy system that derives its pricing information from First Databank. [Tr. 482, 678]. First Databank is a service Rx30 uses to set AWP information. [Tr. 678–679]. First Databank publishes various pricing benchmarks and information, and the Rx30 software is driven from it. [Tr. 678]. Jones Pharmacy has always used First Databank pricing, but it was up to the Pharmacy to change the pricing to what they wanted it to be. [Tr. 483]. In 2014, After DI Gonzales brought to Ms. Jones' attention the high prices the pharmacy was charging for controlleds, Jones Pharmacy started using the First Databank pricing, AWP plus the dispensing fee. [Tr. 483]. Prices vary based on the AWP at the time. [Tr. 483–484]. Often times AWP prices can be high. [Tr. 483–484].

172. Jones Pharmacy started using E–FORCSE in 2011. [Tr. 615]. E–FORCSE is the Electronic-Florida Online Reporting of Controlled Substance Evaluation Program monitoring system. The system shows which pharmacies a patient went to, and the medication and/or controlled substances the patient received. [Tr. 228].[64] Before E–FORCSE, Jones Pharmacy used wholesalers that required it to enter the patients into a prescription monitoring program (''PMP'') report. Ms. Jones testified that she thought the only people that order from those same wholesalers fed into the system, and then you could look at the patient's fill history. [Tr. 615–616].

173. Ms. Jones first heard about red flags for diversion when Florida Department of Health Inspector Robert Di Fiore inspected the Jones Pharmacy on May 14, 2014. [Tr. 484–485; Resp. Exh. 8, at 2].

174. Jones Pharmacy dispensed controlled substances to patient H.L. up until July 2014. [Tr. 495–496; Resp. Exh 11, at 2]. Jones Pharmacy noted that patient H.L. was taking the same medication every month, and patient H.L. became verbally abusive if her prescription was ''not ready or done her way.''[Tr. 495]. Due to this Jones Pharmacy stopped filling prescriptions for patient H.L., but other pharmacies continued to fill prescriptions for her. [Tr. 496; Resp. Exh. 11, at 2].

175. Ms. Jones stated that when Jones Pharmacy opened, it was not calling the prescriber to ascertain a patient's diagnosis. [Tr. 513]. This practice was consistent with Ms. Jones' experience in retail pharmacy. [Tr. 514–515]. Later, Ms. Jones instituted a policy of calling the prescriber and asking for a patient's diagnosis. [Tr. 513]. Ms. Jones presented examples of situations wherein the pharmacy called the doctor to ensure he authored the prescription, ascertained the patient's diagnosis, and recorded it on the prescription. [Tr. 512–517, 524–527; 532–534; Gov't Exh 17, 22, 24].

176. Ms. Jones testified that she did not believe in any way that any of the prescriptions at issue in these proceedings were going to be diverted after they were filled. [Tr. 517–518, 524].

177. Ms. Jones stopped filling prescriptions for certain individuals after the May 2014 Florida Department of Health Investigation. [Tr. 538]. Inspector Crane brought to Ms. Jones' attention the fact that certain patients coming to Jones Pharmacy had drug related arrest records. [Tr. 537–538]. Ms. Jones used the Broward County court website to look up patient names and determine if a patient had an arrest record. [Tr. 538]. From this information, Ms. Jones determined that certain patients had drug charges in their criminal records, and she refused to fill prescriptions for these individuals. [Tr. 538, 540–541].

178. Ms. Jones credibly testified that her practices today are different from those when she first opened Jones Pharmacy. [Tr. 519]. First, Ms. Jones dispenses much less controlled substances. [Tr. 565; Resp. Exh 4]. Her main business is from non-controlled substances that the pharmacy sells. [Tr. 564–565]. Second, in the event that Jones Pharmacy is presented with a prescription similar to the ones at issue in this proceeding, Ms. Jones stated that she would do things differently. [Tr. 520–523]. She would look at the prescribing doctor's credentials, the patients history in the monitoring system, speak with the doctor's office, questioning why a patient is coming from out of state to have a prescription filled, and require documentation substantiating an out of state patients reason for fill. [Tr. 520–523; Tr. 544–545]. Ms. Jones also stated that she will not fill for cash only patients unless the patient presents a ''really good reason.'' [Tr. 541]. Ms. Jones stated the number of patients paying with cash have diminished significantly. [Tr. 565, 568–569; Resp. Exh. 4].

179. Ms. Jones now has a written policy for how employees are to evaluate controlled substance prescriptions. [Tr. 555–556; Resp. Exh. 26]. Ms. Jones testified that Jones Pharmacy's new operational policies and procedures establish clear guidelines for how the pharmacy receives controlled substances, dispenses them to patients, evaluates the legitimacy of a prescription, verifies the prescription, what is done for pick-

[63] The Controlled Substance Ordering System (''CSOS'') is the system pharmacies use to electronically order a controlled substance from their wholesalers. [Tr. 470].

[64] The Florida E–FORCSE website indicates that the system was created in 2009 by the Florida Legislature to ''encourage safer prescribing of controlled substances and to reduce drug abuse and diversion within the state of Florida.'' *Florida Health E–FORCSE Homepage, http://www.floridahealth.gov/statistics-and-data/e-forcse/* (last visited Apr. 10, 2015). Specifically, E–FORCSE ''collects, maintains, and stores controlled substance prescription dispensing information in its database and makes the information available to health care practitioners and law enforcement and regulatory agencies during active investigations.'' [*Id.*].

ups, drop offs, and the protocol to follow if the pharmacy decides not to fill a prescription. [Tr. 555–556; Resp. Exh. 26]. The new policy and procedures guide is dated January 4, 2015. [Tr. 556; Resp. Exh. 26].

180. When testifying about pricing procedures, Ms. Jones admitted that she marked up controlled and non-controlled substances. [Tr. 680–681]. In fact, Ms. Jones stated that she marked up ''most of the controlleds.'' [Tr. 682].

H. Ms. Donna Horn (Respondents' Expert)

181. Donna Horn testified for the Respondent, and was recognized as an expert in pharmacy, pharmacy operations, and regulatory compliance for pharmacies. [Tr. 725, 737; Resp. Exh 24]. Ms. Horn lives in Norwood, Massachusetts. [Tr. 713]. Ms. Horn graduated from Massachusetts College of Pharmacy in Boston, Massachusetts in 1983. [Tr. 714]. She then worked for Osco, a national pharmacy chain, as a pharmacist and pharmacy manager for many years. [*Id.*]. Eventually Osco was sold to Brooks Pharmacy, and Ms. Horn worked for Brooks as a regional pharmacy manager. [Tr. 714–715]. It was her job to ready and transition 28 stores that she was supervising to the Brooks system of operations. [*Id.*]. When that was completed, Ms. Horn became the manager of regulatory affairs for Brooks. [*Id.*]. In that role, Ms. Horn ensured that the policies and procedures for the Brooks pharmacies were in compliance with the state regulations. [Tr. 716]. Then, in 2006, Ms. Horn went to work for the Institute for Safe Medication Practices. [Tr. 717]. The institute conducts studies in medication errors that occur in hospitals and pharmacies. The institute also does continuing education (''CE''). [Tr. 717]. Ms. Horn also writes articles for journals, and has served on the Massachusetts Board of Pharmacy for 11 years. [Tr. 717–718]. In 1995, Ms. Horn was elected to the executive committee of the National Association of Boards of Pharmacy (''NABP''). [Tr. 720] All boards of pharmacy in the United States are members of NABP. [Tr. 720]. At NABP, Ms. Horn wrote model rules and regulations in conjunction with stakeholders and experts in the field. [Tr. 720–721]. When Ms. Horn was president of NABP, her platform was ''reducing medication errors in community pharmacies.'' [Tr. 735]. Ms. Horn currently holds a pharmacy license in Massachusetts. [Tr. 722]. Ms. Horn is also an adjunct faculty member of the Massachusetts College of Pharmacy. [Tr. 724]. She has been qualified as an expert in Federal and State courts. [Tr. 725; Resp. Exh 24]. Ms. Horn's experience reflects that she is very experienced in the prevention of Medication safety and errors. [Tr. 723, 728, 730–731; Resp. Exh. 24 at 5–9]. In fact, Ms. Horn indicated that patient safety and medication risk management is a passion of hers. [Tr. 723]. The last prescription Ms. Horn filled was in 2000 or 2001. [Tr. 794].

182. Ms. Horn testified that she talked with Ms. Jones, reviewed the documents in this case, and noticed that Ms. Jones has adapted her pharmacy policies to make a much more comprehensive and complete approach to compliance with the applicable regulations. [Tr. 743–744].

183. Ms. Horn testified that Ms. Jones' policies and procedures [are] ''a great example of what should be done in order to prevent the, prevent the fraudulent filling of controlled substances.'' [Tr. 744; Resp. Exh. 25].

184. With regard to the dispensing of prescriptions in 2010, Ms. Horn stated that the dispensing pharmacist should have looked at the patient who is getting the prescription and recorded a complete patient history. [Tr. 748]. Ms. Horn also stated that, in 2010, a pharmacist needed to know a patient's drug allergies, what the patient was being treated for, and other medications the patient was on, and who the prescriber was. [*Id.*]. Ms. Horn further testified that the pharmacist would look at the actual prescription itself for the quantity and frequency of what's being dispensed to see if it makes sense. [Tr. 749].

185. Prior to 2014, Ms. Horn had not seen anything published by the DEA concerning the dispensing of controlled substances to out-of-state customers. [Tr. 752]. In May of 2014, Ms. Horn attended a presentation at the NABP annual meeting where the DEA displayed a video vignette on ''red flags.'' [Tr. 751]. The intent of the video was to have every state board of pharmacy publish a link to the video on their respective websites. [Tr. 752]. Ms. Horn stated that she did not believe that the DEA had published anything relating to red flags on their website in 2010 or 2011 because there is nothing on it today. [Tr. 752–753]. Ms. Horn stated that the May 2014 meeting was the first time she ''heard of the red flags and saw them played out in a movie.'' [Tr. 752]. Ms. Horn did acknowledge that in 2012, the DEA published a legal opinion on its website that referred to ''red flags.'' [Tr. 753]. Ms. Horn consulted some of the DEA administrative opinions in determining what was generally known among pharmacists in 2009–2011. [Tr. 872–873]. Ms. Horn claimed that the first time the concept of ''red flags'' was widely known among pharmacists was in relation to the video vignette released in May of 2014. [Tr. 751–752].

186. Ms. Horn opined that, in 2010, it was not widely known among pharmacists that patients travelling long distances, seeking to pay cash, presenting combinations of narcotics, benzodiazepines, and carisoprodol, and presenting pattern prescriptions were indicators of abuse and/or diversion of controlled substances. [Tr. 864–866].

187. Ms. Horn reviewed the State of Florida Department Of Health Investigative Services inspection reports in forming her opinions. [Tr. 759, 761; Resp. Exh. 8].

188. Ms. Horn stated that she looked at the DEA Form 222's in this matter, and she believed that the forms were in compliance with the applicable regulations. [Tr. 773; Resp. Exh. 27]. She stated that Respondent's method of recordkeeping is compliant with the regulations, both federal and state. [*Id*].

189. Ms. Horn testified that some combinations of drugs that are labeled as ''cocktail drugs'' may be taken together for legitimate medical reasons, and often are taken together. [Tr. 777].

190. Ms. Horn did not opine on any of the Government-presented prescriptions. [Tr. 780; Gov't Exh. 15–23]. Ms. Horn stated that she did not review any of the prescriptions at issue from 2010–2012. [Tr. 806]. Ms. Horn indicated that she has not done any research about the corresponding responsibility of a pharmacist. [Tr. 799]. Ms. Horn also indicated that she has not given any presentations about the corresponding responsibility of a pharmacist since 2007. [Tr. 799]. Further, Ms. Horn indicated that she has not published any research on corresponding responsibility issues. [Tr. 797–798].

191. Ms. Horn testified that she agreed with the procedures that Ms. Jones was using in 2010. [Tr. 781]. Ms. Horn stated that she believed Ms. Jones' procedures were in conformity with what the DEA expected a pharmacist to do to prevent diversion in 2010. [*Id.*].

192. Ms. Horn testified that Jones Pharmacy has displayed a ''positive trend downwards as to the amount of controlleds that are dispensed per non-controlleds.'' [Tr. 785]. Ms. Horn further testified that she believed Ms. Jones is ''aware now that people are not as honest as she thought that they were and that she's made steps to get those people out of her business.'' [Tr. 786].

193. Ms. Horn testified that she did not review any of the Florida rules regarding the use or misuse of

prescriptions in preparation for her testimony. [Tr. 805–806].

194. Ms. Horn stated that her opinion in this case, that Ms. Jones should maintain her DEA registration, is based on her conversations with Ms. Jones. [Tr. 806–808]. Ms. Horn stated that Ms. Jones has learned a lot from the time she opened Jones Pharmacy, and ''she understands what her responsibilities are. They are much more clear to her now. The conversations that I've had with her, I truly believe she would not go to filling those prescriptions and she would certainly take into [sic] affect any other DEA red flags that you come up with, she would use those in determining, as long as she knows about them, in determining whether or not to fill a prescription. I truly believe that.'' [Tr. 807]. Ms. Horn opined Ms. Jones' current dispensing practices are ''very much in line with what [Ms. Horn] would expect to see at a community pharmacy.'' [Tr. 785–786].

195. Ms. Horn did not offer any opinions as to whether or not Jones Pharmacy's dispensing of controlled substances was abnormal in 2010, 2011, and 2012. [Tr. 809]. Similarly, Ms. Horn did not opine about the practice of dispensing controlled substances to out of state persons and the prices charged for controlled substances for the timeframe 2010 through 2012. [Tr. 810–812]. Ms. Horn stated that she thinks Ms. Jones ''did exercise her corresponding responsibility in 2014.'' [Tr. 809].

196. Ms. Horn testified that Jones Pharmacy's unwritten 2010 policy of calling the prescribing doctor—to certify that the doctor authored the prescription himself—indicated that the pharmacy was exercising its corresponding responsibility to ensure controlled substances were issued for a legitimate medical purpose under federal law. [Tr. 827; Resp. Exh. 25]. Ms. Horn further testified that merely calling the doctor was not enough, it ''is also imperative that you have a discussion to talk about what is the diagnosis and what is the treatment going to be.'' [Tr. 829]. Ms. Horn further stated that the above listed protocols are ''all [she] knows about what was expected of a corresponding responsibility up until the time [the DEA] came up with these other red flags that would also help a pharmacist determine whether or not a prescription should be filled or not.'' [Tr. 829].

197. Ms. Horn liked the Respondent's more recent policies better than her earlier policies because the policies have been ''updated to reflect new knowledge of diversion tactics.'' [Tr. 832; Resp. Exh. 26]. This new policy was enacted in 2015. [Tr. 833]. Ms. Horn opined that Ms. Jones has changed ''policies and procedures as she [has] learned about things.'' [Tr. 850].

198. Ms. Horn stated that in 2010 it was not widely known in the pharmacy community that certain drugs or combinations of cocktails were indicative of abuse or diversion. [Tr. 864]. Ms. Horn also stated that in 2010 it was not widely known in the pharmacy community that paying cash was an indicator of abuse or diversion rather than using insurance. [Tr. 864]. Ms. Horn stated that in 2010 it was not widely known in the pharmacy community that pattern prescribing—''patients going to the same doctor for the same ailments, receiving the same prescriptions in the same quantity without any difference in the treatment'' [Tr. 865]—was an indicator of abuse or diversion. [Tr. 865]. Ms. Horn stated that in 2010 it was not widely known that Xanax 2 mg was only used in rare circumstances. [Tr. 865–866].

V. Conclusions of Law and Discussion

A. Position of the Parties

1. The Government's Position

On April 20, 2015, the Government timely filed its lengthy (eighty-one page) Government's Proposed Findings Of Fact And Conclusions Of Law (''Gov't Brief''). In it, the Government urged me to accept the following conclusions of law: (1) the dispensing practices at Jones Total Health Pharmacy LLC are an appropriate basis to deny SND Healthcare LLC's application for a DEA registration; (2) Jones Pharmacy committed acts that render its continued registration inconsistent with the public interest; and (3) Respondents have not credibly accepted responsibility or undertaken meaningful remedial measures. [Gov't Br. 42–79].

First, as support for its argument that the dispensing practices at Jones Pharmacy are an appropriate basis to deny SND Healthcare LLC's application for a DEA registration, the Government avers that Jones Pharmacy and SND Healthcare are appropriately treated as one integrated enterprise for purposes of this proceeding. [Gov't Br. 42]. The Government states that ''[t]he DEA has denied an application by one business entity for a DEA COR as being inconsistent with the public interest, 21 U.S.C. 823(f), based on a separate, related business entity's dispensing conduct [sic] were it could find that the two were 'nominally separate business entities.''' [Gov't Br. 42 (*citing MB Wholesale, Inc.,* 72 Fed. Reg. 71,956, 71,958 (DEA 2007))]. The Government further states that SND Healthcare is essentially an expansion of Jones Pharmacy into Miami and the two entities can fairly be considered one 'integrated enterprise' [because] . . . the ownership, management, and retail pharmacy operations of Jones Pharmacy and SND Healthcare are centralized with Cherese Jones.'' [Gov't Br. 43]. Due to this, the Government argues that there is ''no basis in evidence or logic for imposing different sanctions for SND Healthcare and Jones Pharmacy or treating them as anything other than the integrated enterprise they are.'' [Gov't Br. 43–44].

Second, the Government argues that Jones Pharmacy committed acts that render its continued registration inconsistent with the public interest. [*Id.*]. Here, the Government avers that Jones Pharmacy filled over a hundred prescriptions for controlled substances that presented indicia of diversion and abuse. [Gov't Br. 45]. As support, the Government cites prescriptions in Government Exhibits 15–24, and explains that these prescriptions displayed ''red flags'' that were indicators of diversion and abuse. [Gov't Br. 45–46]. These ''red flags'' consisted of customers traveling long distances (often from out of state), cash payments, pattern prescribing, prescriptions for immediate release pain medications in two different strengths or with no accompanying long-acting pain medications, and prescriptions for common cocktail medications. [*Id.*]. The Government also contends that Jones Pharmacy charged exorbitant cash prices for its ''highly diverted narcotics'' by citing an example wherein Jones Pharmacy charged ''one patient $9, $10, or $11 a pill—mark-ups of over 3,000% over Jones Pharmacy'[s] cost to obtain these drugs—when it was filling prescriptions from a doctor who literally used a rubber stamp to prescribe oxycodone.'' [Gov't Br. 48]. The Government states that these ''red flags'' presented ''were not feasibly resolvable by a pharmacist operating within the accepted bounds of the profession exercising the responsibility to ensure that they were filling only legitimate controlled substance prescriptions.'' [Gov't Br. 49].

Along these lines, the Government states that Jones Pharmacy's dispensing patterns, prices, and profits show that filling suspicious controlled substance prescriptions was its chosen business model, and the filling of these controlled substances was Jones' primary business. [Gov't Br. 49–52]. The Government further avers that Ms. Jones knew or had reason to know of the Pharmacy's unlawful dispensing, and her claimed ignorance of abuse and

diversion is neither a credible nor a legally viable defense. [Gov't Br. 53]. The Government then argues that Ms. Jones' purported naiveté ''simply cannot be squared with the objective evidence,'' [*Id.*] and requests that I find that ''Ms. Jones was not credible when she portrayed herself as 'dumb, naïve, [and] stupid' because this description cannot be squared with the profits she made and the prices she charged in 2010, 2011, and 2012.'' [Gov't Br. 58].

Next, the Government explains that the testimony of Respondent's expert, Ms. Horn, is neither credible nor grounded in any professional experience with regard to pharmacists general ignorance of red flags. [Gov't Br. 59]. Here, the Government contests Ms. Horn's ''professional exposure to issues involving a pharmacist's corresponding responsibility have been spare, sporadic, and sparse.'' [*Id.*]. The Government cites facts such as Ms. Horn has never filled prescriptions in Florida, and Ms. Horn last practiced as a pharmacist filling prescriptions fifteen years ago. [Gov't Br. 60]. Finally, the Government states that accepting Ms. Horn's conclusion that ''red flags'' were a mystery in 2010 would upend this Agency's prior opinions and the expertise on which they were based. [Gov't Br. 65].

As additional support for its assertion that Jones Pharmacy committed acts that render its continued registration inconsistent with the public interest the Government states that Jones Pharmacy's inventories and records were deficient. [Gov't Br. 65]. Specifically, the Government alleges that the Respondent's inventories did not include whether they were taken at the beginning or end of the day, the number of commercial containers or dosage units per container, and what was received at the pharmacy for 480 orders of controlled substances. [Gov't Br. 66]. Citing these violations, the Government states ''[a]lthough revocation and denial of Respondents' registrations is justified based on Jones Pharmacy's dispensing practices alone, recordkeeping deficiencies provide yet more reason to support this determination.'' [Gov't Br. 68].

Last, the Government argues that Respondents have not credibly accepted responsibility or undertaken meaningful remedial measures. [Gov't Br. 68]. The Government contends that Ms. Jones refused to admit responsibility for her past conduct, and revealed ignorance of her responsibilities that persists to this day. [Gov't Br. 69]. The Government avers that Ms. Jones' statements that she '' 'could have done more' to prevent abuse and diversion'' place her as a third party bystander to wrongdoing. [Gov't Br. 72]. The Government states that Ms. Jones testimony ''that she viewed, and continues to view, this as a prescriber's responsibility is a blatant attempt to shift blame to others, not accept it for herself.'' [*Id.*]. Further, the Government states that Jones Pharmacy offered no credible evidence of remedial efforts because Respondent's attempt to show that it had a dramatic decline in controlled substances dispensing ''coincided with (1) the decision to stop servicing out-of-state customers in April 2011 and (2) after the DEA started investigating Jones Pharmacy in April 2013.'' [Gov't Br. 78]. Finally, the Government urges me to find that ''Jones Pharmacy's changes in dispensing practices reflect law enforcement's scrutiny of Jones Pharmacy rather than Jones Pharmacy's scrutiny of its customers.'' [*Id.*].

2. The Respondent's Position

On April 20, 2015, the Respondents timely filed their Respondents' Post-Hearing Brief. (''Resp. Brief''). Therein, the Respondent averred that Jones Pharmacy's continued registration is not inconsistent with the public interest, and that the Respondents have presented evidence to mitigate any evidence that shows that their registrations threaten the public interest. [Resp. Br. 29–37].

First, in addressing their contention that Jones Pharmacy's continued registration is not inconsistent with the public interest, the Respondents argue that public interest factors 1 and 3 clearly weigh in Respondent's favor. [Resp. Br. 29]. As support, the Respondents state that they currently hold a valid Florida license, and that the Florida Board of Pharmacy has not initiated any action against their license since its issuance in 2009. [Resp. Br. at 29–30]. Respondents also state that there is ''no evidence in the record that the Respondent or its owner/operator has ever been convicted (or charged with) a crime related to the manufacture, distribution, or dispensing of controlled substances. [Resp. Br. 30].

Next, Respondents address public interest factor two by explaining that their experience in dispensing controlled substances has changed considerably from 2010 until now. [Resp. Br. 30]. The Respondents state that ''[i]n 2010, controlled substance dispensing constituted 63% of Jones' dispensing. This percentage steadily declined and as of the end of 2014, controlled substance dispensing was only at seventeen percent (17%).'' [Resp. Br. 30]. Respondents also state that their cash business has been significantly reduced from 2010 to 2014, and that Jones Pharmacy has ''completely changed the way that it conducts its business with regard to controlled substances.'' [Resp. Br. 31].

The Respondents also argue that public interest factor four is in their favor because ''[a]t all times during the period at issue, Respondents sought to comply with state and federal laws relating to controlled substances.'' [Resp. Br. 31]. Here the Respondents argue that there was no specific legal standard that defined ''red flags'' that a pharmacist was expected to recognize and act upon. [Resp. Br. 32]. As support, the Respondents cite the testimony of Ms. Donna Horn, Respondents' expert witness. [*Id.*]. Respondents state that Ms. Horn ''testified that it was her opinion that Ms. Jones complied with her corresponding responsibility as she understood it at the time by taking the actions that she took to check the validity of the prescriptions.'' [*Id.*]. These procedures included verifying the individuals presenting the prescriptions, verifying the physician's office and identifying who spoke on behalf of the physician, verifying that the physicians' licenses were active, and obtaining the diagnosis. [Resp. Br. 32].

Respondents further aver that public interest factor five also weights in their favor. [Resp. Br. 33]. Respondents argue that their continued registration and granting of pending registration will not threaten the public safety because there is evidence in the record that reflects Jones Pharmacy's compliance with the law, including the Florida Department of Health inspections. [Resp. Br. 33–34]. Further, Respondents argue that their expert, Ms. Donna Horn, testified that Respondents continued registration would not be inconsistent with the public interest. [Resp. Br. 33].

Last, Respondents argue that even though they do not concede that the DEA has met its burden in this instance, Respondents have met their burden to show that their registrations do not threaten the public interest. [Resp. Br. 34]. First, Respondents aver that they have accepted responsibility for their actions through the testimony of Ms. Jones. [Resp. Br. 34–35]. Second, Respondents state that they have ''demonstrated through [their] actions that [they have] taken remedial measures to insure future compliance'' with the law. [Resp. Br. 35]. The Respondents explain that their remedial measures include:

(1) ceasing to fill out of state prescriptions; (2) implementing a policy to ensure prevention of fraudulent dispensing; (3) supplementing the procedure for calling physician offices; (4) verifying physician

practice areas; (5) reviewing the distances traveled between a patient and the physician writing the prescription; (6) reviewing the distance traveled between the customer and the Pharmacy; (7) reviewing on E–FORSCE other locations at which customers are filling prescriptions; (8) implementing new written policies and procedures; (9) ceasing to accept cash payments for controlled substance prescriptions; (10) refusing to fill prescriptions for certain individuals with criminal backgrounds; and substantially reducing business relating to the filling of prescriptions for controlled substances.

[Resp. Br. 36]. Respondents contend that the majority of these actions were taken without prompting from regulators. [*Id.*]. Third, Respondents claim that their recordkeeping also affects public interest factor four. [*Id.*]. To this end, the Respondents state that they have remedied the initial glitches in the ordering system, and that the ''record evidence reflects that Jones Total Health now maintains inventories in accordance with [DEA] requirements.'' [Resp. Br. 37].

In Conclusion, the Respondents request that I find that their continued registration is not inconsistent with the public interest, and that they have presented sufficient evidence to mitigate any evidence that shows that their registrations threaten the public interest. [Resp. Br. 29–37].

B. Statement of Law and Discussion

Pursuant to 21 U.S.C. § 824(a)(4), the Administrator[65] may revoke a registration, and deny a pending application for renewal or modification, if she determines that the continuation or issuance of such registration would be ''inconsistent with the public interest'' as determined pursuant to 21 U.S.C. § 823(f). Section 823(f) requires that the following factors be considered:

(1) The recommendation of the appropriate State licensing board or professional disciplinary authority.

(2) The [registrant's] experience in dispensing, or conducting research with respect to controlled substances.

(3) The [registrant'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); *see also Alexander Drug Co.,* 66 Fed. Reg. 18, 299, 18,302 (DEA 2001); *Nicholas A. Sychak, d/b/a Medicap Pharmacy,* 65 Fed. Reg. 75,959, 75,967 (DEA 2000)]. These factors may be considered in the disjunctive: the Administrator may properly rely on any one or a combination of these factors, and may give each factor the weight she deems appropriate, in determining whether a registration should be revoked or an application for registration denied. [*See Direct Wholesale,* 69 Fed. Reg. 11,654, 11,655 (DEA 2004); *Henry J. Schwarz, Jr., M.D.,* 54 Fed. Reg. 16,422, 16,424 (DEA 1989)].

The applicable regulations state that the test for the proper prescribing and dispensing of controlled substances is as follows:

> A prescription for a controlled substance to be effective must be issued for a legitimate medical purpose by an individual practitioner acting in the usual course of his professional practice. The responsibility for the proper prescribing and dispensing of controlled substances is upon the prescribing practitioner, but a corresponding responsibility rests with the pharmacist who fills the prescription.

[21 C.F.R. § 1306.04(a)]. Thus, for a prescription to be lawful, it needs to be written for a legitimate medical purpose in the practitioner's usual course of professional practice. *Id.* The pharmacist has a corresponding responsibility to verify the validity of a prescription, and if a prescription seems suspect, the pharmacist should not fill it. [*Id. See also United Prescription Services, Inc.,* 72 Fed. Reg. at 50,397, 50,407 (DEA 2007)].

DEA prohibits a pharmacist from filling a prescription for controlled substances when he either ''knows or has reason to know that the prescription was not written for a legitimate medical purpose.'' [*United,* 72 Fed. Reg. at 50,407; *Medic-Aid Pharmacy,* 55 Fed. Reg. 30,043, 30,044 (DEA 1990); *see also Frank's Corner Pharmacy,* 60 Fed. Reg. 17,574, 17,576 (DEA 1995); *Ralph J. Bertolino,* 55 Fed. Reg. 4,729, 4,730 (DEA 1990); *United States* v. *Seelig,* 622 F.2d 207, 213 (6th Cir. 1980)]. This Agency has further held that ''[w]hen prescriptions are clearly not issued for legitimate medical purposes, a pharmacist may not intentionally close his eyes and thereby avoid [actual] knowledge of the real purpose of the prescription.'' [*Bertolino,* 55 Fed. Reg. at 4,730 (*citations omitted*)].

With regard to a Pharmacy's conduct, DEA has consistently held that a retail store operates under the control of its owners, stockholders, or other employees, and therefore the conduct of these individuals is relevant in evaluating the fitness of an applicant. [*See e.g., Rick's Pharmacy,* 62 Fed. Reg. 42,595 (DEA 1997); *Big T Pharmacy,* 47 Fed. Reg. 51,830 (DEA 1982)].

In a pharmacy case to revoke a pharmacy registrant's certificate, the DEA has the burden of proving that the requirements for revocation are satisfied. [21 C.F.R. § 1301.44(e)]. Once the Government has proven its prima facie case, the burden of proof shifts to the Respondent. [*Arthur Sklar, R.Ph., d/b/a King Pharmacy,* 54 Fed. Reg. 34623, 34627 (DEA 1989)]. To rebut such a case the Respondent ''is required not only to accept responsibility for [the established] misconduct, but also to demonstrate what corrective measures [have been] undertaken to prevent the reoccurrence of similar acts.'' [*Holiday CVS,* 77 Fed. Reg. at 62, 339 *citing Jeri Hassman, M.D.,* 75 Fed. Reg. at 8,194, 8,236 (DEA 2010)].

Along these lines, in situations where a registrant has had a lengthy history of violations, the U.S. Courts of Appeal have upheld the Agency's conclusions that past performance is the best predictor of future performance. [*Alra Labs.* v. *DEA,* 54 F.3d 450, 452 (7th Cir. 1995)].

1. Factor One: Recommendation of State Licensing Board

The record contains no recommendations from the State licensing board regarding these Respondents. Further, the record contains no evidence that the Respondents had any adverse State Board action taken against them. Lastly, the record contains no evidence that Ms. Jones had any adverse action taken by the State Board against her.

Recommendations of state licensing boards are relevant, but not dispositive, in determining whether a respondent should be permitted to maintain a registration. [*See Gregory D. Owens, D.D.S.,* 74 Fed. Reg. 36,751, 36,755 (DEA 2009); *see also Martha Hernandez, M.D.,* 62 Fed. Reg. 61,145, 61,147 (DEA 1997)]. According to clear Agency precedent, a ''state license is a necessary, but not a sufficient condition for registration.'' [*Robert A. Leslie, M.D.,* 68 Fed. Reg. at 15,230; *John H. Kennedy, M.D.,* 71 Fed. Reg. 35,705, 35,708 (DEA 2006)]. The ultimate responsibility to determine whether a registration is consistent with the public interest has been delegated exclusively to the DEA, not to entities within state government. [*Edmund Chein, M.D.,* 72 Fed. Reg. 6,580, 6,590 (DEA 2007), *aff'd Chein* v. *DEA,* 533 F.3d 828 (D.C. Cir. 2008)].

I therefore conclude that the fact that the record does not contain evidence of a recommendation by a state licensing board does not weigh for or against a determination as to whether the

[65] The Administrator has the authority to make such determinations pursuant to 28 C.F.R. §§ 0.100(b) and 0.104 (2014).

Respondents' continued registration is consistent with the public interest. [*See Top Rx,* 78 Fed. Reg. 26,069, 26,081 (DEA 2013)].

2. Factors Two and Four: Registrant's Experience in Dispensing Controlled Substances, and Compliance With Applicable State, Federal, or Local Laws Relating to Controlled Substances

Because the Respondents' experience in dispensing controlled substances is related to their compliance with state and federal law, factors two and four will be considered together. [*See, e.g., KK Pharmacy,* 64 Fed. Reg. 49,507, 49,510 (DEA 1999); *Service Pharmacy,* 61 Fed. Reg. 10,791, 10,795 (DEA 1996)].

a. Recordkeeping Violations

Recordkeeping is one of the CSA's essential tenets. For a ''registrant's accurate and diligent adherence to this obligation is absolutely essential to protect against the diversion of controlled substances.'' [*Paul H. Volkman,* 73 Fed. Reg. 30,630, 30,644 (DEA 2008), *aff'd* 567 F.3d 215, 224 (6th Cir. 2009)]. Accomplishing this requires ''every registrant manufacturing, distributing, or dispensing a controlled substance or substances [to] maintain, on a current basis, a complete and accurate record of each such substance manufactured, received, sold, delivered, or otherwise disposed of by him.'' [21 U.S.C. § 827(a)(3)].

In this manner, the Agency has consistently ''held that the failure to comply with recordkeeping requirements is a basis for revoking a registration. [*Alexander Drug Co.,* 66 FR at 18,299, 18,303 (DEA 2001) *citing Singers-Andreini Pharmacy, Inc.,* 63 FR 4,668 (DEA 1998); *Arthur Sklar,* 54 FR at 34,623; *Summer Grove Pharmacy,* 54 FR 28,522 (DEA 1989); *The Boro Pharmacy and Bell Apothecary,* 53 FR 15,151 (DEA 1988)]. Such lack of accountability is clearly not acceptable for a DEA registrant. [*Alexander Drug,* 66 FR at 18,303–04; *Volkman,* 73 FR at 30,644 (holding that recordkeeping violations alone supported denial of practitioner's application)].

Here, Jones Pharmacy was missing some of its required recordkeeping information. [FOF 84–85]. Specifically, the Respondents violated recordkeeping requirements by failing to record whether Jones Pharmacy's biennial inventory was taken at the opening or close of business, and by failing to indicate the number of tablets per opened commercial container, the number of tablets shipped in each commercial container, and the number of commercial containers that Ms. Jones had on hand. [FOF 84–85; 21 CFR § 1304.11(e)(3)].[66] Such lack of accountability violates the DEA's regulations and the requisite closed system of distribution of controlled substances, for without such a complete inventory, the DEA is unable to conduct an accurate accountability audit. Although the inventory was complete in other aspects, Ms. Jones' partial compliance does not obviate her failure to record the required information on the biennial inventory.

Thus, the Respondent's lack of attention to detail with its accountability of the controlled substances received and dispensed is adequate grounds for recommending revocation of Jones Pharmacy's registration. [*Alexander Drug Co.,* 66 FR at 18,299, 18,303 (DEA 2001) *citing Singers-Andreini Pharmacy, Inc.,* 63 FR 4,668 (DEA 1998)].

[66] 21 CFR § 1304.11 lists the controlled substances inventory requirements. As part of the requirements, subsection (a) lists that ''[t]he inventory may be taken either as of opening of business or as of the close of business on the inventory date and it shall be indicated on the inventory.'' Further, § 1304.11(e)(3) lists the applicable inventory requirements for controlled substance dispensers. Specifically, the regulation states:

Each person registered or authorized to dispense . . . controlled substances shall include in the inventory the same information required of manufacturers pursuant to paragraphs (e)(1)(iii) and (iv) of this section. In determining the number of units of each finished form of a controlled substance in a commercial container that has been opened, the dispenser . . . shall do as follows:

(i) If the substance is listed in Schedules I or II, make an exact count or measure of the contents; or

(ii) If the substance is listed in Schedule III, IV, or V, make an estimated count or measure of the contents, unless the container holds more than 1,000 tablets or capsules in which case he/she must make an exact count of the contents.

§ 1304.11(e)(3).

The applicable portion of § 1304.11(e)(1)(iii) and (iv) states:

(iii) For each controlled substance in finished form the inventory shall include:

(A) The name of the substance; (B) Each finished form of the substance (e.g., 10-milligram tablet or 10-milligram concentration per fluid ounce or milliliter); (C) The number of units or volume of each finished form in each commercial container (e.g., 100-tablet bottle or 3-milliliter vial); and

(D) The number of commercial containers of each such finished form (e.g. four 100-tablet bottles or six 3-milliliter vials).

(iv) For each controlled substance not included in paragraphs (e)(1) (i), (ii) or (iii) of this section (e.g., damaged, defective or impure substances awaiting disposal, substances held for quality control purposes, or substances maintained for extemporaneous compoundings) the inventories shall include:(A) The name of the substance; (B) The total quantity of the substance to the nearest metric unit weight or the total number of units of finished form; and (C) The reason for the substance being maintained by the registrant and whether such substance is capable of use in the manufacture of any controlled substance in finished form.

§ 1304.11(e)(1)(iii–iv).

b. Red Flags

The term ''red flags'' does not appear in the Controlled Substances Act, DEA regulations, or the DEA's Pharmacist Manual. [FOF 121]. However, the Government's expert, Dr. Tracy Gordon, indicated that the term ''red flags'' was generally known to Florida Pharmacists between 2010 and 2012. [FOF 109, 111 & n. 13]. The Respondent's expert, Ms. Donna Horn, indicated that the general pharmacist community was unaware of the ''red flags'' cited in this case between the 2010 and 2012. [FOF 185–186]. Here, I find Dr. Tracy Gordon's opinion more credible on this point, for Dr. Gordon's experience as a licensed Florida pharmacist who practiced as an Assistant Pharmacy Manager in Florida during the period 2010–2012 infers that she has knowledge of what pharmacists knew during this time. [FOF 106–111 & fn. 13].

The DEA has established a test for determining whether the Respondent's corresponding responsibility has been met in circumstances where the prescriptions raise red flags of potential improper prescribing. This three-part test is articulated as follows:

> Because Agency precedent limits the corresponding responsibility to circumstances which are known or should have been known [citations omitted], it follows that, to show a violation of a corresponding responsibility, the Government must establish that: (1) the Respondent dispensed a controlled substance; (2) a red flag was or should have been recognized at or before the time the controlled substance was dispensed; and (3) the question created by the red flag was not resolved conclusively prior to the dispensing of the controlled substance.

[*Holiday CVS, LLC d/b/a CVS Pharmacy Nos. 219 and 5195,* 77 FR 62,321, 62,316 (DEA 2012)]. The ''steps necessary to resolve the red flag conclusively will perforce be influenced by the nature of the circumstances giving rise to the red flag.'' [*Id.* at 62,341].

It is undisputed that Jones Pharmacy dispensed the controlled substances at issue in this proceeding, for the Respondent stipulated to dispensing the aforementioned prescriptions. [FOF 1–61; ALJ Exh. 21]. Further, during the presentation of its case, the Government presented credible evidence that ''red flags'' were present in the prescriptions at issue in this matter. [FOF 1–61, 122–130, 132–133]. These ''red flags'' include patients traveling long distances for filling prescriptions (often traveling from out-of-state), prescriptions filled for common cocktail medications, short acting pain medications prescribed without a long acting pain medication,

prescriptions issued by doctors prescribing outside their scope of practice, prescriptions dispensed to patients with the same out-of-state address for the same controlled substances on the same day, and cash payments. [FOF 122–130; 132–133]. This evidence of the existence of ''red flags'' within Jones Pharmacy's prescriptions was not rebutted by the Respondent's expert witness. [FOF 189]. In fact, the Respondent's expert witness did not opine on any of the prescriptions at issue in this matter. [FOF 190].

This analysis, therefore, centers on the third prong of the *Holiday CVS* test; whether the ''red flags'' presented in Jones Pharmacy's prescriptions were conclusively resolved prior to the Pharmacy's dispensing the controlled substances at issue. [*See Holiday CVS,* 77 FR at 62,316].

In her testimony, Ms. Jones stated that Jones Pharmacy followed the policies and procedures that were in place during 2010–2012 with regard to reviewing prescriptions for issues of concern. [FOF 154]. Those policies and procedures included only two methods of evaluating the legitimacy of a prescription: (1) telephoning the prescribing doctor to ensure that the prescription was authored by the prescribing doctor; and (2) inquiring about the patient's diagnosis. [FOF 154]. Credible evidence of these procedures was produced at the hearing in the form of Jones Pharmacy's original prescriptions—the same prescriptions used as the basis for the Government's allegations herein. [FOF 154, 175]. This evidence, however, is not enough to overcome the Government's allegations because it falls short of fulfilling a pharmacist's corresponding responsibility.

When reviewing prescriptions from 2010 to 2012, Jones Pharmacy engaged in a minimal amount of investigation or inspection into the red flags present on the face of the prescriptions. [FOF 154, 175]. Jones Pharmacy's only methods of evaluating the legitimacy of a prescription included talking with the prescribing doctor to ensure that the prescription was authored by the prescribing doctor, and inquiring about the patient's diagnosis. [FOF 154]. Jones Pharmacy may have sought to prevent diversion through its practices, but it only looked into these two indicators of possible ''red flags'' when a prescription was presented with multiple others. [FOF 154].

The Government's expert, Dr. Tracy Gordon, credibly testified that with regard to the ''red flags'' presented in the prescriptions stipulated to in this proceeding, the ''red flags'' presented were unresolvable. [FOF 120]. Dr. Gordon testified that there are certain situations in which red flags can be resolved, but the prescriptions Jones Pharmacy dispensed contained a multitude of red flags that, when considered together, could not be conclusively resolved. [FOF 121–124, 126–130, 132–133]. For example, patients B.F. and K.W. presented identification from Ohio with addresses on the same street. [FOF 122]. B.F. and K.W. saw the same doctor, and were prescribed common cocktail medications. [FOF 1–6, 122]. Dr. Gordon testified that there was nothing Jones Pharmacy could have done to resolve these red flags when presented together. [FOF 122]. Therefore, I conclude that Jones Pharmacy dispensed controlled substances prescriptions with unresolved red flags.

Similar to this, in *Holiday CVS,* the Administrator rejected the Respondent's contention that '''no case law, no Administrator decision, and no published DEA guidance supports [the Government Expert's] claims that certain red flags are 'unresolveable' on their face.''' [77 FR at 62,317]. Instead, the Administrator held that ''if the red flags presented by a prescription could not be resolved conclusively so as to permit a lawful dispensing, then the Government satisfied the third element of its prima facie burden.'' [*Id.* at 62,322].

Following *Holiday CVS,* I have a duty to view the evidence presented in this matter and determine whether or not Jones Pharmacy conclusively resolved the red flags presented by a prescription prior to dispensing it. [*Holiday CVS,* 77 FR at 62,322]. As stated above, Dr. Gordon testified the red flags presented in Jones Pharmacy's prescriptions were unresolvable. [FOF 120, 122–124, 126–130, 132–134]. The Respondents did not put on any evidence rebutting specific red flags present in the prescriptions at issue. [FOF 190]. Rather, the Respondents expert only offered opinions regarding what red flags were generally known during 2010–2012. [FOF 184–186].

Thus, the testimony of Dr. Gordon was not contradicted to the extent that it demonstrated Jones Pharmacy filled prescriptions with unresolvable red flags presented from 2010–2012. Due to this, I conclude that Jones Pharmacy did not conclusively resolve the red flags inherent in its prescriptions prior to dispensing. I therefore find that factors two and four weigh in favor of revocation.

c. Additional Indicators of Diversion

Besides the red flags discussed above, the record manifests additional indicators that Jones Pharmacy may have dispensed controlled substances unlawfully. Specifically, the record indicates that Jones Pharmacy's business, from 2010—2012, was largely comprised of controlled substances sales. [FOF 96, 97 (explaining that 89% of all the controlled substance prescriptions filled by Jones were for cocktail drugs, roughly half of which were dispensed to out of state customers, 99% of the controlled substances were for immediate release pain medications, and 93% of the prescriptions dispensed were for cash paying customers)]. These statistics are unusually high compared to national averages. [FOF 70–72, 117; *see also East Main Street Pharmacy,* 75 FR 66,149, 66,153 (DEA 2010) (noting that the Administrator has considered percentages of a pharmacy's dispensing practices as compared to national averages as an indicator of unlawful conduct)].

The record also indicates that the pricing of Jones' controlled substances was extremely high, and 93% of controlled substance prescriptions were paid for in cash. [FOF 93, 97]. It is true that a pharmacy's level of controlled substances sales is not in and of itself a red flag for diversion or abuse. And it is also true that a pharmacy can charge the prices it wishes with regard to its controlled substances. But high prices and copious dispensing of controlled substances can be an indicator of possible diversion because it elucidates a customer base willing to pay exorbitant prices for a drug the customer could otherwise purchase at a nearby pharmacy for much less. [67] [FOF 132]. This is especially true when a prescription is sold at over 1,000 times

[67] In its brief the Government cites federal court precedent that supports the proposition that high prices are an indicator of unlawful controlled substance dispensing. [Gov't Br. 51 (*citing U.S.* v. *Fuchs,* 467 F.3d 889, 905 (5th Cir 2006) (noting that evidence that the pharmacy ''charged much higher prices than other pharmacies'' supported the conclusion that the pharmacist was part of a criminal conspiracy); *U.S.* v. *Tanner,* 61 F.3d 231, 237 (4th Cir. 1995) (finding evidence that pharmacist ''charged extremely high prices . . . indicate that [he] was fully cognizant that his acts were illegal, and that these sales were not mere accidents''); U.S. v. Hayes, 595 F.2d 258, 261 (5th Cir. 1979) (finding evidence including ''the prices charged by Hayes support the jury's conclusion that Hayes also knew that the prescriptions were not issued for a legitimate medical purpose''); *U.S.* v. *Lovin,* 2009 WL 3634194, *7 (S.D. Cal. 2009) (finding ''evidence from which the jury could infer the defendants knew the substances were distributed for an other than legitimate medical purpose'' included ''the nature of the drugs sold and the exorbitant prices charged'')].

the wholesale cost of the product. [FOF 97].

Finally, the record shows that Jones Pharmacy's profits from 2010–2012 were almost entirely derived from controlled substances sales. [FOF 137–139]. Specifically, Jones Pharmacy's annual profits from dispensing controlled substances in 2010 was $530,483, as opposed to the profits for non-controlled substances of $10,189. [FOF 137]. Jones Pharmacy's annual profits from dispensing controlled substances in 2011 was $439,990, as opposed to the profits for non-controlled substances of $38,241. [FOF 138]. Jones Pharmacy's annual profits from dispensing controlled substances in 2012 was $316,942, as opposed to the profits for non-controlled substances of $58,123. [FOF 139]. The total amount of gross profits Jones Pharmacy made from the sales of schedule II narcotics during this three year period, 2010–2012, was in excess of $1.2 million. [FOF 72]. While I note the downward trend in profits derived from controlled substances for the years 2010, 2011, and 2012, Jones Pharmacy's amount of profits from controlled substance sales as compared to non-controlled substances is exorbitantly high. [FOF 117]. These statistics, coupled with the fact that 93% of controlled substances sales were paid for in cash, [FOF 97], indicate that Jones Pharmacy was dispensing controlled substances in the face of red flags for the sake of reaping lucrative cash profits. [FOF 70, 72].

d. Jones Pharmacy's Knowledge of Red Flags

As an attempt to defend its dispensing actions and profit margins, the Respondents put on evidence purporting to show that Ms. Jones, along with the general pharmacy community, was unaware of the term or concept of ''red flags'' from 2010–2012. [FOF 173, 186; *see also Holiday CVS,* 77 FR at 62,316 (holding that ''Agency precedent limits [a registrant's] corresponding responsibility to circumstances which are known or should have been known.'' (internal citations omitted))]. As support, the Respondents argue that Ms. Jones was simply naïve; she did not know or have reason to know that the prescriptions at Jones Pharmacy were not written for a legitimate medical purpose because the term or concept ''red flags'' was not generally known in the Florida pharmacy community from 2010–2012.[68] [FOF 185, 198]. For the reasons listed below, I find that this defense fails, and Ms. Horn's expert testimony as it relates to Florida pharmacists' knowledge of the term or concept of ''red flags'' from 2010–2012 is not persuasive.

First, the Respondents aver that ''Ms. Jones complied with her corresponding responsibility as she understood it at the time by taking the actions that she took to check the validity of the prescriptions.'' [Resp. Br. 32; FOF 135]. At the hearing, Ms. Jones testified that she was naïve, and did not know about ''red flags'' for abuse or diversion until May 2014. Specifically, Ms. Jones stated that ''we may have made mistakes that people may call dumb, naïve, stupid, but it was not our intent to put stuff in the hand[s] of other people.'' [FOF 135].

In its brief, the Government challenges the sincerity of the anti-diversion ethos Ms. Jones declared at the hearing by pointing out inconsistencies in Ms. Jones's testimony and the Respondents' documentary evidence. The Government first points to high prices Ms. Jones charged and the cash profits Ms. Jones made to show that she ''was fully cognizant that [her] acts were illegal'' and ''not mere accidents.'' [Gov't Br. 53]. Next, the Government notes a gaping inconsistency in Ms. Jones testimony which I find particularly persuasive in assessing Ms. Jones credibility. [Gov't Br. 55–56].

In defending an assertion made by Florida Department of Health Inspector Crane—that a person could notice from Jones Pharmacy's parking lot that the pharmacy catered to pill seekers because of its ''loitering'' clientele—Ms. Jones stated:

> The people [Ms. Crane] considered loitering were people that lived in the area. They were usually older gentlemen that sat outside of some of the businesses. There was a barber shop . . . There was a Haitian restaurant. There was a Hatian market. There was also a tax office . . . I don't think loitering was an appropriate term. They were actually people, I considered the pharmacy to be a part of the community, because they were people who made sure if I was walking in by myself, they would say are you okay? Good Morning. How are you? I felt like they looked out for me, so I don't feel like they were loitering.

[Tr. 415]. But in her letters to her congressional representatives urging action on behalf of the DEA to change her pharmacy's address, Ms. Jones stated that she was '''lucky' to move her business to a 'better environment' where she could 'go in the parking lot and not worry about smelling urine or seeing people hanging out on the sidewalk.'" [FOF 146]. This inconsistency, while seemingly trivial, calls into question the credibility of Ms. Jones' assertion that it was never Jones Pharmacy's intent to divert controlled substances because this statement purports that Ms. Jones was cognizant of the loitering, (possibly pill seeking) clientele outside her store. [FOF 69, 146].

Second, the testimony of Respondent's Expert, Ms. Donna Horn, is not credible as it relates to the general knowledge of Florida pharmacists from 2010–2012. Ms. Horn has a multitude of experience in the prevention of prescription filling errors. [FOF 181]. When Ms. Horn was the President of the National Association of Board of Pharmacies, she prioritized a ''platform'' of ''reducing medication errors.'' [FOF 181]. In contrast to her vast prevention of filling error experience, however, Ms. Horn indicated that she has not conducted any research on a pharmacist's corresponding responsibility. [FOF 190]. Ms. Horn also indicated that she has not published any research on corresponding responsibility issues. [FOF 190]. Further, Ms. Horn stated that she last practiced pharmacy as a pharmacist filling prescriptions fifteen years ago, and has never practiced as a pharmacist filling prescriptions in Florida, for she is only licensed as a pharmacist in Massachusetts [FOF 181].

When asked about the basis for her knowledge with regard to pharmacists' general knowledge of ''red flags,'' Ms. Horn indicated that she looked at some of the administrative opinions on the DEA's website in forming her opinions. [FOF 185]. But as counsel for the Government rightly pointed out, Ms. Horn's opinions about what was ''generally known among pharmacists based on DEA publications—contradicts the only source she claimed to consult.'' [Gov't Br. 63].

For example, Ms. Horn testified that in 2010, a combination of a benzodiazepine, a narcotic, and a carisoprodol was not a sign of drug abuse. Yet in one of the 2010 decisions that Ms. Horn claimed to review, *East Main Street Pharmacy,* the Administrator held that ''the

[68] While Ms. Horn testified that the first time she heard of the term ''red flags'' was in 2014, the term or concept ''red flags'' has long been recognized as a reflection of the norms of the pharmacy profession. [*Holiday CVS,* 77 FR at 62,319 (noting that the ''red flag'' standard is what pharmacists are ''taught in schools''); *East Main Street,* 75 FR 66,149, 66,157 (DEA 2010) (''a pharmacist is 'absolutely' taught to question the legality of a prescription'' such as ''a combination of a narcotic, a benzodiazepine, a muscle relaxant, and a sleeping pill'' with similar doses for everybody, [with] no individualization of therapy''); Gov't Br. 61]. Thus Ms. Jones' personal knowledge of the term ''red flags'' is not the focus here. The focus here is Ms. Jones' professional judgement when dispensing prescriptions that presented suspicious indicators such as the ''red flags'' discussed herein. [FOF 67].

combination of a benzodiazepine, a narcotic and carisoprodol is 'well known in the pharmacy profession' as being used 'by patients abusing prescription drugs.'" [75 FR at 66,149)]. Likewise, the Government lists five such examples in its brief where Ms. Horn's opinion—concerning what was generally known in the pharmacy community about a pharmacist's corresponding responsibility—stands in stark contrast to the administrative decision she purportedly used to form the basis of that very opinion. [Gov't Br. 63]. As such, I am not persuaded by Ms. Horn's testimony regarding what was generally known of ''red flags'' in the Pharmacy community from 2010–2012.

I therefore conclude that the concept of red flags has long been recognized as a reflection of the norms of the pharmacy profession, and Jones Pharmacy's purported ignorance is not a credible defense. [*Holiday CVS,* 77 FR at 62, 319 (noting that DEA has held that the ''red flag'' standard is what pharmacists are ''taught in schools'' (*Holiday CVS,* 77 FR at 62,319), and that ''a pharmacist is 'absolutely' taught to question the legality of a prescription'' such as ''a combination of a narcotic, a benzodiazepine, a muscle relaxant, and a sleeping pill'' with similar doses for everybody, [with] no individualization of therapy.'' *East Main Street,* 75 FR at 66,149)]. The Government, therefore, has met its burden of proof in this matter.

e. Mitigating Evidence

Thus, because the Government has established its *prima facie* case, the burden of production now shifts to the Respondents to demonstrate that they take full responsibility for their unlawful conduct and they have put in place remedial measures so that such violations will not happen in the future. [*Medicine Shoppe-Jonesborough,* 73 FR 364, 387 (DEA 2008) (quoting *Samuel S. Jackson,* 72 FR 23,848, 23,853 (DEA 2007)) (holding that a registrant must ''present sufficient mitigating evidence to assure the Administrator that [it] can be entrusted with the responsibility carried by such a registration''); *Leo R. Miller,* 53 FR 21,931, 21,932 (DEA 1988)]. And 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 both accept responsibility for its actions and demonstrate that it will not engage in future misconduct.'' [*Holiday CVS,* 77 FR at 62,323 *citing Medicine Shoppe-Jonesborough,* 73 FR at 387; see also *Jackson,* 72 FR at 23,853; *John H. Kennedy,* 71 FR 35,705, 35,709 (DEA 2006); *Prince George Daniels,* 60 FR 62,884, 62,887 (DEA 1995)]. Once a respondent has accepted responsibility for her actions, she may ''demonstrate what corrective measures she has undertaken to prevent the re-occurrence of similar acts.'' [*Hassman,* 75 FR at 8194 *citing Jayam Krishna-Iyer,* 74 FR 459, 464 & n.8 (2009)].

As stated above, a registrant's acceptance of responsibility must be unequivocal. In her testimony, Ms. Jones repeatedly stated that she ''could have done more'' when ensuring a prescription was issued for a legitimate medical purpose. [FOF 136 & fn. 21]. But as the Government rightly states in its brief, ''[a] registrant cannot accept responsibility for past misconduct without first understanding those responsibilities.'' [Gov't Br 72].

Ms. Jones testified that the procedures she followed in 2010 were procedures she learned from her experience at other pharmacies. [FOF 152–154]. With regard to the prescriptions at issue in this proceeding, and Jones Pharmacy's prescribing practices in 2010–2012, Ms. Jones stated repeatedly that she should have done things differently; that she could have, and should have, done things much different.[69] [FOF 125, 131, 135, 136 and n.19]. Then when asked on cross-examination about her responsibilities to ensure prescriptions were issued for a legitimate medical purpose, Ms. Jones said she thought she was exercising her responsibility because she was dispensing in accordance with her prior experience. [FOF 136 & fn. 19].[70]

I agree with the Government that the issue with these statements is that they ''place [Ms. Jones] in the role of a third party bystander to wrongdoing.'' [Gov't Br. 72]. Ms. Jones asserts that the practices and procedures she employed were those she utilized at other pharmacies. [FOF 154]. These statements do not act to ''unequivocally'' accept responsibility for Ms. Jones' actions. To the contrary, these statements shift the blame to prior pharmacies that Ms. Jones worked for.

Next, the Government rightly notes that Ms. Jones places culpability of her actions on the ''professed confusion about legal responsibilities.'' [Gov't Br. 72]. And Ms. Jones' wavering responses on cross examination undoubtedly show her lack of understanding of a pharmacist's corresponding responsibility. For example, when asked whether or not there are circumstances that would cause Ms. Jones to reject a prescription because she believed it was not issued for a legitimate medical purpose, Ms. Jones stated ''there are circumstances that would cause me to reject a prescription. I don't think I can make the determination whether it's for a legitimate medical purposes because I would have to say that I'm in that person's body and I know how they feel if we're speaking just about pain medications.'' [FOF 135]. Then when asked whether she knew one way or another if she had a corresponding responsibility, Ms. Jones stated ''I did not know that the law said that I had to make sure that prescriptions said it was legitimate, medically legitimate.'' [FOF 135].

In *Sigrid Sanchez, M.D.,* the Administrator considered a similar situation where a practitioner averred—in the face of wrongful prescribing allegations—that it "'was the first time in [her] professional career that [she] had been a dispensing practitioner,' and that she 'was completely unaware that [she] had run afoul of the laws

[69] In MacKay v. DEA, 664 F.3d 808, 820 (10th Cir. 2011) the U.S. Court of Appeals for the Tenth Circuit addressed the Administrator's consideration of a practitioner's purported acceptance of responsibility. The Court held:

[t]he DEA may properly consider whether a physician admits fault in determining if the physician's registration should be revoked. When faced with evidence that a doctor has a history of distributing controlled substances unlawfully, it is reasonable for the . . . Administrator to consider whether that doctor will change his or her behavior in the future. And that consideration is vital to whether the continued registration is in the public interest. . . . [T]he . . . Administrator had no evidence that Dr. MacKay recognized the extent of his misconduct and was prepared to remedy his prescribing practices.

Id. See also Chein v. *DEA,* 533 F.3d 828, 837 (D.C. Cir. 2007) (upholding revocation order, noting in part that the physician had not ''accepted responsibility for his misconduct''); *Hoxie,* 419 F.3d at 483 (DEA properly considers admission of fault in determining whether a registration should be revoked).

[70] Ms. Jones carefully avoided any admission that she failed to exercise her corresponding responsibility.

Q: When you filled those prescriptions on April 19 and 20 of 2010, were you exercising your responsibility to insure they were issued for legitimate medical purposes?

A: I think I was at the time, yes.

Q: It's fair to say you fulfilled the responsibilities as you understood them at the time, correct?

A: Correct.

Q: And you understand those responsibilities differently today, correct?

A: Differently today—differently in the sense of I can do more; differently, no, in the sense if the prescription is written by the prescriber, I don't think it makes it an illegitimate, not a legitimate prescription for medical purposes. I think I can do more digging to make sure that the patient is going to use it appropriately and not make it so that somebody else has access to it . . . But I still do rely on the prescriber to write prescriptions for legitimate medical purposes. [Tr. 599–600].

governing dispensing practitioners.''' 78 FR 39, 331, 39,333 (DEA 2013). Assessing these claims, the Administrator stated ''[o]ne must wonder why [the practitioner] did not make a similar effort to familiarize herself with the various requirements applicable to the dispensing of controlled substances under both the CSA and state laws.'' [*Id.*]. Considering this, the Administrator held that the practitioner's purported ''ignorance of law is no excuse.'' [*Id.*].

The matter at hand is very much the same. Ms. Jones claimed that she was following her corresponding responsibility as she understood it from 2010–2012 when over a hundred prescriptions that were presented with multiple unresolved red flags were dispensed at Jones Pharmacy. Ms. Jones purported to accept responsibility for Jones Pharmacy's dispensing practices by repeatedly asserting that she did what she knew at the time, but now she knows she could have done more. [FOF 136 & fn. 19]. But then Ms. Jones demonstrated by her statements that she does not fully understand her corresponding responsibility even yet today. [FOF 135]. Thus, there remains no excuse for the Respondents' past dispensing conduct and continued lack of knowledge of Jones Pharmacy's corresponding responsibility to ensure that controlled substances dispensed reach only patients with legitimate medical needs. [*See* 21 CFR § 1306.04(a)].

I agree with the Government that as such, the Respondents' ''[c]laims of reliance on others [and] professed confusions about legal responsibilities demonstrate precisely the opposite of acceptance of responsibility.'' [Gov't Br. 72]. For these reasons, I conclude that Ms. Jones has not accepted responsibility for the unlawful dispensing that occurred at Jones Pharmacy from 2010–2012.

Because I find that Ms. Jones has not unequivocally accepted responsibility for the dispensing of prescriptions with red flags present from 2010–2012, I will not consider the remedial efforts that the Respondents put forth in their case in chief. [*See Holiday CVS, LLC,* 77 FR at 62,346 (explaining that a registrant's acceptance of responsibility and showing of remedial measures are independent ''essential requirements for rebutting the Government's prima facie showing that continuing an existing registration would be 'consistent with the public interest.''' 21 U.S.C. 823(f); *see also Hassman,* 75 FR at 8194 *citing Jayam Krishna-Iyer,* 74 FR at 464 & n.8. *and The Medicine Shoppe,* 79 FR 59,504, 59,510 (DEA 2014) (holding that there is no need to address a Respondent's remedial measures when the respondent has not accepted responsibility for its misconduct).

3. Basis for Denial of SND Healthcare LLC's Application for a DEA Registration

Even though Jones Pharmacy and SND Healthcare are separate entities, they are treated as one integrated enterprise for purposes of this proceeding. In *MB Wholesale, Inc.,* 72 FR 71,956, 71,958 (DEA 2007), the Deputy Administrator denied an application by one business entity for a DEA Certificate of Registration as being inconsistent with the public interest, 21 U.S.C. 823(f), based on a separate, related business entity's dispensing conduct where the two were ''nominally separate business entities.'' [*Id.*]. The Deputy Administrator clarified that the Agency will treat two separately organized business entities as one integrated enterprise under the Controlled Substances Act where it is appropriate to do so based on the overlap of ownership, management, and operations of the two entities.'' [72 FR at 71,958].

In this instance, there is no dispute that SND Healthcare and Jones Pharmacy are one integrated enterprise. Ms. Jones is the owner and operator of both Jones Pharmacy, and SND Healthcare. Jones Total Health Pharmacy, LLC, and SND Healthcare LLC, are both incorporated in the state of Delaware. [FOF 144]. The corporate documents produced in this proceeding show that Ms. Jones is the owner for both business entities. [FOF 144]. The corporate documents also reveal that Ms. Jones is the Registered Agent, the Florida Community Pharmacy Permit applicant, managing member, and authorized representative who submitted the Applications By Foreign Limited Liability Company For Authorization To Transact Business in Florida for both business entities. [FOF 144]. In light of this, I find that it is proper to consider Jones Total Healthcare, LLC, and SND Healthcare, LLC, as one integrated enterprise under the Controlled Substances Act because the ownership, management, and operations of each entity are sufficiently similar.

By virtue of this finding, and because Agency has held that past performance is the best predictor of future performance, [*Alra Labs.* v. *DEA,* 54 F.3d 450, 452 (7th Cir. 1995)], I conclude that the unlawful dispensing practices at Jones Total Health Pharmacy, LLC, are an appropriate basis to deny the pending application for SND Healthcare, LLC's DEA Certificate of Registration.

VI. Conclusions and Recommendation

Given the egregious dispensing practices that took place at Jones Pharmacy from 2010–2012, I recommend that the Respondents' Certificate of Registration for Jones Pharmacy be revoked, and any applications for modification or renewal be denied. Further, for the same reasons described herein, I recommend that the pending Certificate of Registration application for SND Healthcare be denied.[71]

Dated: April 29, 2015

Gail A. Randall,

Administrative Law Judge.

[FR Doc. 2016–27120 Filed 11–9–16; 8:45 am]

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[71] There is no evidence in this record under Factors Three and Five that would mitigate the conduct that is inconsistent with the public interest under Factors Two and Four. I therefore conclude that the absence of such evidence ''militates neither for nor against the revocation sought by the Government.'' *Top Rx Pharmacy,* 78 FR 26,069, 26,081 (2013).

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Part IV

Department of Energy

10 CFR Parts 429 and 431
Defense Federal Acquisition Regulation Supplement: Detection and Avoidance of Counterfeit Electronic Parts (DFARS Case 2012–D055); Energy Conservation Program for Certain Commercial and Industrial Equipment: Test Procedure for Commercial Water Heating Equipment; Final Rule

DEPARTMENT OF ENERGY

10 CFR Parts 429 and 431

[Docket No. EERE–2014–BT–TP–0006]

RIN 1904–AD16

Energy Conservation Program: Test Procedure for Commercial Packaged Boilers

AGENCY: Office of Energy Efficiency and Renewable Energy, Department of Energy.

ACTION: Final rule.

SUMMARY: On March 17, 2016, the U.S. Department of Energy (DOE) issued a notice of proposed rulemaking (NOPR) to amend the test procedure for commercial packaged boilers. That proposed rulemaking serves as the basis for the final rule. DOE incorporates by reference certain sections of the American National Standards Institute (ANSI)/Air-Conditioning, Heating, and Refrigeration Institute (AHRI) Standard 1500, ''2015 Standard for Performance Rating of Commercial Space Heating Boilers.'' In addition, this final rule incorporates amendments that clarify the coverage for field-constructed commercial packaged boilers and the applicability of DOE's test procedure and standards for this category of commercial packaged boilers, provide an optional field test for commercial packaged boilers with fuel input rate greater than 5,000,000 Btu/h, provide a conversion method to calculate thermal efficiency based on combustion efficiency testing for steam commercial packaged boilers with fuel input rate greater than 5,000,000 Btu/h, modify the inlet water temperatures during tests of hot water commercial packaged boilers, establish limits on the ambient temperature during testing, modify setup and instrumentation requirements to remove ambiguity, and standardize terminology and provisions for ''rated input'' and ''fuel input rate.''

DATES: The effective date of this rule is December 12, 2016. The final rule changes will be mandatory for representations related to energy efficiency or energy use starting November 6, 2017. The incorporation by reference of certain publications listed in this rule is approved by the Director of the Federal Register on December 12, 2016.

ADDRESSES: The docket, which includes **Federal Register** notices, public meeting attendee lists and transcripts, comments, and other supporting documents/materials, is available for review at *www.regulations.gov.* All documents in the docket are listed in the *www.regulations/gov index.* However, some documents listed in the index, such as those containing information that is exempt from public disclosure, may not be publicly available.

A link to the docket Web page can be found at *https://www.regulations.gov/docket?D=EERE-2014-BT-;TP-0006.* The docket Web page will contain simple instructions on how to access all documents, including public comments, in the docket.

For further information on how to review the docket, contact the Appliance and Equipment Standards Program Staff, at (202) 586–6636 or by email: *ApplianceStandardsQuestions@EE.DOE.Gov.*

FOR FURTHER INFORMATION CONTACT: Mr. James Raba, U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Office, EE–5B, 1000 Independence Avenue SW., Washington, DC 20585–0121. Telephone: (202) 586–8654. Email: *commercial_packaged_boilers@ee.doe.gov.*

Mr. Peter Cochran, U.S. Department of Energy, Office of the General Counsel, GC–71, 1000 Independence Avenue SW., Washington, DC 20585–0121. Telephone: (202) 586–9496. Email: *Peter.Cochran@hq.doe.gov.*

SUPPLEMENTARY INFORMATION: This final rule incorporates by reference into 10 CFR parts 429 and 431 the testing methods contained in the following commercial standard:

Part 429—ANSI/AHRI Standard 1500–2015, (''ANSI/AHRI Standard 1500–2015''), ''2015 Standard for Performance Rating of Commercial Space Heating Boilers,'' ANSI approved November 28, 2014: Figure C9, Suggested Piping Arrangement for Hot Water Boilers.

Part 431—ANSI/AHRI Standard 1500–2015, (''ANSI/AHRI Standard 1500–2015''), ''2015 Standard for Performance Rating of Commercial Space Heating Boilers,'' Section 3 ''Definitions,'' Section 5 ''Rating Requirements,'' Appendix C ''Methods of Testing for Rating Commercial Space Heating Boilers—Normative,'' Appendix D ''Properties of Saturated Steam—Normative,'' and Appendix E ''Correction Factors for Heating Values of Fuel Gases—Normative,'' ANSI approved November 28, 2014.

Copies of AHRI standards may be purchased from the Air-Conditioning, Heating, and Refrigeration Institute, 2111 Wilson Blvd., Suite 500, Arlington, VA 22201, or by visiting *http://www.ahrinet.org/site/686/Standards/-HVACR-Industry-Standards/-Search-Standards.*

See section IV.N for additional information about this standard.

Table of Contents

I. Authority and Background

Packaged boilers are included in the list of ''covered equipment'' for which the U.S. Department of Energy (DOE) is

authorized to establish and amend energy conservation standards and test procedures. (42 U.S.C. 6311(1)(J)) DOE's energy conservation standards and test procedure for commercial packaged boilers, a subset of packaged boilers, are currently prescribed at 10 CFR 431.87 and 10 CFR 431.86, respectively. The following sections discuss DOE's authority to establish test procedures for commercial packaged boilers and relevant background information regarding DOE's consideration of test procedures for this equipment.

A. Authority

Title III of the Energy Policy and Conservation Act of 1975 (42 U.S.C. 6291, *et seq.;* ''EPCA'' or, ''the Act'') [1] sets forth a variety of provisions designed to improve energy efficiency. Part C of title III, which for editorial reasons was redesignated as Part A–1 upon incorporation into the U.S. Code (42 U.S.C. 6311–6317, as codified), establishes the ''Energy Conservation Program for Certain Industrial Equipment.'' The covered industrial equipment includes packaged boilers, the subject of this document. (42 U.S.C. 6311(1)(J))

Under EPCA, the energy conservation program consists essentially of four parts: (1) Testing, (2) labeling, (3) Federal energy conservation standards, and (4) certification and enforcement procedures. The testing requirements consist of test procedures that manufacturers of covered products must use as the basis for (1) certifying to DOE that their products comply with the applicable energy conservation standards adopted under EPCA, and (2) making representations about the efficiency of those products. Similarly, DOE must use these test procedures to determine whether the products comply with any relevant standards promulgated under EPCA.

Under 42 U.S.C. 6314, EPCA sets forth the criteria and procedures DOE must follow when prescribing or amending test procedures for covered equipment. EPCA provides that any test procedures prescribed or amended under this section shall be reasonably designed to produce test results which measure energy efficiency, energy use or estimated annual operating cost of covered equipment during a representative average use cycle or period of use and shall not be unduly burdensome to conduct. (42 U.S.C. 6314(a)(2))

In addition, if DOE determines that a test procedure amendment is warranted, it must publish a proposed test procedure and offer the public an opportunity to present oral and written comments on it. (42 U.S.C. 6314(b)) Finally, in any rulemaking to amend a test procedure, DOE must determine to what extent, if any, the proposed test procedure would alter the measured energy efficiency of the covered equipment as determined under the existing test procedure. (42 U.S.C. 6314(a)(4)(C))

With respect to commercial packaged boilers, EPCA requires DOE to use industry test procedures developed or recognized by the Air-Conditioning, Heating, and Refrigeration Institute (AHRI) or the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE), as referenced in ASHRAE/IES Standard 90.1, ''Energy Standard for Buildings Except Low-Rise Residential Buildings.'' (42 U.S.C. 6314(a)(4)(A)) Further, if such an industry test procedure is amended, DOE is required to amend its test procedure to be consistent with the amended industry test procedure, unless it determines, by rule published in the **Federal Register** and supported by clear and convincing evidence, that the amended test procedure would be unduly burdensome to conduct or would not produce test results that reflect the energy efficiency, energy use, and estimated operating costs of that equipment during a representative average use cycle. (42 U.S.C. 6314(a)(4)(B))

EPCA also requires that, at least once every 7 years, DOE evaluate test procedures for each type of covered equipment, including commercial packaged boilers, to determine whether amended test procedures would more accurately or fully comply with the requirements for test procedures to not be unduly burdensome to conduct and be reasonably designed to produce test results that reflect energy efficiency, energy use, and estimated operating costs during a representative average use cycle. (42 U.S.C. 6314(a)(1)(A)) DOE last reviewed the test procedures for commercial packaged boilers on July 22, 2009. 74 FR 36312. Therefore, DOE is required to re-evaluate the test procedures no later than July 22, 2016, and this rulemaking has been undertaken in fulfillment of that requirement. As the industry standard for commercial packaged boilers was recently updated, this rulemaking will also fulfill DOE's statutory obligations to make its test procedure consistent with the applicable industry test procedure.

Prior to November 6, 2017, manufacturers must make any representations with respect to the energy use or efficiency of commercial packaged boilers in accordance with the results of testing pursuant to the new appendix A to subpart E of part 431 or the existing test procedure, as it appeared in 10 CFR 431.86, revised as of January 1, 2016. After November 6, 2017, manufacturers must make any representations with respect to energy use or efficiency in accordance with the results of testing pursuant to appendix A to subpart E of part 431.

B. Background

On September 3, 2013, DOE initiated a test procedure and energy conservation standards rulemaking for commercial packaged boilers and published a notice of public meeting and availability of the Framework document (September 2013 Framework document). 78 FR 54197. Both in the September 2013 Framework document and during the October 1, 2013 public meeting, DOE solicited public comments, data, and information on all aspects of, and any issues or problems with, the existing DOE test procedure, including whether the test procedure was in need of updates or revisions. DOE also received comments on the test procedure in response to the notice of availability of the preliminary technical support document (TSD) for the standards rulemaking, which was published in the **Federal Register** on November 20, 2014 (November 2014 Preliminary Analysis). 79 FR 69066.

Additionally, on February 20, 2014, DOE published in the **Federal Register** a request for information (February 2014 RFI) seeking comments on the existing DOE test procedure for commercial packaged boilers, which incorporates by reference Hydronics Institute (HI)/AHRI Standard BTS–2000 (Rev 06.07), ''Method to Determine Efficiency of Commercial Space Heating Boilers'' (BTS–2000). 79 FR 9643. BTS–2000 provides test procedures for measuring steady-state combustion and thermal efficiency of a gas-fired or oil-fired commercial packaged boiler capable of producing hot water and/or steam and operating at full load only. In the February 2014 RFI, DOE requested comments, information, and data about a number of issues, including (1) part-load testing and part-load efficiency rating, (2) typical inlet and outlet water temperatures for hot water commercial packaged boilers, (3) the steam pressure for steam commercial packaged boilers operating at full load, and (4) design characteristics of commercial packaged

[1] All references to EPCA refer to the statute as amended through the Energy Efficiency Improvement act of 2015, Public Law 114–11 (April 30, 2015).

boilers that are difficult to test under the existing DOE test procedure.

On April 29, 2015, AHRI, together with the American National Standards Institute (ANSI), published the ''2015 Standard for Performance Rating of Commercial Space Heating Boilers'' (ANSI/AHRI Standard 1500–2015). ANSI/AHRI Standard 1500–2015 states ''this standard supersedes AHRI Hydronics Institute Standard BTS–2000 Rev. 06.07'' in the front matter of the document. On May 29, 2015, AHRI submitted a request directly to DOE to update the incorporation by reference in the DOE test procedure to reference the new ANSI/AHRI Standard 1500–2015. (Docket EERE–2014–BT–TP–0006, AHRI, No. 29 at p. 1) [2]

Subsequently, DOE published a notice of proposed rulemaking (NOPR) on March 17, 2016, in the **Federal Register** (hereafter March 2016 NOPR). 81 FR 14642. DOE proposed to incorporate by reference relevant sections of ANSI/AHRI Standard 1500–2015 as a replacement for BTS–2000 in the DOE test procedure as well as several modifications to its test procedure that are not captured in ANSI/AHRI Standard 1500–2015. The additional proposed amendments included the following:

- Clarifying the coverage of field-constructed commercial packaged boilers under DOE's regulations;
- Incorporating an optional field test for commercial packaged boilers with fuel input rate greater than 5,000,000 Btu/h;
- Incorporating an optional conversion method to calculate thermal efficiency based on the combustion efficiency test for steam commercial packaged boilers with fuel input rate greater than 5,000,000 Btu/h;
- Modifying the inlet and outlet water temperatures required during tests of hot water commercial packaged boilers to be more representative of field conditions;
- Requiring additional limits on the room ambient temperature and relative humidity during testing;
- Modifying setup and instrumentation requirements to remove ambiguity; and
- Standardizing terminology and provisions in regulatory text related to ''fuel input rate.''

In this final rule, DOE is replacing BTS–2000 with the updated industry standard, ANSI/AHRI Standard 1500–2015, as the basis for the DOE test procedure. DOE is also adopting certain proposals from the March 2016 NOPR and has modified some proposals from the March 2016 NOPR in light of comments received. Section III contains a more detailed discussion of the basis for transitioning to the commercial packaged boiler test procedures outlined in ANSI/AHRI Standard 1500–2015 as well as the additional amendments being adopted.

II. Synopsis of the Final Rule

In this final rule, DOE amends subpart E of 10 CFR part 431 as follows:

- Clarifies definitions regarding commercial packaged boilers;
- Incorporates by reference certain provisions of the current revision to the applicable industry standard: ANSI/AHRI Standard 1500–2015 ''2015 Standard for Performance Rating of Commercial Space Heating Boilers;''
- Provides an optional field test and an optional conversion calculation from combustion to thermal efficiency for commercial packaged boilers with rated input greater than 5,000,000 Btu/h;
- Modifies the inlet water temperature requirements for commercial packaged boilers;
- Reduces the allowable range for ambient room temperature during testing;
- Provides additional specificity in set-up and instrumentation; and
- Requires digital data acquisition for certain parameters.

The final rule also amends 10 CFR part 429 to clarify certification and enforcement procedures, specifically to provide for the verification of rated input and to accommodate certification based on the optional field test.

III. Discussion

The following sections address the products within the scope of this rulemaking, the test procedure amendments, other test procedure considerations, test burden, measured energy efficiency, and changes to certification and enforcement provisions.

Table III.1 presents the list of interested parties that submitted written comments in response to the March 2016 NOPR.

TABLE III.1—INTERESTED PARTIES PROVIDING WRITTEN COMMENT IN RESPONSE TO THE MARCH 2016 NOPR

Document Docket ID No.	Name	Acronym	Type
36, 46	Air-Conditioning, Heating, & Refrigeration Institute	AHRI	Trade Association.
38	American Boiler Manufacturers Association	ABMA	Trade Association.
42	American Gas Association and American Public Gas Association.	Gas Associations (AGA and APGA)	Trade Association.
45	Appliance Standards Awareness Project, Alliance to Save Energy, American Council for an Energy-Efficient Economy, and Natural Resources Defense Council.	Efficiency Advocates (ASAP, ASE, ACEEE, and NRDC).	Advocate.
39	Bradford White Corporation	BWC	Manufacturer.
40	Burnham Holdings, Inc.	Burnham	Manufacturer.
48	California Investor Owned Utilities	CA IOUs	Utility Association.
35	Council of Industrial Boiler Owners	CIBO	Trade Association.
43	Lochinvar, LLC	Lochinvar	Manufacturer.
44	Northwest Energy Efficiency Alliance	NEEA	Advocate.
47	Raypak, Inc.	Raypak	Manufacturer.
31	Tahir Khan	Khan	Individual.
41	Weil-McLain	Weil-McLain	Manufacturer.
33	Veritatis	Veritatis	Consultant.

[2] A notation in this form provides a reference for information that is in Docket No. EERE–2014–BT–TP–0006 . . . , which is maintained at *https://www.regulations.gov/docket?D=EERE-2014-BT-TP-0006*. The references are arranged as follows: (commenter name, comment docket ID number, page of that document). This particular notation refers to a comment from AHRI on p. 1 of document number 29 in the docket.

Interested parties provided comments on a range of issues, including both issues raised by DOE for comment, as well as other issues related to the proposed changes to the test procedure. The issues on which DOE received comments, as well as DOE's responses to those comments and the resulting changes to the test procedure proposals presented in the NOPR, are discussed in the subsequent sections. A parenthetical reference at the end of a comment quotation or paraphrase provides the location of the item in the public record.

A. Scope and Definitions

In this final rule, DOE adopts several new definitions that help further clarify the scope and applicability of DOE's commercial packaged boiler test procedure. DOE notes that these amendments to DOE's definitions at 10 CFR 431.82 also apply to DOE's energy conservation standards for commercial packaged boilers.

1. Definition of Commercial Packaged Boiler

While EPCA authorizes DOE to establish, subject to certain criteria, test procedures and energy conservation standards for packaged boilers, to date, DOE has only established test procedures and standards for commercial packaged boilers, a subset of packaged boilers. In 2004, DOE published a final rule (October 2004 final rule) establishing definitions, test procedures, and energy conservation standards for commercial packaged boilers. 69 FR 61949 (Oct. 21, 2004). In the October 2004 final rule, DOE defined ''commercial packaged boiler'' as a type of packaged low pressure boiler that is industrial equipment with a capacity (fuel input rate) of 300,000 Btu per hour (Btu/h) or more which, to any significant extent, is distributed in commerce: (1) For heating or space conditioning applications in buildings; or (2) for service water heating in buildings but does not meet the definition of ''hot water supply boiler.'' 69 FR 61949, 61960. DOE also defined ''packaged low pressure boiler'' as a packaged boiler that is: (1) A steam boiler designed to operate at or below a steam pressure of 15 psig; or (2) a hot water commercial packaged boiler designed to operate at or below a water pressure of 160 psig and a temperature of 250 °F; or (3) a boiler that is designed to be capable of supplying either steam or hot water, and designed to operate under the conditions in paragraphs (1) and (2) of this definition. 69 FR 61949, 61960.

DOE notes that, because commercial packaged boilers are currently defined as a subset of packaged low pressure boilers, commercial packaged boilers are also defined by the pressure and temperature criteria established in the definition of a ''packaged low pressure boiler.'' Consequently, DOE proposed in the March 2016 NOPR a definition of ''commercial packaged boiler'' that explicitly includes the pressure and temperature criteria established by the ''packaged low pressure boiler'' definition, and to remove its definitions for ''packaged low pressure boiler'' and ''packaged high pressure boiler'' as those definitions would no longer be necessary. DOE stated that it believed such a modification would clarify the characteristics of the equipment to which DOE's test procedure and energy conservation standards apply.

In response to the March 2016 NOPR, AHRI and Bradford White supported DOE's proposals to modify its commercial packaged boiler definition and to remove the extraneous definitions. (Bradford White, No. 39 at p. 2; AHRI, No. 46 at p. 8) No commenters in response to the March 2016 NOPR raised concerns over the proposal. DOE therefore adopts these proposed changes in this final rule.

DOE's amended definition for commercial packaged boilers also includes exclusionary language for field-constructed equipment (discussed in section III.A.2) as was proposed in the March 2016 NOPR. This exclusion was previously part of DOE's definition for the broader ''packaged boiler'' definition.

Burnham suggested that the scope of regulated commercial boilers should be limited to sizes that can be reasonably tested in a laboratory and that, in spite of backsliding concerns, to do so would acknowledge practical concerns and previous rulemaking error. (Burnham, No. 40 at p. 8) In response, DOE notes that the scope of coverage and original energy conservation standards were established by EPCA, not by a DOE rulemaking. 42 U.S.C. 6313(a)(4). Because the scope of coverage has never included a capacity limit, DOE must have a test procedure in place for all commercial packaged boilers for manufacturers to be able to certify their equipment as complying with the energy conservation standards. DOE reiterates that to establish such a rated input limit for covered equipment with existing standards would violate the anti-backsliding provisions of EPCA found at 42 U.S.C. 6313(a)(6)(B)(iii)(I) for those equipment larger than the limit. Additionally, both BTS–2000 (incorporated by reference in the existing DOE test procedure) and ANSI/AHRI Standard 1500–2015 (being incorporated by reference in this final rule) include in their scope any commercial packaged boiler with rated input of 300,000 Btu/h or greater.

2. Field-Constructed Commercial Packaged Boilers

EPCA establishes the statutory authority by which DOE may regulate ''packaged boilers'' and defines a ''packaged boiler'' as a boiler that is shipped complete with heating equipment, mechanical draft equipment, and automatic controls; usually shipped in one or more sections. (42 U.S.C. 6311(11)(B)) In adopting the EPCA definition for a ''packaged boiler,'' DOE amended the definition to: (1) Include language to address the various ways in which packaged boilers are distributed in commerce; and (2) explicitly exclude custom-designed, field-constructed boilers. 69 FR 61949, 61952. ''Custom-designed, field-constructed'' boilers were excluded because DOE believed the statutory standards for ''packaged boilers'' were not intended to apply to these boiler systems, which generally require alteration, cutting, drilling, threading, welding or similar tasks by the installer. As a result, DOE defined a ''packaged boiler'' as a boiler that is shipped complete with heating equipment, mechanical draft equipment and automatic controls; usually shipped in one or more sections and does not include a boiler that is custom designed and field constructed. If the boiler is shipped in more than one section, the sections may be produced by more than one manufacturer, and may be originated or shipped at different times and from more than one location. 10 CFR 431.82. As noted in section III.A.1, DOE is moving this exclusion from the definition for ''packaged boiler'' to the definition for ''commercial packaged boiler'' in order to clarify the applicability of its regulations.

In order to further clarify the difference between field-constructed commercial packaged boilers (which are excluded from DOE's commercial packaged boiler regulations) and field-assembled commercial packaged boilers (which are subject to DOE's regulations), DOE proposed the following definition for ''field-constructed'' in the March 2016 NOPR:

Field-constructed means custom-designed equipment that requires welding of structural components in the field during installation; for the purposes of this definition, welding does not include attachment using mechanical fasteners or brazing; any jackets, shrouds, venting, burner, or

burner mounting hardware are not structural components.

DOE noted in the March 2016 NOPR that it considered structural components include heat exchanger sections, flue tube bundles and internal heat exchanger surfaces, external piping to one or more heat exchanger sections or locations, and the mechanical supporting structure the heat exchanger rests upon in the case where a support structure is not provided with the commercial packaged boiler. DOE further noted that welding does not include attachment using mechanical fasteners or brazing; and any jackets, shrouds, venting, burner, or burner mounting hardware are not structural components. Conversely, DOE stated that a field-assembled commercial packaged boiler can be assembled in the field without the welding of structural components, as previously listed.

DOE received several comments pertaining to the proposed definition for ''field-constructed'' in response to the March 2016 NOPR. Bradford White expressed support for the proposed definition. (Bradford White, No. 39 at p. 2) Lochinvar suggested that because DOE is proposing a field test that would be limited to commercial packaged boilers with fuel input rates greater than 5,000,000 Btu/h that the same fuel input rate limit be included in the definition for field-constructed commercial packaged boilers. (Lochinvar, No. 43 at p. 2) NEEA and Lochinvar also suggested that the definition for field-constructed should mean custom designed equipment that requires American Society of Mechanical Engineers (ASME) code stamped with the ''H'' (heating) or ''R'' (repair) designator welding in the field during installation. (NEEA, No. 44 at p. 2; Lochinvar, Public Meeting Transcript, No. 34 at p. 21)

DOE notes that the field-constructed exemption for commercial packaged boilers applies to field-constructed equipment of any size; the field test methodology accommodates those commercial packaged boilers that are not field-constructed (and therefore not exempt from DOE regulations) and the size of which makes testing in a laboratory setting exceptionally difficult or cost-prohibitive. Therefore DOE is not adopting a size limitation in its definition for field-constructed as it pertains to commercial packaged boilers. With respect to Lochinvar's suggestion that the ASME code for welding could be used to limit the scope of what is considered ''field-constructed,'' DOE does not believe the ASME stamp requirements are applied equally across all jurisdictions, making it a poor indicator that a unit meets the field-constructed definition. Therefore, DOE will not define field-constructed to include a requirement that the ASME stamps designators for welding be used as a means of delineating field-constructed commercial packaged boilers.

DOE reiterates that field-assembled equipment is covered, is required to be tested using the DOE test procedure, and is required to comply with the existing energy conservation standards and certification requirements.

3. Other Definitions

DOE also received comments regarding other commercial packaged boilers definitions proposed in the March 2016 NOPR. In the March 2016 NOPR, DOE proposed to modify its definition for combustion efficiency. The current definition states that combustion efficiency for a commercial packaged boiler ''is determined using test procedures prescribed under § 431.86 and is equal to 100 percent minus percent flue loss (percent flue loss is based on input fuel energy).'' 10 CFR 431.82. As noted in the March 2016 NOPR, this definition does not sufficiently describe what the metric represents, and therefore DOE proposed to define combustion efficiency for a commercial packaged boiler as ''a measurement of how much of the fuel input energy is converted to useful heat in combustion and is calculated as 100-percent minus flue loss, as determined with the test procedures prescribed under § 431.86.''

CIBO, AERCO, and the Gas Associations suggested that DOE's proposed definition for combustion efficiency conflicted with the definition found in ANSI/AHRI Standard 1500–2015 and that the definition found in ANSI/AHRI Standard 1500–2015 should be retained. (CIBO, No. 35 at p. 2; Gas Associations, No. 42 at p. 2; AERCO, Public Meeting Transcript, No. 34 at p. 129–131) AERCO suggested that the DOE's proposed definition does not exclude jacket losses but that the definition in ANSI/AHRI Standard 1500–2015 does. (AERCO, Public Meeting Transcript, No. 34 at p. 129–131) CIBO also suggested that DOE's definition for ''combustion efficiency'' should use the higher heating value of the fuel in the calculation in order to account for water vapor produced during combustion.

In response, DOE notes that its combustion efficiency definition (both current and proposed) defines combustion efficiency as being measured under the DOE test procedure whereas industry definitions for the term do not. DOE believes that specifying in the definition that combustion efficiency is determined using the test procedures prescribed under § 431.86 makes clear that where DOE uses the term in its regulations it is referring to the metric as determined by DOE's test procedure. The rest of the definition provides description of what combustion efficiency represents and DOE believes this descriptive portion of the proposed definition is consistent with industry definitions. In this final rule, however, DOE has modified the descriptive portion of the definition to be consistent with that found in ANSI/AHRI Standard 1500–2015. Specifically, DOE's definition now describes the combustion efficiency as being 100 percent minus the percent losses due to dry flue gas, incomplete combustion, and moisture formed by combustion of hydrogen. In response to CIBO's comment with respect to using a higher heating value, DOE notes that DOE's test method and calculations for combustion efficiency incorporate by reference the pertinent sections of ANSI/AHRI Standard 1500–2015, specifically sections C7.2 and C7.3, which take into account the higher heating value of the fuel. Section C7.2.16 of ANSI/AHRI Standard 1500–2015 uses the measured value for Q_{IN} which is calculated using the higher heating value of the fuel.

The Efficiency Advocates suggested that DOE clarify the distinction between condensing and non-condensing boilers to ensure that proper test conditions are used for any tested commercial packaged boiler. (Efficiency Advocates, No. 45 at pp. 2–3) In the March 2016 NOPR, DOE proposed to incorporate by reference the definitions for these terms as found in ANSI/AHRI Standard 1500–2015. DOE notes that section 3.2.2 in ANSI/AHRI Standard 1500–2015 (incorporated by reference in this final rule) states that aa condensing commercial packaged boiler means a ''[commercial packaged] boiler which will, during the laboratory tests prescribed in this standard, condense part of the water vapor in the flue gases and which is equipped with a means of collecting and draining this condensate from the heat exchange section.'' Section 3.2.5 states that a non-condensing commercial packaged boiler means a ''[commercial packaged] boiler that is not a condensing [commercial packaged] boiler.'' [3] DOE believes that the definition for condensing

[3] In the March 2016 NOPR and in this final rule, DOE includes language in its test procedure that clarifies that in all sections of ANSI/AHRI Standard 1500–2015 that are incorporated by reference, the term ''boiler'' means a commercial packaged boiler as defined in 10 CFR 431.82.

commercial packaged boiler found in ANSI/AHRI Standard 1500–2015 is sufficient for distinguishing from non-condensing commercial packaged boilers.

B. General Comments

AHRI, Burnham, Raypak, and the Gas Associations suggested that DOE suspend the energy conservation standards rulemaking (Docket EERE–2013–BT–STD–0030) until after the test procedure is finalized. (AHRI, No. 46 at p. 9, Public Meeting Transcript, No. 34 at p. 11; Burnham, No. 39 at p. 1; Raypak, No. 47 at p. 1; Gas Associations, No. 42 at p. 1) The Gas Associations suggested that impacts on ratings originating from the test procedure amendments must be known with certainty prior to submitting comments on the standards NOPR and that stakeholders must know with certainty that the test procedure is technically correct, provides for the repeatability of ratings, and can be performed without any excessive burden on the manufacturer/test facility. (Gas Associations, No. 42 at p. 1) Weil-McLain suggested that DOE violated the process rule at 10 CFR part 430, subpart C, Appendix A, and the EPCA requirement at 42 U.S.C. 6295(o)(3). (Weil-McLain, No. 41 at p. 11) Weil-McLain also suggested that simultaneous standards and test procedure rulemakings for commercial packaged boilers as well as changes to equipment classes could cause serious harm to industry, manufacturers, contractors, and consumers. They further stated that the simultaneous impact of increasing standards and lowering of ratings due to the changing test procedure will render product models unavailable, possibly resulting in building owners/consumers and contractors having to consider more expensive alternatives. (Weil-McLain, No. 41 at p. 9)

In response to the comment from Weil-McClain, 42 U.S.C. 6295(o)(3) is a provision under Part A of EPCA, ''Energy Conservation Program for Consumer Products Other than Automobiles,'' that generally prohibits the Secretary from prescribing a new or amended standard for a covered consumer product if a test procedure has not been prescribed for that consumer product. The test procedure provision is also generally applicable to the ''Energy Conservation Program for Certain Industrial Equipment,'' with several exceptions, including packaged boilers, the subject of this rulemaking. (42 U.S.C. 6311(a)). Nevertheless, DOE already has a test procedure in effect for commercial packaged boilers and this rulemaking would not result in a lapse in effectiveness during which standards would be amended without having a test procedure in place. With regard to the Process Rule, DOE developed the Process Rule to establish procedures, interpretations and policies to guide DOE in the consideration and promulgation of new or revised appliance efficiency standards for consumer products under EPCA. 10 CFR part 430, subpart C, Appendix A. However, its approach is not prescribed. See, paragraph 14 of 10 CFR part 430, subpart C, Appendix A.

In general, DOE does not believe that the timing of the test procedure and standards rulemakings has negatively impacted stakeholders' ability to provide meaningful comment on this test procedure rulemaking. The March 2016 NOPR included an update to the latest industry standard (*i.e.,* ANSI/AHRI Standard 1500–2015), which was developed by a consensus-based AHRI process and was released in April 2015. Further, in May 2015 AHRI petitioned DOE to replace BTS–2000 with ANSI/AHRI Standard 1500–2015 in the DOE test procedure for commercial packaged boilers. (AHRI, No. 29 at p. 1) DOE understands that industry was involved in developing and has experience with the changes adopted in ANSI/AHRI Standard 1500–2015. Further, DOE believes that its proposals in the March 2016 NOPR were largely consistent with the test methodology found in ANSI/AHRI Standard 1500–2015. In response to the March 2016 NOPR, stakeholders provided detailed, insightful comments on all aspects of the proposal, including those proposals not derived from the ANSI/AHRI Standard 1500–2015. This demonstrates that industry was able to carefully consider DOE's proposed test procedure and how it compared to the current Federal test procedure. Nevertheless, DOE granted a 30-day extension of the comment period for the energy conservation standards rulemaking (Docket EERE–2013–BT–STD–0030) to ensure stakeholders had sufficient time to consider the proposed test procedure amendments in relation to the proposed standards.

C. Adoption of Certain Sections of ANSI/AHRI Standard 1500–2015

The existing DOE test procedure for commercial packaged boilers incorporates by reference BTS–2000 to determine the steady-state efficiency of steam or hot water commercial packaged boilers while operating at full load. As described in section I, on April 29, 2015, AHRI published a new ANSI/AHRI Standard 1500–2015 (ANSI approved November 28, 2014), which supersedes BTS–2000. On May 29, 2015, AHRI submitted a request directly to DOE to update the incorporation by reference in the DOE test procedure to reference the new ANSI/AHRI Standard 1500–2015. (Docket EERE–2014–BT–TP–0006, AHRI, No. 29 at p. 1) As noted in the March 2016 NOPR, DOE reviewed both standards and DOE believes that the recently published ANSI/AHRI Standard 1500–2015 standard is not unduly burdensome to conduct and represents an improvement over BTS–2000 while retaining the general testing methodology and metrics (*i.e.,* thermal and combustion efficiency) of the existing test procedure. DOE noted that several of the changes incorporated into ANSI/AHRI Standard 1500–2015 were also suggested by interested parties in public comments responding to DOE's September 2013 Framework document, November 2014 Preliminary Analysis, and February 2014 RFI. DOE therefore proposed to adopt certain sections of ANSI/AHRI Standard 1500–2015 in the March 2016 NOPR.

Several parties responding to the March 2016 NOPR expressed support for adopting ANSI/AHRI Standard 1500–2015. (ABMA, No. 38 at p. 1; AHRI, No. 46 at p. 2; Burnham, No. 40 at p. 1–3, 9; Raypak, No. 47 at p. 1–2; Lochinvar, No. 43 at p.1; Gas Associations; No. 42 at p. 2; NEEA, No. 44 at p. 1; Weil-McLain, No. 41 at p. 13; ABMA, Public Meeting Transcript, No. 34 at p. 12; Crown Boiler, Public Meeting Transcript, No. 34 at p. 36) However, multiple parties did not agree with DOE's additional proposals and modifications or suggested that DOE's proposals meant that DOE was not adopting ANSI/AHRI Standard 1500–2015. (AHRI, No. 46 at p. 2; Burnham, No. 40 at p. 1–3, 9; Raypak, No. 47 at p. 1–2; Lochinvar, No. 43 at p.1; Gas Associations; No. 42 at p. 2; Weil-McLain, No. 41 at p. 13) AHRI, Burnham, and Raypak suggested that DOE had not provided clear and convincing evidence pursuant to 42 U.S.C. 6314(a)(4)(B) that its proposed changes in addition to ANSI/AHRI Standard 1500–2015 were necessary. (AHRI, No. 46 at p. 2; Burnham, No. 40 at p. 1–3, 9; Raypak, No. 47 at p. 1–2)

As described in section I.A, with respect to commercial packaged boilers, EPCA requires DOE to use industry test procedures as referenced in ASHRAE/IES Standard 90.1, ''Energy Standard for Buildings Except Low-Rise Residential Buildings.'' (42 U.S.C. 6314(a)(4)(A)) Further, if such an industry test procedure is amended, DOE is required to amend its test procedure to be consistent with the amended industry test procedure, unless it determines, by

rule published in the **Federal Register** and supported by clear and convincing evidence, that the amended test procedure would be unduly burdensome to conduct or would not produce test results that reflect the energy efficiency, energy use, and estimated operating costs of that equipment during a representative average use cycle. (42 U.S.C. 6314(a)(4)(B))

DOE notes that it adopts industry standards and test procedures to the extent possible while satisfying other statutory requirements (such as the aforementioned requirement for the test procedure to produce results that reflect energy efficiency, energy use, and estimated operating costs of that equipment during a representative average use cycle. (42 U.S.C. 6314(a)(4)(B)) To accomplish this, DOE often adopts certain sections of industry test procedures rather than adopting industry standards wholesale. Additionally, DOE is adopts provisions in its test procedures that provide for compliance certification and enforcement in order to integrate the industry standard into DOE regulations. In this final rule, DOE is incorporating by reference certain sections of ANSI/AHRI Standard 1500–2015 as the basis of its test procedure in satisfaction of 42 U.S.C. 6314(a)(4)(A). Similarly, DOE is removing the incorporation by reference of the previously referenced industry standard, BTS–2000, as it has been superseded.

DOE outlined its justification for each of its proposals in the March 2016 NOPR. The need and evidence for each provision adopted in this final rule is described in the subsequent sections of this final rule.

D. Fuel Input Rate Certification and Enforcement

In the March 2016 NOPR, DOE proposed to standardize its terminology by introducing a definition for ''fuel input rate'' and proposed provisions for measuring and certifying the value for each basic model. Specifically, DOE proposed a procedure for determining the fuel input rate, which would be certified to DOE, by using the mean of measured values rounded to the nearest 1,000 Btu/h. DOE believed it was necessary to make this clarification because the fuel input rate determines the division of equipment classes and therefore the applicable Federal energy conservation standards for commercial packaged boilers.

Bradford White recommended using the term ''rated input'' instead of ''fuel input rate.'' (Bradford White, No. 39 at p. 6) AHRI suggested DOE drop its proposed definition and requirements for fuel input rate. (AHRI, No. 46 at p. 6) Lochinvar indicated that the boiler industry is not confused by the terms used for input rate and would be harmed by the DOE's proposed definition (and more significantly) use of the terms for input rate. (Lochinvar, No. 43 at p. 10)

AHRI, Burnham and Lochinvar stated that the maximum rated input is determined as part of the safety certification process, that this process occurs before efficiency testing, and that the safety certification agency requires that the maximum rated input for which the boiler is certified is used on the nameplate. (AHRI, No. 46 at p. 6; Burnham, No. 40 p. 7; Lochinvar, No. 43 at p. 10) AHRI stated that the manufacturer's first requirement is to design a model that will comply with all the safety standards and codes applicable to that boiler model, and that part of this design phase is establishing the maximum input rate of the boiler. (AHRI, No. 46 at p. 7) They also stated that manufacturers do not conduct efficiency tests until they are certain of the model's compliance with the applicable safety requirements, and that manufacturers therefore cannot wait until their efficiency tests to determine the model's input rating. (AHRI, No. 46 at p. 7) AHRI stated that with respect to efficiency testing the role of the maximum input rating is to assure that the unit is set up to fire at the rate at which the model was designed to operate. (AHRI, No. 46 at p. 6) Lochinvar indicated that the input rate of a commercial packaged boiler is more likely to fall slightly below that found on the nameplate so as not to exceed its safety certification. (Lochinvar, Public Meeting Transcript, No. 34 at p. 117) Raypak also did not support DOE's proposed approach for the fuel input rate because the rated input is first established during safety certification testing, specifically in accordance with ANSI/CSA Z21.13 ''Gas-Fired Low Pressure Steam and Hot Water Boilers.'' Raypak further suggested DOE accept the fuel input rate from this process for its certification reports as is currently done. (Raypak, No. 47 at p. 7)

DOE proposed a certification procedure for fuel input rate in the March 2016 NOPR to standardize and clarify the method by which the fuel input rate for a basic model is determined. However, in light of comments received, DOE recognizes the precedence of the safety certification process during the design and development of commercial packaged boilers, particularly with respect to determining the fuel input rate for a commercial packaged boiler. DOE acknowledges that in general manufacturers subject each model to testing witnessed or performed by safety certification organizations that ensure a commercial packaged boiler model fires on rate over a range of operating conditions and ignitions. DOE also acknowledges that once the safety certification body has verified the fuel input rate of a commercial packaged boiler, the manufacturer is often obligated to use that rate on the nameplate of the commercial packaged boiler and the accompanying product literature, and that rate has been the rate used when certifying compliance to DOE.

Lochinvar stated that since the test method and efficiency metric change with the classification of the boiler, it makes sense that a fixed rating such as ''rated input'' would be used to determine the test that should be run. Lochinvar further commented that the DOE proposal to use the tested input rate to determine the product class creates a paradox where the necessary test is not determined until the test is done. (Lochinvar, No. 43 at p. 10)

AHRI suggested that the proposed definition for input rate would assure that the input rate of a model would change every time the efficiency test is conducted and that it also creates a paradox where the test to be conducted is based on its equipment class but that the equipment class is not determined until the test is conducted. (AHRI, No. 46 at p. 7) AHRI suggested that comparable models that could meet the same design load of a prospective customer would have different fuel input rates under DOE's proposal and that this creates a distinction without a difference. (AHRI, No. 46 at p. 7) Burnham stated that under the proposed rule the manufacturer could be required to claim two slightly different inputs for the boiler—one for safety certification and one for meeting DOE requirements—and that this is burdensome and will create confusion in the field. (Burnham, No. 40 at p. 7) Burnham suggested that a boiler could fall into different standards categories depending on, for example, the higher heating value of the fuel used on the day the unit is tested. (Burnham, No. 40 at p. 7)

In light of the safety certification process, DOE is not adopting its proposed certification provisions for the fuel input rate. Manufacturers must use the rated input for the basic model as determined through the safety certification process, which results in the maximum rated input listed on the nameplate and in manufacturer

literature for the basic model. Based on the suggestions made by Bradford White, DOE will adopt the term ''rated input'' to mean the maximum rate at which a commercial packaged boiler has been rated to use energy as indicated by the nameplate or in the manual shipped with the commercial packaged boiler, and will adopt ''fuel input rate'' to mean the rate at which any particular commercial packaged boiler uses energy and is determined using test procedures prescribed under § 431.86.

DOE also proposed in the March 2016 NOPR a set of enforcement provisions to confirm that the fuel input rate of a commercial packaged boiler being tested matched the certified value for rated input for the basic model. DOE proposed these provisions to clarify its process for determining compliance, specifically for determining the equipment class and therefore applicable standard for a commercial packaged boiler if it did not fire on rate (within 2-percent of the certified rated input value). In the case that a commercial packaged boiler did not fire on rate, DOE proposed the following steps:

- DOE will attempt to adjust the gas pressure in order to increase or decrease the fuel input rate as necessary;
- If still not on rate, DOE will then attempt to modify the gas inlet orifice (*e.g.,* drill) accordingly;
- If still not on rate, DOE will use the measured fuel input rate when determining equipment class and the associated combustion and/or thermal efficiency standard level for the basic model.

In response, Bradford White recommended that the following steps be taken: The manifold pressure is adjusted; followed by changing the gas pressure, if necessary; and lastly, modify the gas orifice(s). (Bradford White, No. 39 at p. 6) Bradford White also suggested that DOE should consult with the manufacturer on how to achieve desired conditions if adjustments do not allow a model to operate within 2-percent of its rated input. (Bradford White, No. 39 at p. 6) Similarly, AHRI suggested that if, during testing, a unit cannot be put on rate and the input rate that is achieved in that situation would put the model in a different equipment class, DOE should ask the manufacturer for the documentation that confirms that the nameplate input rate is the value certified by the testing agency which certified the model's compliance with the applicable safety standards. (AHRI, No. 46 at p. 7) Raypak opposed the proposal that DOE attempt to modify gas inlet orifices when the fuel input rate of a boiler is not within 2-percent of the certified value because several of its commercial packaged boilers use zero-governor technology that use a nozzle instead of an orifice. The nozzle cannot simply be drilled to gain more gas flow, and drilling would damage the nozzle. Raypak suggested that DOE consult manufacturer's instructions and input before attempting to adjust the input rate. (Raypak, No. 47 at p. 7)

DOE agrees with Bradford White that adjusting the manifold pressure of a commercial packaged boiler could bring the measured fuel input rate of a unit to within 2-percent of the rated input during testing. DOE notes that its proposed regulatory text stated that it would modify ''gas pressure'' without specifying inlet or manifold and therefore such modification would be attempted. In this final rule, DOE clarifies that it would attempt to alter the manifold pressure and inlet pressure in order to bring the measured fuel input rate to within 2-percent of the rated input. In response to Raypak's comments, DOE agrees that manufacturer's instructions should first be consulted and therefore is adopting additional language to clarify that this would occur before any attempts at adjust the commercial packaged boiler or test set-up are made. DOE also notes, however, that its language adopted in this notice states that DOE will attempt each modification as specified in the test procedure. DOE will therefore use its discretion as well as rely on the discretion of the third-party test laboratory in attempting each modification as may be required to bring the measured fuel input rate of a gas-fired unit to within 2-percent of rated input. If a commercial packaged boiler uses a nozzle rather than an orifice, DOE would not attempt to drill the nozzle as the provision clearly states that only a gas inlet orifice would be drilled (if the unit is equipped with one). DOE also clarifies that this set of attempts to bring a tested unit on rate apply only to gas-fired commercial packaged boilers, and that DOE would not attempt modifications for oil-fired equipment.

Raypak suggested that rounding fuel input rates to the nearest 1,000 Btu/h will create confusion and uncertainty. (Raypak, No. 47 at p. 7) BWC disagreed with the proposal that a model's measured input is to be rounded to the nearest 1,000 Btu/hr and does not see a value in rounding the input. The model, if not already, must be adjusted to achieve its rated input ± 2-percent. (BWC, No. 39 at p. 6) DOE notes that the provision requiring rounding fuel input rates to the nearest 1,000 Btu/h was associated with the certification process for fuel input rate and is not being adopted in this final rule. Raypak's and BWC's concerns are therefore now moot.

E. Testing of Large Commercial Packaged Boilers

In the March 2016 NOPR, DOE acknowledged that large commercial packaged boilers may not be fully assembled until they are installed at the field site, which may preclude them from being tested in a laboratory setting. DOE also recognized that, as the size of the equipment increases, testing costs incurred to condition the incoming water and air to the test procedure rating conditions, as well as management of the hot water generated during testing, also significantly increases. DOE therefore proposed several provisions for its commercial packaged boiler test procedure that would accommodate the testing of large units.

1. Optional Field Test

DOE proposed a field test option for commercial packaged boilers with fuel input rates greater than 5,000,000 Btu/h. If electing to use this option, a manufacturer would test the combustion efficiency of a commercial packaged boiler once assembled in the field in order to certify compliance with the applicable energy conservation standard. As discussed in the March 2016 NOPR, DOE proposed this option in response to industry concerns that the DOE test procedure was difficult or impossible to conduct for large commercial packaged boilers. DOE recognized that commercial packaged boilers with high fuel input rates (*i.e.,* greater than 5,000,000 Btu/h) may not be fully assembled until they are installed at the field location which may preclude them from being tested in a laboratory setting. The proposed field test option would allow for compliance certification based on testing of only one unit, and would include exemptions for certain set-up, ambient condition, and water temperature requirements that would be difficult or impossible to meet in the field.

In response, Farrelly supported the field testing option while several commenters did not. (Khan, No. 31 at p. 1; ABMA, No. 38 at p. 2; Bradford White, No. 39 at p. 3; AHRI, No. 46 at p. 6; Burnham, No. 40 at p. 2; Raypak, No. 47 at p. 3; Lochinvar, No. 43 at p. 4; Weil-McLain, No. 41 at p. 6, 14; Farrelly, Public Meeting Transcript, No. 34 at p. 165) Although Bradford White did not agree with allowing commercial packaged boilers to be tested in the field, it suggested that it is already common practice to field test boilers

with inputs greater than 5,000,000 Btu/h because laboratories are not able to test them. (Bradford White, No. 39 at pp. 2–3) Burnham suggested that the proposed optional field test violates 42 U.S.C. 6314(a)(4)(B). (Burnham, No. 40 at p. 2) AHRI stated that in the field a test cannot be conducted per ANSI/AHRI Standard 1500–2015. (AHRI, Public Meeting Transcript, No. 34 at p. 144)

In response to Burnham's suggestion that the proposed optional field test violates EPCA42 U.S.C. 6314(a)(4)(B), DOE notes that under that provision DOE may, by rule published in the **Federal Register** and supported by clear and convincing evidence, determine that the amended test procedure would be unduly burdensome to conduct or would not produce test results that reflect the energy efficiency, energy use, and estimated operating costs of that equipment during a representative average use cycle. Further, 42 U.S.C. 6314(a)(2) requires that DOE test procedures not be unduly burdensome to conduct. As discussed in the March 2016 NOPR, DOE received input from multiple stakeholders responding to the September 2013 Framework document and November 2014 Preliminary Analysis (Docket EERE–2013–BT–STD–0030) that indicated the DOE test procedure (referencing BTS–2000) was impractical for large commercial packaged boilers not only because of the size limitation of manufacturer and laboratory facilities, but also because these commercial packaged boilers are often not fully assembled until they are on site for installation. For example, in response to the March 2016 NOPR Weil-McLain indicated that testing commercial packaged boilers with rated input 10,000,000 Btu/h boilers and higher is cost prohibitive. (Weil-McLain, No. 41 at p. 6, 15) DOE proposed the field test option using the combustion efficiency measurement because such a test would be simpler, shorter in duration, and could be conducted in the field after a commercial packaged boiler has been assembled. DOE therefore believes that its proposal satisfied both the requirements found at 42 U.S.C. 6314(a)(2) and 42 U.S.C. 6314(a)(4)(B) to adopt a test procedure that is not unduly burdensome to conduct. Moreover, DOE solicited suggestions for alternatives to the field test option by which manufacturers could certify compliance for large commercial packaged boilers but did not receive any such suggestions.

ABMA, Lochinvar, and Crown Boiler stated that meeting the required room temperature and humidity conditions would be difficult or impossible in the proposed field test. (ABMA, No. 38 at p. 2; Lochinvar, No. 43 at p. 4; Crown Boiler, Public Meeting Transcript, No. 34 at p. 10, 151–152) (DOE notes that the proposed field test option in the March 2016 NOPR did not require ambient room temperature and relative humidity requirements to be met.) AHRI, Lochinvar and Raypak expressed concern that the field test would potentially decrease accuracy and repeatability of the test, and AHRI and Lochinvar suggested this is due to the lack of tightly controlled operating conditions. (AHRI, No. 46 at p. 6; Lochinvar, No. 47 at p. 2; Raypak, No. 47 at p. 3) Lochinvar, Weil-McLain, and AERCO suggested that the field test option would not result in comparable ratings between equipment because laboratory tests would need to meet tight operating conditions while field tests would not. (Lochinvar, No. 43 at p. 2, 4, Public Meeting Transcript, No. 34 at p. 149; Weil-McLain, No. 41 at p. 6, 14; AERCO, Public Meeting Transcript, No. 34 at p. 149–151) Weil-McLain also suggested that a commercial packaged boiler tested using the field test option could meet the standard for its equipment class but not meet the standard when tested in a laboratory environment using the proposed test conditions. (Weil-McLain, No. 41 at p. 6)

As was noted in the March 2016 NOPR, DOE agrees that a field test option will inherently be more variable than a test conducted in a laboratory environment. However, as DOE noted in this preamble, the field test option will accommodate testing of commercial packaged boilers that currently are difficult or impossible to test. Manufacturers are obligated to certify that their equipment meets DOE standards as measured according to the DOE test procedure. While manufacturers have indicated that there are certain commercial packaged boilers that cannot be tested using the current DOE test procedure, they have generally opposed the field test option and have not put forth an alternative method of test that would address this. DOE notes that manufacturers will be required to submit certain parameters including water temperatures and ambient conditions as part of the compliance report for comparison to future tests of the same unit or another unit of the same basic model. A manufacturer may continue to use the standard laboratory method if it believes such a test would be more representative of the efficiency of its equipment. Additionally, for enforcement tests, DOE recognizes that a field test could not meet the existing laboratory accreditation requirements found at 10 CFR 429.110(a)(3) and there is adopting an exception in this section specifically for field tests of commercial packaged boilers.

Raypak stated that with respect to the field test, 10 CFR 429.12(a), which requires that certification of equipment occur before distribution in commerce, would not be met if product is allowed to be advertised and sold before ratings are established. (Raypak, No. 47 at p. 3) Raypak stated that DOE must forbid the use of thermal efficiency advertising for models using the field testing method because testing will not have been performed yet to qualify those metrics. (Raypak, No. 47 at p. 3) Lochinvar and AHRI expressed concern that with respect to field testing commercial packaged boilers could potentially be sold into commerce without having a rating beforehand. (Lochinvar, Public Meeting Transcript, No. 34 at p. 148; AHRI, Public Meeting Transcript, No. 34 at p. 161) Weil-McLain suggested that if field testing is allowed, each unit should be required to be tested and the data from a field test unit should not be used to qualify that model for future sales without field testing every installation. (Weil-McLain, No. 41 at p. 15)

In response to Raypak's concern regarding certification of equipment prior to distribution in commerce, DOE notes that in the March 2016 NOPR, DOE proposed a provision under 10 CFR 429.60 that would allow for certification of equipment not previously certified within 15 days of commissioning. This equipment-specific provision overrides the general provision of 429.12 requiring certification prior to distribution in commerce. In response to Raypak's suggestion that DOE should prohibit representations of thermal efficiency based on field testing because the field testing would not yet have been performed to substantiate the representation, DOE notes that 42 U.S.C. 6314(d)(1) requires that representations of efficiency be based on testing in accordance with the DOE test procedure. If a manufacturer wishes to make representations of efficiency, the commercial packaged boiler basic model must first be certified as having been tested and compliant with the standard, which can reflect testing either using the normal laboratory test for thermal or combustion efficiency (as applicable pursuant to 10 CFR 431.87) or using an alternative efficiency determination method (AEDM). Such an AEDM could be based on testing for the smallest model in a basic model line and applied to the larger models in order to certify

compliance. Likewise, representations for a commercial packaged boiler model that has been previously certified using field test data could be made (*i.e.,* a subsequently distributed unit of the same basic model).

DOE does not agree with Weil-McLain's suggestion that each installation of a field tested model would always need to be tested. If a commercial packaged boiler basic model is certified using the field test method, the manufacturer is certifying that each unit of that basic model complies with the applicable energy conservation standard as is the case with any basic model that uses the laboratory method (*i.e.,* not field tested) of testing and certification. DOE believes that requiring the testing and certification of each unit of a basic model in the field would be unduly burdensome. If the manufacturer is uncomfortable with its certification due to uncertainty whether subsequent units will comply with the standard, the manufacturer may choose to test each subsequent unit.

ABMA does not support the field test option as proposed because once a boiler leaves a manufacturer's shipping dock, ownership transfers to the purchaser of the equipment and the boiler manufacturer has no further control over it. ABMA suggested that, even if an owner is willing to allow a field test, they are likely only willing to allow testing during summer (non-heating) months; however, the heating load available on the building during the summer is insufficient to perform a test even at night. ABMA further indicated that installation of the necessary equipment and instrumentation is unlikely to be allowed by the owner, particularly stack thermocouple grids and flow meters. (ABMA, No. 38 at p. 2, Public Meeting Transcript, No. 34 at p. 140–141) Similarly, Lochinvar indicated that conducting efficiency tests requires time and, depending on field installations, could involve some risk of damage to equipment. They suggested that building inspectors will not typically have the training to conduct the desired tests or verify proper execution of the test if they are providing oversight. Additionally, Lochinvar stated that a third-party inspector that delivers a non-compliant result might find themselves the subject of a lawsuit questioning their methodology and results. (Lochinvar, No. 43 at p. 4)

To allow for testing in factory fire test areas ABMA suggested modifying the definition of field test to mean a combustion efficiency test that is conducted in a location other than a laboratory setting. ABMA stated that doing so would reduce problems associated with field testing to a mostly manageable level. (ABMA, No. 38 at p. 2) ABMA also stated that certification after distribution in commerce may be a worthwhile course of action provided that its other concerns for the field test provisions are accounted for. (ABMA, No. 38 at p. 3)

DOE agrees with ABMA's suggestion that a test performed in a factory fire test area (*i.e.,* a manufacturer facility or space with fewer test capabilities than a laboratory) could meet the requirements of DOE's proposed field test while alleviating concerns regarding ownership and access to the installed commercial packaged boiler for testing. The regulatory language proposed in the March 2016 NOPR and being adopted in this final rule allows for such testing.

AHRI suggested that DOE consider additional modifications to the AEDM to allow a means to certify that large input models comply with the applicable minimum efficiency standard; however, AHRI did not provide additional detail or suggest how this might be accomplished. (AHRI, No. 46 at p. 6) Lochinvar stated that, if DOE will allow the use of the ANSI/AHRI Standard 1500–2015 test method and AEDMs, there should be no need for field testing of boilers. Lochinvar further stated that it believes that the combination of testing according to ANSI/AHRI Standard 1500–2015, conversion methodology and use of the AEDM should provide manufacturers adequate options to verify their boilers' performance. Lochinvar noted that this may require production of the smallest products in a given family for ''lab'' testing and encouraged DOE to allow some grace period for the production of these units and the accompanying test data to minimize the burden on these manufacturers. (Lochinvar, No. 43 at p. 4, 5) Lochinvar also noted that it understands that the performance of any commercial packaged boiler is to be verified before it is introduced to commerce and encouraged DOE to apply the appropriate rules fairly to all manufacturers. (Lochinvar, No. 43 at p. 4) ACEEE commented that allowing AEDMs for the certification of commercial packaged boilers that are too large for testing in a lab may be preferable to field tests. (ACEEE, Public Meeting Transcript, No. 34 at p. 148) ACEEE and ABMA also raised a concern that the AEDM process may not be feasible for large commercial packaged boilers because AEDMs are based on testing of multiple units of the same model and that commercial packaged boilers models with rated inputs above 5,000,000 Btu/h may only ever have one unit produced. (ACEEE, Public Meeting Transcript, No. 34 at p. 156; ABMA, Public Meeting Transcript, No. 34 at p. 157)

DOE notes that representations based on the amended test procedure are not required until November 6, 2017 which allows manufacturers time to comply with the amended test procedure. Additionally, DOE believes that its provisions for AEDMs as they pertain to commercial packaged boilers adequately address AHRI's and Lochinvar's suggestions and mitigate test burden. An AEDM may be validated based on tests of any individual models in a validation class that meet or exceed the Federal energy conservation standard regardless of size. The tests could therefore be performed on the smallest individual model in a validation class and the AEDM could then be applied to certify the compliance of all other sizes. With respect to ACEEE and ABMA's concern regarding the number of units required for validating the AEDM, DOE notes that only one unit for each basic model of a validation class is required to be tested for comparison to the AEDM pursuant to 10 CFR 429.70(c)(2)(i).

However, as noted in the March 2016 NOPR, DOE believes that field tests of commercial packaged boilers would not be a sufficient basis for AEDMs applied to models below the 5,000,000 Btu/h and therefore proposed that AEDMs validated using field test data could only be applied to commercial packaged boilers with fuel input rates greater than 5,000,000 Btu/h. In response to the concern expressed by ACEEE and ABMA regarding the ability to develop an AEDM applicable to commercial packaged boilers with rated inputs greater than 5,000,000 Btu/h, DOE notes that manufacturers could develop the AEDM based on testing of commercial packaged boilers with rated inputs less than 5,000,000 Btu/h and applying the AEDM to larger models, thereby mitigating this concern.

ABMA believes the threshold for allowing the field test and conversion methodology should be reduced to 2,500,000 Btu/h from 5,000,000 Btu/h to match normal capacity breaks in product lines. (ABMA, No. 38 at p. 3) AHRI indicated that it is feasible to conduct the thermal efficiency test on steam commercial packaged boilers with rated inputs greater than 2,500,000 Btu/h and less than or equal to 5,000,000 Btu/h. (AHRI, No. 46 at p. 8) However, Bradford White suggested that requiring laboratory tests for commercial packaged boilers between 2,500,000 Btu/h and 5,000,000 Btu/h would require laboratory upgrades totaling $300,000. (Bradford White, No. 39 at p.

2–3) Lochinvar opposes all ''field testing;'' however, if allowed, Lochinvar suggested the lower limit for field constructed boilers must be no lower than 5,000,000 Btu/h because [commercial] packaged boilers are widely available in this input rate and should not be unequally tested and rated. (Lochinvar, No. 43 at p. 4) Weil-McLain suggested that if the field test option is kept that it only be available to 10,000,000 Btu/h boilers and larger because testing these boilers is cost prohibitive. (Weil-McLain, No. 41 at p. 6, 15) Weil-McLain also indicated that testing water and steam commercial packaged boilers with inputs between 2,500,000 Btu/h and 5,000,000 Btu/h is already done in many facilities. (Weil-McLain, No. 41 at p. 14)

The purpose of the field test option is to alleviate the test burden for large capacity commercial packaged boilers that is largely the result of laboratory facility limitations. As such, DOE believes that a minimum 5,000,000 Btu/h threshold for the field test option is appropriate as indicated in Lochinvar's and AHRI's comments, as well as Weil-McLain's indication that laboratory testing for commercial packaged boilers between 2,500,000 and 5,000,000 Btu/h is already common. In response to Bradford White's indication that incorporating commercial packaged boilers with inputs greater than 2,500,000 Btu/h and 5,000,000 Btu/h would impose costs, DOE does not believe costs associated with testing such units are prohibitive, as other parties have suggested that such testing is already commonly performed. In response to ABMA's comments that the threshold should be lowered to 2,500,000 Btu/h, DOE does not agree that capacity breaks in product lines is sufficient justification for such an allowance. In response to Weil-McLain's suggestion to raise the threshold to 10,000,000 Btu/h, DOE notes that the field test is an option, not a requirement, and that raising the threshold to 10,000,000 Btu/h would likely result in manufacturers and laboratory facilities needing to make major investment in laboratory capabilities in order to be able to perform laboratory tests up to such a capacity.

2. Optional Conversion of Combustion Efficiency to Thermal Efficiency

As an additional provision for accommodating large commercial packaged boilers (rated input greater than 5,000,000 Btu/h) DOE proposed in the March 2016 NOPR a conversion from combustion efficiency to thermal efficiency for steam commercial packaged boilers. While hot water commercial packaged boilers of the same size must meet a Federal energy conservation standard using the combustion efficiency metric, steam commercial packaged boilers must meet a thermal efficiency standard. The thermal efficiency test uses a more complex set-up and instrumentation and would be difficult to conduct in the field. Under the proposal, manufacturers could test a steam commercial packaged boiler for combustion efficiency (in a laboratory or in the field) and convert to thermal efficiency using an equation.

In response to this proposal, ABMA agreed with the concept of the conversion but did not agree that a single number (2-percent difference between combustion and thermal efficiency) is applicable across a broad range of sizes. They suggested that the difference should be capacity dependent and provided the following data for the difference between combustion and thermal efficiency: 4,185,000 Btu/h: 0.56 percent, 10,463,000 Btu/h: 0.41 percent, 31,383,000 Btu/h: 0.24 percent, and 50,220,000 Btu/h: 0.18 percent. Alternatively, ABMA suggested that a manufacturer could use size-specific data on radiation loss. (ABMA, No. 38 at p. 3, Public Meeting Transcript, No. 34 at p. 87) Bradford White stated that the 2-percent difference was not appropriate and suggested reviewing active products in the AHRI directory. (Bradford White, No. 39 at p. 3) Lochinvar stated that the proposed conversion method was appropriate; however, Lochinvar also stated that they did not agree with any attempt to convert between combustion and thermal efficiency. They further suggested that using a fixed conversion factor is not accurate or appropriate. (Lochinvar, No. 43 at p. 4–5)

Weil-McLain stated that the 2-percent difference between combustion and thermal efficiency is arbitrary and will not result in reliable thermal efficiency results. (Weil-McLain, No. 41 at p. 8) Weil-McLain also suggested that manufacturers could take advantage of the conversion by removing insulation which would increase jacket losses and combustion efficiency but not result in higher thermal efficiency. (Weil-McLain, No. 41 at p. 15) They also suggested that if thermal efficiency cannot be directly measured or derived based on jacket loss measurements then it should not be the specified efficiency method for that equipment class. Finally, Weil-McLain stated that the range of values for the difference between combustion and thermal efficiency is much larger than the 0.5 percent to 2.0-percent cited in the March 2016 NOPR. (Weil-McLain, No. 41 at p. 15)

Relatedly, AERCO commented that, if only the combustion efficiency test were required for large commercial packaged boilers, the test burden would be manageable. They indicated that investment in water pump and heat dissipation equipment may be necessary, but that running a test may amount to $30,000 to $40,000 which is considered reasonable when compared to the cost of some large commercial packaged boilers ($100,000 to $200,000). (AERCO, Public Meeting Transcript, No. 34 at p. 154) ABMA indicated that there would still be a limit to the size of commercial packaged boilers that could be tested even if performing only the combustion efficiency test. (ABMA, Public Meeting Transcript, No. 34 at p. 154)

DOE notes that the intent of the optional combustion to thermal efficiency methodology is to reduce test burden for manufacturers that have found it difficult to test the thermal efficiency of commercial packaged boilers with rated inputs greater than 5,000,000 Btu/h. This is supported by AERCO's comment that performing a combustion test would be achievable for large commercial packaged boilers. Manufacturers have the option of continuing to use the thermal efficiency test if they believe it will result in a more accurate representation of their equipment's efficiency. As described in the March 2016 NOPR, DOE analyzed a subset of the AHRI directory (as of January 2015)[4] in order to determine a value for the conversion; specifically, DOE considered the difference between rated combustion and thermal efficiency for all steam commercial packaged boilers with rated input larger than 5,000,000 Btu/h. DOE found 52 basic models of steam commercial packaged boilers with a rated input larger than 5,000,000 Btu/h and the difference between rated combustion and thermal efficiency ranged between 0.5 percent and 2.0-percent. DOE acknowledges that the range may be wider (and may include values for which the thermal efficiency is greater than the combustion efficiency) for other subsets of commercial packaged boilers or for all commercial packaged boilers as a whole. However, this methodology would only be available to steam commercial packaged boilers with rated input greater than 5,000,000 Btu/h and

[4] Available at: *https://www.ahridirectory.org/ahridirectory/pages/home.aspx*

therefore DOE used only that subset of data.

Additionally, DOE used a single value of 2.0 that represents the maximum difference between combustion and thermal efficiency for those commercial packaged boilers in order to generate conservative ratings for basic models certified using this methodology. If manufacturers believe their equipment is capable of achieving a higher thermal efficiency, they may elect to use the thermal efficiency test rather than the combustion efficiency test and conversion. DOE notes that the thermal efficiency test may still be used for DOE enforcement testing; and therefore, DOE does not believe that manufacturers would be likely to manipulate the test to achieve a better result as Weil-McLain suggests.

With respect to Weil-McLain's suggestion to use combustion efficiency as the metric for this equipment class, EPCA directs DOE to consider amending its energy conservation standards for commercial packaged boilers each time ASHRAE amends ASHRAE/IES Standard 90.1. (42 U.S.C. 6313(a)(6)(A)) Pursuant to EPCA, on July 22, 2009, DOE published a final rule adopting the thermal efficiency metric as the energy efficiency descriptor for eight of ten equipment classes of commercial packaged boilers in order to conform to ASHRAE/IES Standard 90.1–2007. 74 FR 36314. DOE is not reconsidering the efficiency metric used for any equipment class of commercial packaged boilers at this time.

F. Hot Water Temperatures

In the March 2016 NOPR, DOE proposed modifications to the water temperatures for hot water tests of commercial packaged boilers. In the current DOE test procedure (which incorporates by reference BTS–2000), inlet water temperature for a non-condensing commercial packaged boiler can be between 35 °F and 80 °F and outlet water temperature must be 180 °F ± 2 °F. For a condensing commercial packaged boiler, inlet water temperature must be 80 °F ± 5 °F and outlet water temperature must be 180 °F ± 2 °F (at Point C in). ANSI/AHRI Standard 1500–2015, which replaced BTS–2000 and was proposed for incorporation by reference in the March 2016 NOPR, did not change these temperature requirements. These inlet and outlet temperature requirements result in a temperature rise across the heat exchanger ranging from 98 °F to 147 °F for a non-condensing commercial packaged boiler and from 93 °F to 107 °F for a condensing commercial packaged boiler. Also, BTS–2000 and ANSI/AHRI Standard 1500–2015 permit recirculating loops, allowing heated outlet water to be reintroduced into the incoming water thereby increasing the temperature of the inlet water entering the commercial packaged boiler (see further discussion in section III.F.2). As stated in the March 2016 NOPR, DOE identified several issues with these temperature requirements based on comments received in response to the October 2013 Framework document, February 2014 RFI, and the November 2014 Preliminary Analysis, as well as through manufacturer interviews and a review of the existing DOE test procedure. The issues included:

- The current temperature rise is unrepresentative of actual operating conditions;
- The current temperature rise may induce excessive stresses on some commercial packaged boilers; and
- The presence of recirculating loops during testing leads to significant variability in the actual temperature rise across the commercial packaged boiler.

DOE therefore proposed modifications to the inlet and outlet water temperature requirements that would result in a consistent 40 °F nominal temperature rise for all commercial packaged boilers. For condensing commercial packaged boilers, DOE proposed an inlet temperature of 80 °F and an outlet temperature of 120 °F, and for non-condensing commercial packaged boilers DOE proposed an inlet temperature of 140 °F and an outlet temperature of 180 °F. Additionally, while recirculating loops could still be used, DOE proposed that the inlet temperature would be measured downstream of where the loop would reenter the incoming water stream, immediately prior to the water entering the commercial packaged boiler.

1. General Comments

Burnham, Weil-McLain, and the Efficiency Advocates agreed that the temperatures in the current test procedure (BTS–2000, or equivalently in ANSI/AHRI Standard 1500–2015) were not representative of actual installation/field conditions for commercial packaged boilers. (Burnham, No. 40 at p. 3; Efficiency Advocates, No. 45 at p. 1–2; Weil-McLain, No. 41 at p.7) Weil-McLain further suggested that BTS–2000 was not intended to simulate actual installation conditions for the boiler and that a 100 °F temperature rise would not have been used in BTS–2000 otherwise. (Weil-McLain, No. 41 at p. 17) Burnham further stated that, even though the water temperatures found in ANSI/AHRI Standard 1500–2015 are not representative of those seen in the field, this does not necessarily mean that resulting efficiency measurements are not representative of what would be found in the field. (Burnham, No. 40 at p. 3)

Bradford White, NEEA, and the Efficiency Advocates stated that DOE's proposed water temperatures would more accurately reflect operating temperatures found in the field. (Bradford White, No. 39 at p. 3; NEEA, No. 44 at p. 2; Efficiency Advocates, No. 45 at p. 1–2) AERCO also stated that continuing to use the 80 °F inlet and 180 °F outlet temperatures is unrealistic and that this should be changed even if ratings are affected. (AERCO, Public Meeting Transcript, No. 34 at p. 12) NEEA stated that, for non-condensing commercial packaged boilers, hot water coils that provide heating are designed to provide a 20 °F temperature drop across the coil with a design supply water temperature of 180 °F on the coldest days and 160 °F on mild days. NEEA stated that the 20 °F temperature drop across the coil prevents the return water from being less than 140 °F (when the supply water temperature is 160 °F), which prevents condensing from occurring, and that the 40 °F rise proposed by DOE is more representative than the range used in ANSI/AHRI Standard 1500–2015. For condensing commercial packaged boilers, NEEA stated that the 40 °F temperature rise is also more representative of typical conditions in a commercial building, and that water is typically supplied to the building at 120 °F and returned to the commercial packaged boiler at 100 °F. (NEEA, No. 44 at pp. 1–2) The Efficiency Advocates similarly commented that return water for a non-condensing commercial packaged boiler must be at or above 140 °F to prevent condensing and possible corrosion. (Efficiency Advocates, No. 45 at pp. 1–2)

The Efficiency Advocates also suggested that the specificity of DOE's proposed inlet and outlet temperature requirements would improve consistency and repeatability across ratings and tests. (Efficiency Advocates, No. 45 at pp. 1–2) The Efficiency Advocates also supported the proposal to measure the inlet water temperature downstream of where inlet water enters the unit such that the actual temperature of the water entering the commercial packaged boiler would not be obscured. (Efficiency Advocates, No. 45 at p. 1) The CA IOUs supported DOE's proposal for a fixed inlet water temperature as opposed to the 35 °F to 80 °F range currently allowed because consumers could more confidently

compare the ratings of commercial packaged boiler models. (CA IOUs, No. 48 at p. 2)

However, several stakeholders including AHRI, Burnham, Raypak, Lochinvar and Weil-McLain, suggested that DOE's proposed water temperatures would impact ratings, and presented test results that showed a range of effects on thermal efficiency from a decrease of up to 1.4-percent to an increase of up to 1.8-percent. (AHRI, No. 46 at p. 3; Burnham, No. 40 at p. 4; Raypak, No. 47 at p. 4; Lochinvar, No. 43 at p. 7; Weil-McLain, No. 41 at p. 4, 8, 10) AHRI stated that the current water temperature conditions specified in BTS–2000 and maintained in ANSI/AHRI Standard 1500–2015 should be retained without change. (AHRI, No. 46 at p. 3) AHRI further stated that the aggregate effect on ratings is irrelevant to a commercial packaged boiler model that just complies with the standard and whose rating is lowered by the proposed test procedure. (AHRI, No. 46 at p. 3) Burnham suggested that the proposed water temperatures would trigger manufacturers to recertify and could result in non-compliance for some models, while Crown Boiler and Raypak suggested that all manufacturers would need to retest all models. (Burnham, No. 40 at p. 4, 5; Crown Boiler, Public Meeting Transcript, No. 34 at p. 10; Raypak, No. 47 at p. 4, 6) Lochinvar questioned why, if the amended test procedure is not expected to change ratings, manufacturers should be burdened with rerating their units. (Lochinvar, Public Meeting Transcript, No. 34 at p. 49) NEEA suggested that DOE create a crosswalk to convert old test data to new test data as a way of reducing testing burden. (NEEA, Public Meeting Transcript, No. 34 at p. 34) Burnham raised the concern that reducing the temperature rise would increase measurement error and therefore the thermal efficiency error by 2.5 times. (Burnham, No. 40 at p.5) DOE believes that Burnham arrived at the factor of 2.5 by dividing a 100 °F temperature rise by the proposed 40 °F temperature rise, and that Burnham is suggesting that the measurement error would increase in the same proportion as the decrease in temperature rise. DOE notes that such a scenario would only happen in those instances where recirculating loops are not currently used during testing, *e.g.,* cast iron sectional commercial packaged boilers.

The Gas Associations suggested that DOE document specific differences in efficiency that result from the water temperature changes as compared to ratings produced by ANSI/AHRI Standard 1500–2015 so that manufacturers could evaluate the impacts the temperature changes would have on their specific models. (Gas Associations, No. 42 at p. 2) The CA IOUs suggested that test data from Pacific Gas and Electric (PGE) showed changes in efficiency resulting from different inlet and outlet water temperatures, but that this testing was done according to a different test protocol and it remains unclear how the changes proposed in the NOPR will impact the efficiency of commercial packaged boilers on the market. (CA IOUs, No. 48 at p. 4)

DOE is sensitive to concerns regarding the impact of the test procedure amendments on ratings, particularly for commercial packaged boilers that were not previously able to use a recirculating loop for reducing the temperature rise across the unit, as there was a significant difference in inlet water temperature in the NOPR for units not using a recirculating loop as compared to the current test method. (Recirculating loops are considered in section III.F.2.) However, DOE continues to believe that an inlet water temperature range of 35 °F to 80 °F is an unnecessarily large range due to the capabilities of current test facilities, and that lower temperatures in that range are particularly unrepresentative of water temperatures found in the field. In this final rule, DOE is therefore adopting an inlet temperature requirement of 80 °F ± 5 °F for non-condensing commercial packaged boilers that do not utilize a recirculating loop, and the outlet temperature will remain 180 °F ± 2 °F. (Note: this inlet water temperature is consistent with the existing inlet water temperature requirement for condensing commercial packaged boilers. See section III.F.3 for discussion of water temperatures for condensing commercial packaged boilers.) This range aligns with the existing allowable maximum temperature of 80 °F for the inlet water temperature but reduces the total allowable range. DOE agrees with the Efficiency Advocates and CA IOUs that the March 2016 NOPR water temperatures would improve consistency due to their specificity, would remove ambiguity concerning the temperature of water entering a unit, and would provide assurance to consumers that commercial packaged boilers were rated similarly. DOE believes that these consequences also will result from the temperatures being adopted in this final rule. DOE believes that this final rule results in a test procedure that is more representative of efficiencies found in the field by increasing the allowable inlet water temperature and more repeatable because of the narrower allowable range of inlet water temperatures, while mitigating concerns regarding the impact on ratings. DOE believes that the concerns regarding impacts on ratings due to the proposed 140 °F inlet water temperature are mitigated with the temperature requirements it is adopting in this final rule. Therefore, DOE does not believe it is necessary to produce, as the Gas Associations and NEEA suggested, a conversion methodology between the existing and amended test procedures. Moreover, a manufacturer would only need to recertify a basic model if it determines its test results no longer represent the efficiency of the basic model as tested under the amended test procedure. Such a determination should be possible based on a review of the water temperatures used to generate prior test data and an understanding of the potential effects on the resulting efficiency.

2. Recirculating Loops

DOE noted in the March 2016 NOPR that the presence of recirculating loops during testing obscures the actual temperature rise that the commercial packaged boiler experiences. Section 8.5.1.1.1 of BTS–2000, which is incorporated by reference in the current DOE test procedure, states that such a loop may be used ''for tubular boilers that require a greater flow rate to prevent boiling.'' In such instances, the same section also requires that the temperature rise through the boiler itself not be less than 20 °F. Section 5.3.5.3 of ANSI/AHRI Standard 1500–2015, which replaces BTS–2000, expands the use of recirculating loops by removing the requirement that a boiler be ''tubular'' to use a recirculating loop, such that a recirculating loop may be used ''for [any] boilers that require a greater flow rate to prevent boiling.'' In the March 2016 NOPR, DOE proposed inlet water temperature requirements immediately preceding the commercial packaged boiler, thereby allowing all commercial packaged boiler tests to use the recirculating loop to achieve a 140 °F or 80 °F inlet water temperature for non-condensing and condensing units, respectively. (See section III.F.3 for discussion of water temperatures for condensing commercial packaged boilers.) DOE also sought comment specifically on the prevalence of recirculating loops during testing. DOE received the following feedback:

- ABMA stated that recirculating loops are used for fire-tube type boilers. (ABMA, No. 38 at p. 4)
- Bradford White stated that recirculating loops are used for low

mass boilers to prevent boiling. (Bradford White, no. 39 at p. 4)

• AHRI stated that recirculating loops are used for water-tube type boilers that require forced water circulation to operate, and that the AHRI certification program is consistent with this. (AHRI, No. 46 at p. 3)

• Burnham stated that recirculation loops are not used unless absolutely necessary (though they did not indicate what conditions would require the recirculating loop) and indicated that BTS–2000 only explicitly permits recirculating loops for water-tube type boilers. (Burnham, No. 40 at p. 5)

• Raypak stated that they use a recirculating loop on all non-condensing boilers. (Raypak, No. 47 at p. 6)

• Lochinvar stated that recirculation loops are common on tube-type boilers and uncommon on cast sectional boilers but that this is not universally true. They also stated that a recirculating loop is needed for copper fin tube boilers but not stainless steel tube boilers. (Lochinvar, No. 43 at p. 7, Public Meeting Transcript, No. 34 at p. 43)

• Weil-McLain stated that it is not true that most manufacturers use a recirculation loop with sectional cast iron boilers. (Weil-McLain, No. 41 at p. 9)

• Crown Boiler stated that they do not use a recirculating loop in testing most of their boilers except for those that require a higher flow rate, and that they believe this is characteristic of most other manufacturers. (Crown Boiler, Public Meeting Transcript, No. 34 at p. 42–43)

• AERCO stated they do not use a recirculating loop unless it is during the winter and the water entering the building is 40 °F to 50 °F. (AERCO, Public Meeting Transcript, No. 34 at p. 44)

DOE notes that Raypak does not manufacture sectional cast iron commercial packaged boilers, and therefore their statement that recirculating loops are only used for their non-condensing models is consistent with the current allowance only for ''tubular'' or tube-type commercial packaged boilers in the DOE test procedure (BTS–2000, section 8.5.1.1.1). Raypak also stated that it specifies minimum and maximum flow rates in its installation and operation manuals to prevent boiling and erosion in the tubes, and that it uses recirculation loops to maintain these flow rates during testing. (Raypak, No. 47 at p. 6) Burnham further suggested that excessive stresses caused by the current temperature rise are not a problem because of the short duration of the test, and that recirculation loops are used only when necessary because they create additional set-up complexity and may negatively impact efficiency. (Burnham, No. 40 at p. 4–5) AHRI suggested that the change in ANSI/AHRI Standard 1500–2015 to make recirculating loops available for all models addresses concerns for damaging the commercial packaged boiler. (AHRI, No. 46 at p. 3) In response to the March 2016 NOPR, the CA IOUs supported the proposed inlet water temperature location because it would remove ambiguity. (CA IOUs, No. 48 at p. 2)

In response to the comments, DOE continues to believe that there is sufficient variation in test set-ups and temperatures so as to warrant adopting additional specifications for water temperatures. DOE believes that the expansion of the use of recirculating loops to any commercial packaged boilers as alluded to by AHRI is further justification for moving the location of the inlet water temperature constraint to immediately preceding the commercial packaged boiler inlet. Therefore, DOE is adopting the non-condensing temperatures proposed in the March 2016 NOPR (140 °F inlet as measured immediately preceding the commercial packaged boiler and 180 °F outlet) for those commercial packaged boilers that use a recirculating loop as allowable by ANSI/AHRI Standard 1500–2015 (*i.e.,* to prevent boiling). This will ensure that all commercial packaged boilers using a recirculating loop during testing use the same temperature rise of 40 °F and will remove ambiguity, increase consistency, and provide for a more representative test of efficiency. DOE notes that a temperature requirement at this location allows manufacturers and laboratories the flexibility of either using a recirculating loop or an external heat source (*e.g.,* another boiler) to maintain the required inlet water temperature.

3. Condensing Commercial Packaged Boilers

Burnham suggested that DOE's proposed water temperatures make the test less representative of actual operating conditions because condensing boilers will experience an increase in efficiency due to the reduction in outlet water temperature. (Burnham, No. 40 at p.4) Raypak also stated that the proposed condensing temperatures are not representative of typical temperature rises and that these same temperatures are used in ASHRAE 155P only to provide a ''boundary condition test'' as part of the efficiency map that that test procedure will produce. (Raypak, No. 47 at p. 3)

Burnham and Crown Boiler also suggested that non-condensing and condensing commercial packaged boilers are often used at the same water temperatures (Burnham suggested this therefore overstates the relative efficiency of condensing commercial packaged boilers) and Raypak stated that condensing boilers will see water temperatures closer to the proposed non-condensing test temperatures and that the NOPR did not address this. (Burnham, No. 40 p 2, 4; Crown Boiler, Public Meeting Transcript, No. 34 at p. 10, 57; Weil-McLain, No. 41 at p. 4) Burnham suggested this violates 42 U.S.C. 6314(a)(4)(B), which states DOE must amend the test procedure as necessary to be consistent with the amended industry test procedure or rating procedure unless it determines that to do so, supported by clear and convincing evidence, would not meet the requirements for test procedures to be representative of energy efficiency during an average use cycle and to be not unduly burdensome to conduct. (Burnham, No. 40 p 2, 4) Weil-McLain suggested that, if the proposed water temperatures are adopted, all commercial packaged boilers (non-condensing and condensing) should be tested at the non-condensing temperatures but have the option to test at the condensing temperatures (Weil-McLain, No. 41 at p. 5) Bradford White also suggested that different temperature conditions for condensing and non-condensing boilers would not result in fair comparisons. (Bradford White, No. 39 at p. 3)

Raypak similarly suggested that condensing boilers be tested and certified at both proposed temperature conditions (non-condensing and condensing) to provide engineers, building owners, and architects an understanding of the true efficiency that would be obtained; they also stated that separate temperature ranges for condensing and non-condensing commercial packaged boilers would introduce confusion in the market. (Raypak, No. 47 at pp. 3–4, 8) AERCO suggested rating condensing equipment at the same water temperatures as non-condensing equipment. (AERCO, Public Meeting Transcript, No. 34 at p. 44–45) PGE suggested requiring two separate metrics for condensing commercial packaged boilers, one for condensing and one for non-condensing operation. (PGE, Public Meeting Transcript, No. 34 at pp. 55–57) However, Crown Boiler, Lochinvar, and AHRI opposed this concept. (Crown Boiler, Public Meeting Transcript, No. 34 at p. 58; Lochinvar,

Public Meeting Transcript, No. 34 at p. 60–61; AHRI, Public Meeting Transcript, No. 34 at p. 59) Raypak stated that not requiring condensing boilers to be certified at both conditions would give condensing boilers an unfair advantage because they are often installed in non-condensing applications or experience periods of non-condensing operation. (Raypak, No. 47 at p. 4, 8) Finally, Raypak stated that their test results indicated an 8.5-percentage point reduction in thermal efficiency when testing a condensing boiler at the non-condensing temperatures as opposed to the condensing temperatures, and that this difference needs to be addressed in DOE's test procedure. (Raypak, No. 47 at p. 4)

DOE acknowledges concerns that condensing commercial packaged boilers often in application do not experience temperatures that induce condensing operation. DOE's proposed water temperatures for condensing equipment in the March 2016 NOPR preserved the existing nominal inlet water temperature of 80 °F but reduced the outlet water temperature from 180 °F to 120 °F to achieve a more realistic temperature rise of 40 °F, consistent with the temperature rise that was proposed for non-condensing equipment. As noted by Raypak, these temperatures also aligned with the anticipated temperatures in ASHRAE Standard 155P, which several commenters have recommended DOE adopt in the future once it is published. DOE recognizes that these temperatures (80 °F inlet and 120 °F outlet), as Raypak suggested, are intended to provide a boundary condition test for ASHRAE Standard 155P—one in which a condensing commercial packaged boiler is assured to fully condense due to the average temperature between inlet and outlet water (100 °F) being well below the temperature at which condensing begins to occur (approximately 130–140 °F). Condensing commercial packaged boilers could therefore potentially gain higher efficiencies under the proposed water temperatures, and while this would not require manufacturers to rerate existing models, it may result in rated efficiencies that are not achieved in application. DOE is, therefore, maintaining the inlet and outlet water temperatures in the existing test procedure for this final rule.

4. Test Facility Water Flow Rate Capabilities

Bradford White, AHRI, Raypak, Lochinvar, and Weil-McLain suggested that the reduction in the temperature rise from 100 °F to 40 °F would reduce the capacity of laboratory facilities or that facility upgrades would be necessary because of a proportional increase in water flow rate. (Bradford White, No. 39 at p. 4; AHRI, No. 46 at p. 3; Raypak, No. 47 at p. 6; Lochinvar, No. 43 at p. 7; Weil-McLain, No. 41 at p. 14) AHRI suggested that this would be most noticeable for cast-iron and oil-fired boilers, which have not been tested with a recirculating loop. (AHRI, No. 46 at p. 4) ABMA suggested that DOE's estimated costs in the March 2016 NOPR for a 10 million Btu/h boiler were inadequate and that it is not abnormal for a boiler to be three times as large. They suggested that without an AEDM the ratio (three times) would be applied to the pump (equaling $9,000) and new weigh tanks and scales in order to accommodate a flow rate of up to 1,500 gallons per minute (gpm), as well as a new cooling tower that could reach $750,000. (ABMA, No. 38 at p. 5) AHRI stated that DOE incorrectly assumed that a recirculating loop would resolve the issue of higher water flow rates and higher total volume necessary for the proposed water temperatures. (AHRI, No. 46 at p. 3–4)

In response to concerns regarding water flow rates DOE believes that the temperatures adopted in this final rule mitigate the need for higher flow rates (and therefore additional costs, as ABMA suggests). For commercial packaged boilers that cannot utilize a recirculation loop, DOE is adopting a temperature rise that is similar to what is used currently (nominal 100 °F, whereas the current test procedure allows for a temperature rise between 98 °F and 147 °F) and therefore DOE anticipates similar flow rates will be used during testing. For commercial packaged boilers that utilize a recirculating loop to prevent boiling (in keeping with ANSI/AHRI Standard 1500–2015, incorporated by reference in this final rule), the inlet water temperature requirement, measured immediately preceding the commercial packaged boiler inlet, standardizes the temperature for these commercial packaged boilers. Currently, this temperature is not monitored and is not required to meet any specific range. However, DOE anticipates based on product literature that the current use of recirculating loops results in a similar inlet water temperature to the 140 °F temperature requirements adopted in this final rule, and therefore does not result in any substantive change to the water flow requirements. DOE therefore does not anticipate increased water flow rates needed to meet the amended test procedure, and

5. Other Issues Related to Water Temperatures

Several commenters raised other issues associated with water temperatures for commercial packaged boilers. Bradford White stated that some commercial packaged boilers may not be capable of being tested with a 40 °F difference between inlet and outlet water temperatures and that they should instead be tested with a temperature rise as close to 40 °F as possible as allowed by manufacturer instructions. (Bradford White, No. 39 at p. 3) AHRI and Lochinvar stated that DOE already has a process in place by which instructions regarding testing of particular models could be provided. (AHRI, No. 46 at p. 8; Lochinvar, No. 43 at p. 6) Weil-McLain noted that if a boiler could previously be tested with a 100 °F temperature rise then there is no reason that it could not be tested with a 40 °F temperature rise. (Weil-McLain, No. 41 at p. 16) Raypak suggested that the proposed test procedure would allow manufacturers to select the temperature rise that works best for their product because of the proposed allowance for manufacturer instructions to specify a maximum temperature rise that would be used during testing. (Raypak, No. 47 at p. 6) DOE notes that, with the temperature requirements being adopted in this final rule, the concerns presented by these commenters apply only to commercial packaged boilers that use a recirculating loop during testing because only such units would be required to have a 40 °F temperature rise.

DOE agrees that, pursuant to 10 CFR 429.60(b)(4), manufacturers may already provide supplementary instructions for the purposes of testing a basic model. DOE therefore has determined that the test procedure proposal that addresses commercial packaged boilers that cannot be tested at the specified inlet water temperature is duplicative and DOE is not adopting those provisions. Manufacturers may continue to provide supplementary instructions pursuant to 10 CFR part 429; however, these supplementary instructions do not supplant the requirements of the DOE test procedure. Manufacturers may, however, submit a petition for waiver for any commercial packaged boilers model that cannot be tested to the DOE test procedure pursuant to 10 CFR 431.401 on the grounds that that either the basic model contains one or more design characteristics that prevent testing of the basic model according to the prescribed test procedures or cause

the prescribed test procedures to evaluate the basic model in a manner so unrepresentative of its true energy or water consumption characteristics as to provide materially inaccurate comparative data.

Multiple stakeholders, including Bradford White, AHRI, Burnham, Lochinvar, Raypak, and Weil-McLain did not support DOE's proposed tolerance of ± 1 °F for the inlet and outlet water temperatures. (Bradford White, No. 39 at p. 3; AHRI, No. 46 at p. 4, Public Meeting Transcript, No. 34 at p. 47; Burnham, No. 40 at p. 5; Lochinvar, No. 43 at p. 1; Raypak, No. 47 at p. 3; Weil-McLain, No. 41 at p. 5) Burnham and Raypak suggested that the proposed tolerances would not improve the accuracy of efficiency measurements, and Weil-McLain suggested that using a tolerance of ± 2 °F would not impact the accuracy of the measurement compared to ± 1 °F because the actual temperature measured during the test is accounted for in the calculations for efficiency. (Burnham, No. 40 at p. 5; Raypak, No. 47 at p. 3; Weil-McLain, No. 41 at p. 5) Lochinvar, Weil-McLain, and Crown Boiler indicated that maintaining the water temperatures over the course of a test to within the proposed ± 1 °F band for the necessary water flow rates would be difficult or impossible. (Lochinvar, No. 43 at pp. 1, 7, Public Meeting Transcript, No. 34 at p. 48; Weil-McLain, No. 41 at p. 4; Crown Boiler, Public Meeting Transcript, No. 34 at p. 48) Bradford White suggested that the average of the inlet and outlet water temperatures individually be held to a ± 1 °F tolerance through the test duration, while any given reading would have a tolerance of ± 2 °F. (Bradford White, No. 39 at p. 3) AERCO suggested allowing the temperature to vary by more than ± 1 °F but conducting the test for 2 hours so that variations from the target temperature will not bias the result. (AERCO, Public Meeting Transcript, No. 34 at p. 51)

DOE concurs with Weil-McLain's assessment that the calculations for efficiency use the actual temperature rise measured during the test and therefore maintaining the temperatures within certain tolerances is less important. DOE notes that the tolerances instead provide an additional verification that the system is operating at a steady-state. Moreover, while the water temperature immediately prior to entering the commercial packaged boiler must meet the described requirements the calculation for efficiency will continue to use the average of the water temperature measured upstream of the point at which the recirculating loop reenters the incoming water stream. The tolerance on this temperature therefore does not necessarily affect the temperature used in the efficiency calculations (unless a recirculating loop is not used). DOE is therefore not adopting the proposed temperature tolerances of ± 1 °F and is instead adopting tolerances from ANSI/AHRI Standard 1500–2015.

AERCO stated that multipoint water temperature measurements or mixing before a single point reading is critical because a large source of error in efficiency calculations is the temperature. Measurement error can occur because of stratification of the water temperature. (AERCO, Public Meeting Transcript, No. 34 at pp. 52, 172–173) DOE acknowledges that ANSI/AHRI Standard 1500–2015 incorporated set-up changes to induce mixing at the outlet in order to prevent stratification and therefore reduce measurement error. DOE is therefore adopting similar set-up changes at the inlet of the commercial packaged boilers in order to reduce the error associated with inlet water temperature measurement. Water entering the commercial packaged boiler must first pass through two plugged tees in order to induce mixing, with the temperature measurement taking place in the plugged end of the second tee.

G. Ambient Conditions

In the March 2016 NOPR, DOE proposed new constraints on ambient temperature and relative humidity. DOE's existing test procedure limits the humidity of the room during testing of condensing boilers to 80-percent (10 CFR 431.86(c)(2)(ii)) and establishes ambient room temperature requirements. BTS–2000 (incorporated by reference) and ANSI/AHRI Standard 1500–2015 both require that test air temperature, as measured at the burner inlet, be within ±5 °F of the ambient temperature, where ambient temperature is measured within 6 feet of the front of the unit at mid-height. ANSI/AHRI Standard 1500–2015 prescribes an allowable ambient temperature during the test between 30 °F and 100 °F (section 5.3.8) with the relative humidity not exceeding 80-percent in the test room or chamber (section 5.3.9). DOE proposed to require that ambient relative humidity at all times be 60-percent ± 5-percent and ambient room temperature 75 °F ± 5 °F during thermal and combustion efficiency testing of commercial packaged boilers.[5] DOE proposed the same ambient conditions for all commercial packaged boilers (non-condensing and condensing).

In response to the March 2016 NOPR, ABMA, AHRI, Burnham, and Lochinvar indicated that current testing typically takes place in uncontrolled environments, spaces that are not sealed and tightly controlled with respect to ambient conditions, or spaces that could not be maintained within the proposed ambient parameters for all sizes of commercial packaged boilers. (ABMA, No. 38 at p. 6, Public Meeting Transcript, No. 34 at p. 75; AHRI, No. 46 at p. 4; Burnham, No. 40 at p. 6; Lochinvar, No. 43 at p. 8) Weil-McLain indicated that combustion air is typically not conditioned; that for direct exhaust systems and direct vent or sealed units, combustion air is provided directly to the unit and therefore the ambient room air is often warmer than the air used for combustion. (Weil-McLain, No. 41 at p. 2) Because the air is brought in from outside and is unconditioned, several manufacturers suggested that the proposed ambient requirements would limit the times of year during which testing could be performed. (Bradford White, No. 39 at p. 4; Burnham, No. 40 at p. 6; Raypak, No. 47 at p. 5; Weil-McLain, No. 41 at p. 2)

Several commenters suggested that the proposed ambient conditions would result in additional test burden by forcing manufacturers to spend significant resources in upgrading facilities and HVAC capabilities. (ABMA, No. 38 at pp. 4, 6; Bradford White, No. 39 at p. 4; Burnham, No. 40 at p. 6; CA IOUs, No. 48 at pp. 3–4; AHRI, No. 46 at p. 4; Raypak, No. 47 at p. 5; Lochinvar, No. 43 at p. 8; Weil-McLain, No. 41 at pp. 2, 14) Weil-McLain suggested that DOE understated the costs associated with laboratory facility upgrades. (Weil-McLain, No. 41 at p. 2) Bradford White estimated that the cost of an environmental chamber would be approximately $120,000; AHRI suggested the cost could be from $100,000 to over $1,000,000; Burnham suggested that the cost would be approximately $125,000 for a 20-ton cooling capacity laboratory HVAC system; and Raypak estimated that a facility capable of conditioning combustion air to support a 4,000,000 Btu/h boiler would be $500,000 to $1,500,000. (Bradford White, No. 39 at p. 4; AHRI, No. 46 at p. 4; Burnham, No. 40 at p. 6; Raypak, No. 47 at p. 6)

[5] *Humidity* is the amount of water vapor in the air. *Absolute* humidity is the water content of air. *Relative* humidity, expressed as a percent, measures the current absolute humidity relative to the maximum for that temperature. *Specific* humidity is a ratio of the water vapor content of the mixture to the total air content on a mass basis.

Multiple stakeholders suggested that DOE had not provided sufficient evidence that tighter ambient condition restrictions are justified. (Burnham, No. 40 at p. 6; AHRI, No. 46 at p. 4; Weil-McLain, No. 41 at p. 2; Bradford White, No. 39 at p. 5) ABMA acknowledged, however, that ANSI/AHRI Standard 1500–2015 was written primarily based on testing of smaller boilers and that it is possible it does not account for the sensitivity of larger boilers to certain test conditions. (ABMA, Public Meeting Transcript, No. 34 at p. 82) AHRI suggested that ambient requirements were being considered as part of the development of ASHRAE Standard 155P, particularly as they pertain to jacket losses. (AHRI, Public Meeting Transcript, No. 34 at pp. 80–81) Weil-McLain also stated that the premise that ambient temperature limits would improve repeatability is false, while CA IOUs stated that a range of allowable ambient temperatures of 30 to 100 degrees Fahrenheit (found in ANSI/AHRI Standard 1500–2015) can result in efficiency ratings that vary because heat convection from the commercial packaged boiler to the room would increase as the ambient room temperature decreases. (Weil-McLain, No. 41 at p. 2; CA IOUs, No. 48 at p. 1). CA IOUs therefore supported the ambient room temperature requirement to be 75 °F ± 5 °F and stated that it should be achievable by most testing facilities. However, CA IOUs also suggested that variations in relative humidity have little effect on efficiency rating and therefore did not justify the added test burden. (CA IOUs, No. 48 at pp. 3–4) Similarly, Crown Boiler questioned whether the limits for relative humidity were justified, but suggested that an allowable range of 0 to 60-percent relative humidity would be more reasonable. (Crown Boiler, Public Meeting Transcript, No. 34 at pp. 74–75) Raypak stated that they concur with the conclusion reached in the residential boiler test procedure rulemaking that ambient temperature and relative humidity do not have any impact on efficiency. (Raypak, No. 47 at p. 4) Bradford White also suggested that the changes to the DOE test procedure may in fact have an effect on ratings in light of DOE's consideration that ambient temperature and relative humidity have a noticeable effect on efficiency. (Bradford White, No. 39 at pp. 4–5, 6–7)

In light of comments received DOE is maintaining the current maximum ambient relative humidity of 80-percent. At this time, DOE does not believe the added test burden of controlling ambient humidity is justified, given the amount of combustion air required for commercial packaged boilers approaching 5,000,000 Btu/h rated input (larger than this size would be eligible for the optional field test for which ambient relative humidity would not be constrained). DOE is adopting tighter restrictions for ambient room temperature as compared to ANSI/AHRI Standard 1500–2015, as it does not believe that the incremental test burden associated with maintaining reasonable room temperatures is excessive. However, in light of the concerns raised about fluctuations in test spaces, DOE is adopting a wider range of allowable ambient room temperatures as compared to those in the March 2016 NOPR. For condensing commercial packaged boilers, room ambient temperature will be required to be between 65 °F and 85 °F and for non-condensing commercial packaged boilers ambient room temperature will be required to be between 65 °F and 100 °F. DOE believes that these temperatures are aligned with ASHRAE Standard 155P,[6] which several commenters have requested DOE adopt once it is published. DOE is also requiring that the average ambient relative humidity and average ambient room temperature be included in certification reports.

Additionally, Burnham and Raypak commented specifically that the ± 2 °F tolerance with respect to the mean ambient temperature would be difficult or impossible to maintain given the size of equipment and make-up air requirements. (Burnham, No. 40 at p. 6; Raypak, No. 47 at p. 5) In light of these concerns, DOE is widening the allowable tolerance by which the room ambient temperature can vary with respect to the average ambient room temperature during the test from ± 2 °F as proposed to ± 5 °F. DOE proposed similar requirements (± 2 °F variation from average ambient room temperature) for in its test procedure NOPR for commercial water heating equipment, published in the **Federal Register** on May 9, 2016. 81 FR 28587. In response, Bradford White, AHRI, and A.O. Smith (owner of Lochinvar) supported an allowable variation of ± 5 °F as opposed to ± 2 °F, and Bradford White and A.O. Smith suggested that maintaining temperature with such allowable variation would be achievable without additional burden to manufacturers. (Docket EERE–2014–BT–TP–0008: Bradford White, No. 19 at p. 3; AHRI, No. 26 at p. 7; A. O. Smith, No. 27 at p. 18)[7] DOE notes that Bradford White and A.O. Smith (Lochinvar) manufacturer both commercial water heating equipment and commercial packaged boilers, and DOE expects that laboratory facilities are comparable for testing both types of equipment. DOE is therefore adopting a tolerance of ± 5 °F with respect to the average room ambient temperature for commercial packaged boilers.

AERCO suggested that the altitude of a unit undergoing a field test could impact the test result, and the CA IOUs suggested that barometric pressure variation has a greater impact on test ratings than relative humidity and possibly temperature. (AERCO, Public Meeting Transcript, No. 34 at p. 160; CA IOUs, Public Meeting Transcript, No. 34 at p. 76) DOE was not provided data that indicate to what extent barometric pressure affects efficiency ratings for commercial packaged boilers. In general, DOE has not found it necessary to regulate the ambient barometric pressure of test rooms for heating products. Accordingly, DOE is not adopting barometric pressure requirements in this final rule.

H. Set-up and Instrumentation

In the March 2016 NOPR, DOE proposed several clarifications to set-up and instrumentation for its commercial packaged boiler test procedure, including steam piping configuration, digital data acquisition, and calibration requirements.

In general, ACEEE suggested that DOE not specify instrumentation to the level of detail being proposed, but rather indicate only how DOE would test for enforcement cases because it is the manufacturer's responsibility to ensure the accuracy of its certifications. (ACEEE, Public Meeting Transcript, No. 34 at pp. 108–109) DOE disagrees, as manufacturers need to have test data to assess whether a product is compliant prior to distribution that is just as reliable as the test data DOE uses when bringing an enforcement case. DOE establishes test provisions that both DOE and manufacturers (as well as other stakeholders) must use when conducting an efficiency test. Although DOE does establish separate enforcement provisions, such provisions typically do not establish an alternative method of test but instead establish a

[6] An Advisory Public Review Draft of ASHRAE Standard 155P was published in August 2016 and can be found at: *https://osr.ashrae.org/sitepages/showdoc2.aspx/ListName/Public%20Review%20Draft%20Standards/ItemID/1542/IsAttachment/N/Standard+155P+061616+APR_chair_approved.pdf.*

[7] The rulemaking docket for the commercial water heating equipment test procedure can be found at: *https://www.regulations.gov/docket?D=EERE-2014-BT-TP-0008.*

methodology to grant latitude to manufacturers for key metrics such as those used to determine equipment class. Establishing a consistent test methodology, including calibration procedures, is fundamental to EPCA, as it ensures that all parties have a standardized method for assessing compliance with standards and for generating efficiency information for consumers. Therefore, DOE is adopting calibration procedures as part of its test procedure in this final rule that all parties must use when using the DOE test procedure.

1. Steam Piping

In the March 2016 NOPR DOE proposed provisions in order to clarify steam riser and header geometry. The proposed additional specifications were as follows:

- No reduction in diameter shall be made in any horizontal header piping, as a reduction in pipe diameter in the horizontal header prevents entrained water from draining properly and typically leads to non-steady-state operation. In the case of commercial packaged boilers with multiple steam risers, the cross-sectional area of the header must be no less than 80-percent of the summed total cross-sectional area of the risers, and the header pipe must be constant in diameter along its entire length.
- The diameter of the vertical portion of the steam condensate return pipe that is above the manufacturer's recommended water level may be reduced to no less than one half of the header pipe diameter to ensure adequate operation of the return loop and draining of entrained water back into the commercial packaged boiler.

In the event the manufacturer's literature does not specify necessary height and dimension characteristics for steam risers, headers, and return piping, DOE also proposed the following requirements to ensure consistent and repeatable testing:

- The header pipe diameter must be the same size as the commercial packaged boiler's steam riser (steam take-off) pipe diameter. In the case of commercial packaged boilers with multiple steam risers, the cross-sectional area of the header must be no less than 80-percent of the summed total cross-sectional area of the risers, and the header pipe must be constant in diameter along its entire length.
- The height measured from the top of the header to the manufacturer's recommended water level must be no less than the larger of 24 inches or 6 times the header pipe diameter.
- The distance between the vertical steam riser (steam take-off) leading to the water separator and the elbow leading to the condensate return loop must be a minimum of three (3) header pipe diameters to prevent entrained water from entering the separator piping.
- If a water separator is used, piping must pitch downward to the separator at a rate of at least ¼ inch per foot of pipe length in order to assure proper collection of moisture content and steady-state operation during testing.
- A vented water seal is required in steam moisture collection plumbing to prevent steam from escaping through the moisture collection plumbing.

In response, the CA IOUS supported the modified language for steam riser and header geometry, steam condensate return pipe and pipe installation requirements because they would improve test accuracy and quality. (CA IOUs, No. 48 at p. 3) AHRI suggested that the test procedure should refer to manufacturer's installation instructions with regard to steam riser, header, and return water loop requirements. (AHRI, No. 46 at p. 8) Weil-McLain suggested that the steam quality requirement (98-percent per BTS–2000 and ANSI/AHRI Standard 1500–2015) is sufficient and that the proposed configuration requirements do not reflect common installation practices. (Weil-McLain, No. 41 at p. 7) Crown Boiler also suggested that the geometry requirements in ANSI/AHRI Standard 1500–2015 are sufficient because pipe sizes can vary by manufacturer and are listed in manufacturer's specifications. They also suggested that the requirement for the steam riser diameter to be half of the diameter of the header is not needed because there is generally no flow in the pipe and that the size of the pipe is sometimes determined experimentally. (Crown Boiler, Public Meeting Transcript, No. 34 at p. 85)

While DOE believes that its proposed requirements could be met in most cases, DOE cannot anticipate all commercial packaged boiler designs and configurations. For commercial packaged boiler designs for which the proposed steam piping configurations would not be feasible, manufacturers would need to seek waiver or, for commercial packaged boilers with rated inputs greater than 5,000,000 Btu/h, may need to use the field test where they otherwise could have performed a laboratory test. DOE agrees with Weil-McLain that the steam quality requirement is sufficient for ensuring steady operation of the commercial packaged boiler, in conjunction with the requirement in ANSI/AHRI Standard 1500–2015 that steam pressure not fluctuate by more than 5-percent. DOE believes that using only the steam quality and pressure measurement requirements will allow manufacturers flexibility in their set-up while ensuring tests are conducted equivalently. DOE is therefore withdrawing these proposed steam pipe set-up provisions.

DOE also proposed insulation conductivity and thickness requirements for steam piping. AHRI commented that certifying compliance with an R-value as opposed to thickness and conductivity may be simpler. (AHRI, Public Meeting Transcript, No. 34 at p. 90) DOE notes that the proposed insulation requirements are taken from ASHRAE/IES Standard 90.1 and conversion to R-values would result in fractions which may present confusion. The proposed steam piping insulation provisions are therefore adopted in this final rule for consistency with the industry standard. The March 2016 NOPR included rows for fluid temperatures up to 250 °F; however, this final rule adopts the full table from ASHRAE/IES Standard 90.1, which include fluid temperatures up to 350 °F, in order to account for superheated steam.

2. Digital Data Acquisition

DOE proposed to require digital data acquisition at 30-second intervals in the March 2016 NOPR. Bradford White supported this proposal. (Bradford White, No. 39 at p. 5) However, AHRI, Burnham, Lochinvar, and Weil-McLain suggested that the requirement was not justified. (AHRI, No. 46 at p. 5; Burnham, No. 40 at p. 7; Lochinvar, No. 43 at pp. 6, 9; Weil-McLain, No. 41 at p. 6) ABMA suggested that digital data acquisition may have benefits. (ABMA, No. 38 at p. 5) Multiple stakeholders, including AHRI, ABMA, Lochinvar, Raypak, and Weil-Mclain, also raised concern about the cost burden of this requirement. (AHRI, No. 46 at p. 5; ABMA, No. 38 at p. 5, Public Meeting Transcript, No. 34 at p. 101; Lochinvar, No. 43 at p. 6; Raypak, No. 47 at p. 4; Weil-McLain, No. 41 at pp. 5–6)

Burnham indicated that most laboratories can log temperatures at 30-second intervals although they may not be able to do so with instrumentation having the required accuracy of ± 0.2 °F. (Burnham, No. 40 at p. 7) Weil-McLain noted that DOE did not identify a calibration methodology for the digital data acquisition equipment. (Weil-McLain, No. 41 at p. 5) Raypak suggested that the data acquisition system would require costs for a flow meter, gas meter, flue gas analyzer, gas chromatograph, pressure transducers,

barometric pressure and humidity interface controls and would cost four to five times DOE's estimate. (Raypak, No. 47 at p. 8) Lochinvar suggested that water temperature readings should be digitized but that higher heating value, barometric pressure, and relative humidity should not be digitized. (Lochinvar, Public Meeting Transcript, No. 34 at p. 102–103)

DOE believes digital data acquisition is a valuable tool for ensuring that the various parameters and requirements of the test procedure are met for the duration of the test. Temperatures vary over the course of a test, and DOE does not believe that 15-minute interval data as required by ANSI/AHRI Standard 1500–2015 is sufficient for verifying that the test procedure has been met or that the measured efficiency has not been influenced by variance in certain parameters. DOE considered the cost burden of adding digital data acquisition in the NOPR and has revised its estimates in section IV.B, and continues to believe that the costs are not overly burdensome in comparison to the overall cost of testing for a manufacturer's product line. DOE is therefore adopting the requirement for obtaining data digitally for temperatures, specifically ambient room temperature, flue gas temperature, and water temperatures. Because DOE is not, at this time, adopting tighter tolerances on the ambient relative humidity, DOE also will not require digital data acquisition for this parameter and will continue to use 15-minute intervals. DOE does not believe it is necessary to specify calibration in light of the accuracy requirements already part of ANSI/AHRI Standard 1500–2015.

Weil-McLain suggested that DOE provide details on integration and averaging methods for each data type as well as rules on how to treat data points that fall outside of the requirements when the average or integrated values for the test are within requirements. (Weil-McLain, No. 41 at p. 6, Public Meeting Transcript, No. 34 at p. 65) AHRI similarly suggested DOE include a table that lists which measurements are to be averaged and which are to be totaled over the test period. (AHRI, Public Meeting Transcript, No. 34 at pp. 104–105) DOE has modified the tables in the test procedure to clarify that any individual digital reading falling out of its required range per the DOE test procedure constitutes an invalid test. DOE is modifying the original 30-second interval to 1-minute intervals as a means of reducing the burden that the constraint may pose by invalidating a test due to one 30-second interval reading of one parameter not being within tolerance. Each 1-minute interval reading for each of the parameters required to be obtained through digital data acquisition must therefore fall within the specified range per the DOE test procedure. In this final rule, DOE has also added specificity regarding averaging and integration for each measurement, as applicable.

3. Calibration

DOE proposed in the March 2016 NOPR that instrumentation be calibrated at least once per year. Bradford White and Lochinvar expressed support for this proposal, and DOE did not receive any comments objecting. (Bradford White, No. 39 at p. 5; Lochinvar, No. 43 at p. 9) DOE is therefore adopting this requirement in this final rule. Weil-McLain, however, suggested that the proposed calibration procedures did not address whether pre-test and post-test calibration is required. For example, they suggest that it is unclear what implications, if any, there are if a previously calibrated instrument is used and on the next calibration the instrument fails or is damaged. (Weil-McLain, No. 41 at p. 18) DOE clarifies that it is not adopting provisions by which a test is invalidated because an instrument fails a subsequent calibration.

In the March 2016 NOPR, DOE proposed to require calibration of gas chemistry instrumentation using standard gases with purities of greater than 99.9995 percent for all constituents analyzed. In response, AHRI, Bradford White, Burnham, Raypak, Lochinvar, Weil-McLain, and Crown Boiler suggested that the requirement was too stringent. (AHRI, No. 46 at p. 5; Bradford White, No. 39 at p. 5; Burnham, No. 40 at p. 7; Raypak, No. 47 at pp. 7–8; Lochinvar, No. 43 at p. 9; Weil-McLain, No. 41 at p. 18; Crown Boiler, Public Meeting Transcript, No. 34 at p. 99) Raypak noted that its supplier, Airgas Specialty Gases, uses ultra-high purity gases of 99.99 percent for CO_2 and 99.5 percent for CO, and that they indicated that 99.9995 percent purity CO_2 is significantly more expensive and the maximum available for CO is 99.99 percent. (Raypak, No. 47 at p. 7) Lochinvar suggested that the excessive purity proposed in the March 2016 NOPR was both prohibitively expensive and posed significant toxicity and flammability risks. They further suggested that calibration references should be 4 to 10 times more accurate than the required accuracy of the equipment being calibrated. (Lochinvar, No. 43 at p. 9) Bradford White suggested that a typical cylinder of calibration gas costs approximately $400 and lasts approximately 8 weeks, assuming the analyzer is calibrated daily; they also provided a sample gas calibration certificate. (Bradford White, No. 39 at p. 5 and Attachment)

After further consideration, DOE acknowledges that gas meeting the proposed ultra-high purity gas calibration standards may be difficult or expensive to obtain. Additionally, DOE recognizes that there are requirements for the accuracy of gas chemistry instrumentation found in ANSI/AHRI Standard 1500–2015 that are being adopted in this final rule. DOE believes that the requirements for gas chemistry instrumentation accuracy (specifically ± 0.1 percent for CO_2 and O_2 testers and the greater of ± 10 ppm or ± 5-percent of reading for CO testers) are sufficient for the purposes of the commercial packaged boiler test procedure and that requiring a specific calibration gas purity beyond the accuracy of the instrument itself may be duplicative. Accordingly, DOE is not adopting this proposal.

4. Other Set-up and Instrumentation Comments

ABMA requested that straight vent stacks be allowed as an alternative to the double 90-degree elbow configuration in ANSI/AHRI Standard 1500–2015 to accommodate commercial packaged boilers with forced draft burners firing into combustion chambers under positive pressure. They further stated that automated draft control systems are used on installations having tall stacks, thus there is typically no dilution of flue gas in the vent system. (ABMA, No. 38 at p. 2–3) DOE agrees that such commercial packaged boilers should be permitted to test using straight vent stacks and has included a provision in this final rule accordingly.

The CA IOUs suggested that the test procedure should be revised to eliminate ambiguity in how CO_2 concentrations are measured during the test. They indicated that during tests of commercial packaged boilers conducted by PGE, the CO_2 concentration could change depending on where the CO_2 probe was placed in the flue gas stream. (CA IOUs, No. 48 at p. 2) DOE reviewed the submitted data and acknowledges that acknowledges that there appears to be an affect on the CO2 measurement based on horizontal position of the flue gas probe. Additionally, DOE notes that there is ambiguity, as CA IOUs suggest, in the placement of the flue gas probe for vent configurations like the one CA IOUs presented in their comment. Specifically, DOE believes the unit tested by PGE was an outdoor commercial packaged boilers because

there was no stack attached to the unit. However, CA IOUs did not suggest which position should be used in the DOE test procedure. DOE notes that section C2.5.2 of ANSI/AHRI Standard 1500–2015 specifies that sampling from a rectangular plane be collected ''using a sampling tube located so as to obtain an average flue gas sample.'' DOE agrees that this is ambiguous. DOE is therefore adopting a requirement that three samples be taken at evenly spaced intervals (¼, ½, and ¾ of the distance from one end) in the longer dimension and along the centerline halfway between the edges in the shorter dimension of the rectangle and that the average be taken.

Weil-McLain noted that ANSI/AHRI Standard 1500–2015 specifies different fuel oil analysis requirements (fuel oil grade under ASTM D396–14a, heating value under ASTM D240–09, hydrogen and carbon content under ASTM D5291–10, and density and American Petroleum Institute (API) gravity [8] under ASTM D396–14a) for commercial packaged boilers than are required for residential boilers under ASHRAE 103–1993 annual fuel utilization efficiency (AFUE) (*e.g.,* gravity and viscosity uses ASTM D396–90A and fuel oil analysis requirements are different than for commercial). Weil-McLain suggested DOE correct this to allow the same fuel oil analysis for both residential and commercial efficiency testing. (Weil-McLain, No. 41 at p. 13) DOE reviewed the fuel oil specifications of ASTM D396–14a and the requirements found in ASHRAE Standard 103–1993 (incorporated by reference for the DOE test procedure for residential boilers found at 10 CFR part 430 subpart B appendix N). While they are similar, they are not identical and DOE could not confirm that they would yield similar results. Weil-McLain did not provide any evidence that the two methods were equivalent. Therefore, DOE is not adopting additional provisions for fuel oil analysis at this time.

Weil-McLain noted that ANSI/AHRI Standard 1500–2015 allows for two different water meter calibrating methods, one of which does not meet certain accuracy requirements found in table C1 of ANSI/AHRI Standard 1500–2015, and therefore recommends that DOE require water meters in all cases to meet table C1 in order to avoid inaccurate efficiency results. (Weil-McLain, No. 41 at p. 13) DOE notes that the March 2016 NOPR did not propose to adopt section C2.7.2.2.2, which is the alternative water meter calibration method that Weil-Mclain referred to. This final rule adopts only the instrument accuracy requirements of Table C1 in ANSI/AHRI Standard 1500–2015 and not section C2.7.2.2.2about which Weil-McLain expressed concern.

I. Other Issues

1. Burners for Oil-Fired Commercial Packaged Boilers

In the March 2016 NOPR, DOE proposed a set of provisions for determining the burner to be used in testing an oil-fired commercial packaged boiler. DOE proposed that the unit be tested with the particular make and model of burner certified by the manufacturer. If multiple burners are specified in the installation and operation manual or in one or more certification reports, then DOE proposed that any of the listed burners may be used for testing and all must be certified to the Department.

In response, AHRI requested additional specificity in the test procedure for a situation in which manufacturer's specifications do not prescribe a specific burner or burners, particularly with respect to firing rate and/or spray geometry. (AHRI, Public Meeting Transcript, No. 34 at pp. 93–94) DOE notes that under its proposed regulations in the March 2016 NOPR, manufacturers would be required to certify the make and model of the burner used during certification testing, and that this make and model would be used for testing. DOE believes this is sufficiently clear and is adopting the language it proposed in the March 2016 NOPR.

2. Certification and Enforcement Provisions

DOE proposed a provision in the March 2016 NOPR that it would conduct enforcement testing in both steam mode and hot water mode for those commercial packaged boilers capable of producing both and both results must demonstrate compliance with the applicable energy conservation standards. Lochinvar objected to the proposal, stating that there is already a method in place for determining hot water commercial packaged boiler efficiency based on the rating in steam mode, and that the requirement would add test burden. (Lochinvar, No. 43 at p. 11) In response, DOE notes that this is not a certification requirement for manufacturers, but is a provision that indicates the procedure DOE will follow when conducting its own enforcement testing. Namely, DOE would conduct an enforcement test in each mode (steam and hot water) for those commercial packaged boilers models capable of operating in either mode rather than using the measured efficiency for steam mode to determine compliance in hot water mode. DOE would use the appropriate result to evaluate compliance with the respective standards. DOE notes that this does not add test burden for manufacturers and is adopting this provision as part of this final rule.

3. Part-Load Testing

In the March 2016 NOPR, DOE tentatively concluded that part-load testing was not warranted and therefore did not propose any new test procedure provisions towards that end. In response, Lochinvar supported this conclusion and, along with NEEA, the Efficiency Advocates, and the CA IOUs, suggested using ASHRAE 155 in the future to capture part-load performance. (Lochinvar, No. 43 at p. 11; NEEA, No. 44 at pp. 2–3; Efficiency Advocates, No. 45 at p. 3; CA IOUs, No. 48 at p. 5) Weil-McLain suggested that part-load efficiency should not be mandated, but also that it would be prudent to regulate how part-load efficiency is measured in order to ensure comparable part-load ratings. (Weil-McLain, No. 41 at p. 19) DOE does not intend to develop a test procedure at this time for the purpose of measuring part-load efficiency. DOE believes the ratings produced by its test procedure provide a sufficient basis to give the purchaser enough information when choosing between commercial packaged boilers models. DOE may in the future adopt a test procedure that includes part-load measurements.

4. Stack Temperature Adjustment

In the March 2016 NOPR, DOE proposed a calculation to adjust the stack temperature when using steam mode combustion efficiency ratings to represent the combustion efficiency in hot water mode. DOE's existing test procedure allows commercial packaged boilers with fuel input rate greater than 2,500,000 Btu/h capable of producing steam and hot water to use the combustion efficiency as measured in steam mode to represent the combustion efficiency in hot water mode. 10 CFR 431.86(c)(2)(iii)(B). DOE received waiver requests from Cleaver-Brooks, Johnston Boiler, Superior Boiler Works, and York-Shipley (AESYS) that asked to use an adjustment to the stack temperature when using this rating method in order to more accurately reflect the combustion efficiency of a commercial packaged boiler operating in hot water

[8] The American Petroleum Institute gravity, or API gravity, is a measure of how heavy or light a petroleum liquid is compared to water: if its API gravity is greater than 10, it is lighter and floats on water; if less than 10, it is heavier and sinks.

mode. The adjustment is given by Equation 1:

$$T_{F,SS,adjusted} = T_{F,SS} - T_{sat} + 180 \qquad \textbf{Equation 1}$$

where $T_{F,SS,adjusted}$ is the adjusted steady-state flue temperature used for subsequent calculations of combustion efficiency, $T_{F,SS}$ is the measured steady-state flue temperature during combustion efficiency testing in steam mode, T_{sat} is the saturated steam temperature that corresponds to the measured steam pressure, and 180 is the hot water outlet temperature.

In response, Lochinvar agreed with adopting the method and indicated that the theory behind the correction is sound and results should be conservative. (Lochinvar, No. 43 at p. 10) Weil-McLain did not support adopting the method because not all boiler designs are the same and the method may not reflect accurate ratings for water mode. (Weil-McLain, No. 41 at p. 7) Crown Boiler suggested that the adjustment may be unreliable, and ABMA questioned to what extent testing was done to develop the equation. (Crown Boiler, Public Meeting Transcript, No. 34 at p. 133–135; ABMA, Public Meeting Transcript, No. 34 at p. 133–135)

DOE considered data from the AHRI directory [9] (as of May 2015) for commercial packaged boilers with rated inputs greater than 2,500,000 and for which differing combustion and thermal efficiencies were listed for the same model (57 models). DOE found that on average combustion efficiency in hot water mode was approximately 0.8-percent higher than that for steam and would anticipate a similar adjustment from the proposed methodology. However, while several manufacturers requested the adjustment methodology as part of the waiver process, no data were submitted to validate the equation. DOE is therefore not adopting this adjustment methodology. Manufacturers wishing to rate a basic model with a higher combustion efficiency in hot water mode can perform a separate combustion efficiency test in that mode.

5. Oxygen Combustion Analyzer

ANSI/AHRI Standard 1500–2015 includes a methodology for using an O_2 combustion analyzer for measurements of combustion efficiency, and DOE proposed adopting this methodology by incorporating by reference this industry standard. AHRI expressed its support for the provision because the O_2 methodology is essentially equivalent to the CO_2 methodology and that AHRI had completed analysis to verify this. (AHRI, Public Meeting Transcript, No. 34 at p. 95) DOE is adopting this provision in the final rule.

6. Rounding Requirements

DOE proposed to clarify its rounding procedures by requiring that the combustion and thermal efficiency results be rounded to the nearest tenth of one percent. In response, ACEEE suggested that reporting to such a level of precision means little to the customer, has little justification when considering the 5-percent tolerance on the final rating, and instead suggested rounding to a whole number. (ACEEE, Public Meeting Transcript, No. 34 at pp. 126–128) Bradford White similarly did not see value in rounding to the nearest tenth of a percent and instead recommended rounding to the nearest percent. (Bradford White, No. 39 at p. 6) Lochinvar, however, supported the DOE proposal to round to the nearest tenth of a percent. (Lochinvar, No. 43 at p. 10)

DOE notes that the AHRI certification program,[10] which uses BTS–2000 for certification testing, expresses thermal and combustion efficiency ratings to the nearest tenth of one percent. Also, the energy conservation standards for commercial packaged boilers at 10 CFR 431.87 are expressed to the tenth of one percent. DOE is therefore adopting a provision in this final rule to clarify that thermal and combustion efficiency ratings are to be rounded to the nearest tenth of one percent as was proposed in the March 2016 NOPR.

IV. Procedural Issues and Regulatory Review

A. Review Under Executive Order 12866

The Office of Management and Budget (OMB) has determined that test procedure rulemakings do not constitute ''significant regulatory actions'' under section 3(f) of Executive Order 12866, Regulatory Planning and Review, 58 FR 51735 (Oct. 4, 1993). Accordingly, this action was not subject to review under the Executive Order by the Office of Information and Regulatory Affairs (OIRA) in the Office of Management and Budget (OMB).

B. Review Under the Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) requires that when an agency promulgates a final rule under 5 U.S.C. 553, after being required by that section or any other law to publish a general notice of proposed rulemaking, the agency shall prepare a final regulatory flexibility analysis (FRFA), unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. As required by Executive Order 13272, ''Proper Consideration of Small Entities in Agency Rulemaking,'' 67 FR 53461 (August 16, 2002), DOE published procedures and policies on February 19, 2003 to ensure that the potential impacts of its rules on small entities are properly considered during the DOE rulemaking process. 68 FR 7990. DOE has made its procedures and policies available on the Office of the General Counsel's Web site: *http://energy.gov/gc/office-general-counsel.*

This final rule prescribes test procedure amendments that will be used to determine compliance with energy conservation standards for commercial packaged boilers. The amendments (1) clarify the definitions for commercial packaged boilers; (2) incorporate by reference the industry standard ANSI/AHRI Standard 1500–2015; (3) establish provisions for verifying rated input during enforcement testing; (4) adopt an optional field test and an optional metric conversion calculation; (5) modify the inlet and outlet water temperature requirements for hot water tests; (6) establish new temperature for combustion air; and (7) provide additional set-up and instrumentation requirements.

DOE reviewed this rule under the provisions of the Regulatory Flexibility Act and DOE's own procedures and policies published on February 19, 2003. 68 FR 7990. DOE has concluded that this rule will not have a significant impact on a substantial number of small entities. The factual basis for this certification is as follows.

The Small Business Administration (SBA) considers a business entity to be

[9] Available at: *https://www.ahridirectory.org/ahridirectory/pages/home.aspx.*

[10] For AHRI directory, see: *https://www.ahridirectory.org/ahridirectory/pages/cblr/defaultSearch.aspx.*

a small business, if, together with its affiliates, it employs less than a threshold number of workers specified in 13 CFR part 121. These size standards and codes are established by the North American Industry Classification System (NAICS). The threshold number for NAICS classification code 333414, which applies to ''heating equipment (except warm air furnaces) manufacturing' and includes commercial packaged boilers, is 500 employees.

To estimate the number of companies that could be small business manufacturers of the equipment affected by this rulemaking, DOE conducted a market survey using available public information to identify potential small manufacturers. DOE's research involved reviewing the DOE Compliance Certification Management System database (CCMS), AHRI directory (a product database), individual company Web sites, and marketing research tools (*e.g.,* Hoover's reports) to create a list of all domestic small business manufacturers of equipment affected by this rulemaking. DOE identified 21[11] manufacturers of commercial packaged boilers as domestic small business manufacturers. DOE was able to discuss the DOE test procedures with 5 of these small businesses prior to publication of the March 2016 NOPR. DOE also obtained information about small businesses and potential impacts on small businesses while interviewing manufacturers in the context of the standards rulemaking. However, DOE did not receive any detailed quantifications about the incremental burden small businesses would face as compared to larger businesses in light of the proposed methods.

With respect to potential costs associated with the test procedure amendments, DOE notes that several amendments are clarifications or clerical changes that will not impose costs on small manufacturers. The clarifications made to the definitions relevant for commercial packaged boilers do not modify the scope of the test procedure nor do they impose additional test burden. DOE is not modifying the scope of coverage or substantively modifying its definitions in such a way that would result in the need to certify compliance for equipment for which certification is not already required. As a result, manufacturers that are small businesses are not expected to have to certify commercial packaged boilers for which they are not already certifying compliance.

Also, updating the referenced test procedure to ANSI/AHRI Standard 1500–2015 is not anticipated to impose additional costs on manufacturers. ANSI/AHRI Standard 1500–2015 is an industry standard that replaces BTS–2000, which is currently incorporated by reference in the DOE test procedure. ANSI/AHRI Standard 1500–2015 uses essentially the same test method found in BTS–2000. While ANSI/AHRI Standard 1500–2015 removed outdated instrumentation references from BTS–2000, DOE does not believe manufacturers are using instrumentation that could not meet the requirements found in ANSI/AHRI Standard 1500–2015. ANSI/AHRI Standard 1500–2015 also increases the allowable steam pressure for steam tests as compared to BTS–2000, which accommodates testing of larger commercial packaged boilers but does not impose additional costs on manufacturers, including small manufacturers.

DOE is not adopting its proposed provisions for certification of fuel input rate, which had the potential of requiring manufacturers to re-certify previously certified commercial packaged boilers. The provisions DOE adopts in this final rule regarding rated input pertain only to the process DOE will use when conducting assessment and enforcement testing and are for manufacturer information only. Therefore, these changes will pose no additional burden to small manufacturers of commercial packaged boilers.

DOE is adopting several provisions in this final rule that may reduce the burden associated with certifying compliance for commercial packaged boilers. Currently, laboratory testing for thermal or combustion efficiency, as applicable, is required for the certification of all commercial packaged boilers regardless of size. As described in the March 2016 NOPR and in section III.E, DOE acknowledges that some commercial packaged boilers because of their size may only be fully assembled at their site of installation and therefore the requirement to test for efficiency in a laboratory would require a manufacturer to assemble the unit at the laboratory for testing, tear it down and ship it to the site for installation, and re-build it—a process that may be expensive, if not impracticable. DOE is adopting an optional field test methodology based on the combustion efficiency test for commercial packaged boilers with rated input greater than 5,000,000 Btu/h as part of this final rule. As described in the March 2016 NOPR, the optional field test is intended to reduce test burden as compared to the existing DOE test procedure for thermal efficiency. DOE has previously noted that the combustion efficiency test is less burdensome because of its shorter duration and reduced instrumentation as compared to the thermal efficiency test. Therefore, by providing a simpler, shorter test method that only requires a unit to be assembled once, the optional field test provisions are anticipated to reduce test burden for small manufacturers that manufacturer these large commercial packaged boilers, as compared to the current test procedure.

Similarly, DOE is adopting an optional conversion calculation to obtain a thermal efficiency rating from a combustion efficiency test. The calculation allows small manufacturers to test the combustion efficiency (in a laboratory, manufacturer facility, or in the field) for steam commercial packaged boilers with rated input greater than 5,000,000 Btu/h and convert to a thermal efficiency rating. As described regarding the field test option, this optional calculation is anticipated to reduce test burden by allowing manufacturers of large equipment to use a simpler and shorter test (the combustion efficiency test, either in a laboratory or in the field).

Some test procedure amendments in this final rule may require additional costs for manufacturers, including small manufacturers. DOE is adopting more specific inlet piping provisions based on comments on the March 2016 NOPR that will increase the accuracy of the inlet water temperature measurement. The set-up change will require additional segments of pipe and tee connections, and a temperature sensor, however DOE believes most if not all manufacturers already have these items. The set-up change may result in a longer set-up time which DOE estimates to be one additional hour per test. Based on current wage information from the Bureau of Labor Statistics (BLS) for a mechanical engineering technician,[12] DOE estimates the additional cost per test (hourly labor cost multiplied by number of hours) to be $41.

DOE is also adopting water temperature limits in this final rule that will reduce ambiguity in ratings and provide for a more repeatable test. In the

[11] In the March 2016 NOPR, DOE identified 23 small businesses; however, of those 23, one small manufacturer left the market and another is considered large and therefore the count is now 21.

[12] Hourly labor cost is estimated by multiplying the hourly wage for a mechanical engineering technician by 1.5 to account for benefits. Based on data from the BLS, the mean hourly wage for a mechanical engineering technician (occupation code 17–3027) is $27.11. See: *http://www.bls.gov/oes/current/oes173027.htm#nat.*

NOPR, DOE considered that a reduction in the temperature rise across a commercial packaged boilers would proportionally increase the water flow rate required. Such an increase may have necessitated facility improvements for manufacturer and third-party laboratories, specifically by installing larger pumps to meet the increase water demand, and DOE received several comments suggesting this would be the case in response to the March 2016 NOPR. ABMA suggested that the proposed test procedure could be particularly harmful to small entities. ABMA indicated that the example DOE provided for a 10 million Btu/h was inadequate and that it is not abnormal for a boiler to reach 3 times that size. They suggested that without an AEDM, the ratio would apply to the required larger pump size, weigh tanks, scales etc. and that applying the scaling factor of 3 to the $3,000 pump cost in the NOPR would result in a $9,000 pump. Additionally, ABMA stated that scaling the 500 gpm flow rate would yield 1,500 gpm requiring new weigh tanks and scales and possibly a new cooling tower which could reach nearly $750,000. (ABMA, No. 38 at p. 5) However, in this final rule DOE is adopting water temperature limits that are more closely aligned with the current test procedure and reduce the allowable range of inlet water temperature for non-condensing commercial packaged boilers. For non-condensing commercial packaged boilers that already utilize a recirculating loop during testing, the amended test procedure standardizes the temperature rise across the commercial packaged boiler which may require slight adjustment of flow rates compared to current tests but does not require any additional set-up. For non-condensing commercial packaged boilers that do not currently use a recirculating loop, manufacturers may choose to use a recirculating loop in order to achieve the 80 °F ± 5 °F inlet water temperature. DOE estimates the additional set-up time required to be one hour per test, and this additional cost per test to be $41 (hourly labor cost for mechanical engineering technician multiplied by number of hours). For condensing commercial packaged boilers, DOE is not modifying the water temperature requirements.

In the March 2016 NOPR DOE proposed that steam tests occur at the lowest steam pressure at which the steam quality requirement of 98-percent is achieved by starting at atmospheric pressure and increasing incrementally. In response ABMA and Weil-McLain commented that the requirement to incrementally increase steam pressure would impose undue test burden. (ABMA, No. 38 at p. 4; Weil-McLain, No. 41 at p. 16) However, in the NOPR DOE estimated the cost of the time and fuel consumed for each test to be approximately $253 based on two additional hours of mechanical engineering technician labor and natural gas use for a 10 million Btu/h commercial packaged boiler.[13] DOE continues to believe this amount is modest in comparison to the overall cost of product development and certification.

With respect to ambient conditions, based on comments received regarding the additional burden of tightly constraining ambient temperature and humidity, DOE is not adopting tighter restrictions on the ambient humidity and is adopting a broader range of allowable ambient temperatures as compared with the March 2016 NOPR. Several commenters suggested that the proposed ambient conditions in the March 2016 NOPR would result in additional test burden by forcing manufacturers to spend significant resources in upgrading facilities and HVAC capabilities. (ABMA, No. 38 at pp. 4, 6; Bradford White, No. 39 at p. 4; Burnham, No. 40 at p. 6; CA IOUs, No. 48 at pp. 3–4; AHRI, No. 46 at p. 4; Raypak, No. 47 at p. 5; Lochinvar, No. 43 at p. 8; Weil-McLain, No. 41 at pp. 2, 14) Weil-McLain suggested that DOE understated the costs associated with laboratory facility upgrades. (Weil-McLain, No. 41 at p.2) Bradford White estimated that the cost of an environmental chamber would be approximately $120,000; AHRI suggested the cost could be from $100,000 to over $1,000,000; Burnham suggested that the cost would be approximately $125,000 for a 20-ton cooling capacity laboratory HVAC system; and Raypak estimated that a facility capable of conditioning combustion air to support a 4,000,000 Btu/h boiler would be $500,000 to $1,500,000. (Bradford White, No. 39 at p. 4; AHRI, No. 46 at p. 4; Burnham, No. 40 at p. 6; Raypak, No. 47 at p. 6) Lochinvar indicated that adding the additional water and environmental test limitations beyond those in AHRI 1500 will have a substantial impact on all manufacturers which will be more significant for small manufacturers with less well equipped labs. (Lochinvar, No. 43 at p. 11)

However, DOE is not adopting the ambient condition requirements it proposed in the March 2016 NOPR. For ambient humidity, DOE is maintaining the current 80% maximum relative humidity requirement and is adopting a broader range of allowable ambient temperatures than proposed in the March 2016 NOPR. With regard to the ambient room temperature requirements in this final rule, DOE notes that the ranges of 65 °F to 100 °F for non-condensing commercial packaged boilers and 65 °F to 85 °F for condensing commercial packaged boilers are intended to prevent the test from being conducted in extreme ambient conditions, and that these allowable temperature ranges are typical for building heating, ventilating, and air-conditioning systems in normal operating conditions. Additionally, the temperature ranges being adopted are consistent with those found in DOE's test procedure for residential boilers (10 CFR part 430 subpart B appendix N) and in the draft version of ASHRAE Standard 155P published in August 2016 for public review, which several commenters have requested DOE adopt in the future as the basis for the DOE commercial packaged boiler test procedure. DOE does not believe that the ambient temperature requirements being adopted will require facility or equipment upgrades.

In the March 2016 NOPR, DOE proposed requiring digital data acquisition for certain parameters in the commercial packaged boilers test procedure. DOE acknowledged that the requirement would have some one-time costs for manufacturers that do not currently have the necessary equipment. ABMA stated that digital data acquisition has its benefits, however it may create heavy financial burden for small manufacturers and should therefore be optional. (ABMA, No. 38 at p. 5) Raypak believed that the proposed digital data acquisition was too burdensome, particularly for small business manufacturers who would need to purchase data acquisition equipment at costs substantially higher than DOE estimates in the NOPR. (Raypak, No. 47 at p. 4) However, commenters did not present specific cost estimates for necessary equipment. DOE nevertheless reexamined its estimates for digital data acquisition and added instrumentation that may also be necessary to meet the requirements and the revised cost estimates are found in Table IV.1. The data acquisition system could be used by the manufacturer or laboratory to test all commercial packaged boiler models going forward.

[13] The price of natural gas is the 5-year average (May 2009 to May 2014) obtained from the ''U.S. Price of Natural Gas Sold to Commercial Consumers'' from U.S. Energy Information Administration (EIA) (Available at: *http://www.eia.gov/dnav/ng/hist/n3020us3m.htm).*

TABLE IV.1—ESTIMATED ONE-TIME COSTS ASSOCIATED WITH DIGITAL DATA ACQUISITION

Description	Cost
Laptop	$1,500
Data Acquisition Module	2,000
Data Acquisition Software	3,000
Instrumentation (Resistance Temperature Detectors, Thermocouples)	1,000
Initial Purchase, Installation and Setup (40 hours laboratory technician time × 41/hour)	1,640
Total	9,140

DOE does not believe that manufacturers are required to re-test and re-certify existing basic models that are already certified as complying with DOE's energy conservation standards as a result of this test procedure final rule. As part of its energy conservation standards rulemaking for commercial packaged boilers, DOE found that there are 595 individual models attributed to 8 small manufacturers in the CCMS database. While this results in an average of 74 individual models per small manufacturer, DOE estimates that small manufacturers on average certify 10 basic models (approximately 7 individual models per basic model). Based on discussions with third-party test laboratories, DOE estimates that a laboratory test using a third-party laboratory would cost a manufacturer approximately $5,000. Using publicly available information from Hoovers, Manta, and Glassdoor, DOE estimated revenues for small manufacturers listed in the CCMS database. The average annual for a small manufacturer revenue was $29.6 million. If a small manufacturer were to test 7 basic models with a third-party laboratory, DOE estimates that this would cost $35,000 which represents approximately 0.1% of revenue. (Note: DOE believes this is conservative, as most manufacturers would use their own laboratories for testing at a lower cost.)

In the case of using their own facilities and conducting tests in-house, as shown in Table IV.1, DOE estimates the one-time costs associated with data acquisition to be $9,140. DOE continues to believe these costs are modest in comparison to small manufacturer revenues and to the overall cost of product development and certification. For water tests, the additional burden due to the inlet piping set-up and recirculating loop total two additional hours of mechanical engineering technician labor or $82. For steam tests, DOE estimated that two additional hours of mechanical engineering technician labor and natural gas use would cost approximately $253. DOE believes that these additional costs for each test attributable to the inlet piping set-up, recirculating loop set-up, and steam pressure adjustment to be modest in comparison to the overall cost of testing.

Further, DOE notes that manufacturers may use the AEDM process for certifying compliance in order to reduce burden. Manufacturers may develop an AEDM based on test data for smaller units in a basic model group and apply the AEDM for larger sizes of commercial packaged boilers. Additionally, the field test option adopted in this final rule provides a test method by which a manufacturer of large equipment (*i.e.* greater than 5,000,000 Btu/h rated input) can test and certify such commercial packaged boilers in the field if they do not have facilities capable of meeting the requirements of the standard laboratory test method.

Additional compliance flexibilities may be available for small manufacturers through other means. EPCA provides that a manufacturer whose annual gross revenue from all of its operations does not exceed $8 million may apply for an exemption from all or part of an energy conservation standard for a period not longer than 24 months after the effective date of a final rule establishing the standard. Additionally, Section 504 of the Department of Energy Organization Act, 42 U.S.C. 7194, provides authority for the Secretary to adjust a rule issued under EPCA in order to prevent ''special hardship, inequity, or unfair distribution of burdens'' that may be imposed on that manufacturer as a result of such rule. Manufacturers should refer to 10 CFR part 1003 for additional details.

For the reasons stated previously, DOE concludes that this final rule will not have a significant economic impact on a substantial number of small entities, so DOE has not prepared a regulatory flexibility analysis for this rulemaking. DOE will provide its certification and supporting statement of factual basis to the Chief Counsel for Advocacy of the SBA for review under 5 U.S.C. 605(b).

C. Review Under the Paperwork Reduction Act of 1995

Manufacturers of commercial packaged boilers must certify to DOE that their equipment complies with any applicable energy conservation standards. To certify compliance, manufacturers must first obtain test data for their equipment according to the DOE test procedures, including any amendments adopted for those test procedures. DOE has established regulations for the certification and recordkeeping requirements for all covered consumer products and commercial equipment, including commercial packaged boilers. (See generally 10 CFR part 429.) The collection-of-information requirement for the certification and recordkeeping is subject to review and approval by OMB under the Paperwork Reduction Act (PRA). This requirement has been approved by OMB under OMB control number 1910–1400. Public reporting burden for the certification is estimated to average 30 hours per manufacturer, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

Notwithstanding any other provision of the law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with, a collection of information subject to the requirements of the PRA, unless that collection of information displays a currently valid OMB Control Number.

D. Review Under the National Environmental Policy Act of 1969

In this final rule, DOE amends its test procedure for commercial packaged boilers. DOE has determined that this rule falls into a class of actions that are categorically excluded from review under the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*) and DOE's implementing regulations at 10 CFR part 1021. Specifically, this rule amends an existing rule without affecting the amount, quality or distribution of energy usage, and, therefore, will not result in any environmental impacts. Thus, this rulemaking is covered by Categorical Exclusion A5 under 10 CFR part 1021, subpart D, which applies to any rulemaking that interprets or amends an existing rule without changing the environmental effect of that rule. Accordingly, neither an environmental assessment nor an environmental impact statement is required.

E. Review Under Executive Order 13132

Executive Order 13132, ''Federalism,'' 64 FR 43255 (August 4, 1999), imposes certain requirements on agencies formulating and implementing policies or regulations that preempt State law or that have Federalism implications. The Executive Order requires agencies to

examine the constitutional and statutory authority supporting any action that would limit the policymaking discretion of the States and to carefully assess the necessity for such actions. The Executive Order also requires agencies to have an accountable process to ensure meaningful and timely input by State and local officials in the development of regulatory policies that have Federalism implications. On March 14, 2000, DOE published a statement of policy describing the intergovernmental consultation process it will follow in the development of such regulations. 65 FR 13735. DOE examined this final rule and determined that it will not have a substantial direct effect 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. EPCA governs and prescribes Federal preemption of State regulations as to energy conservation for the products that are the subject of this final rule. States can petition DOE for exemption from such preemption to the extent, and based on criteria, set forth in EPCA. (42 U.S.C. 6297(d)) No further action is required by Executive Order 13132.

F. Review Under Executive Order 12988

Regarding the review of existing regulations and the promulgation of new regulations, section 3(a) of Executive Order 12988, ''Civil Justice Reform,'' 61 FR 4729 (Feb. 7, 1996), imposes on Federal agencies the general duty to adhere to the following requirements: (1) eliminate drafting errors and ambiguity; (2) write regulations to minimize litigation; (3) provide a clear legal standard for affected conduct rather than a general standard; and (4) promote simplification and burden reduction. Section 3(b) of Executive Order 12988 specifically requires that Executive agencies make every reasonable effort to ensure that the regulation (1) clearly specifies the preemptive effect, if any; (2) clearly specifies any effect on existing Federal law or regulation; (3) provides a clear legal standard for affected conduct while promoting simplification and burden reduction; (4) specifies the retroactive effect, if any; (5) adequately defines key terms; and (6) addresses other important issues affecting clarity and general draftsmanship under any guidelines issued by the Attorney General. Section 3(c) of Executive Order 12988 requires Executive agencies to review regulations in light of applicable standards in sections 3(a) and 3(b) to determine whether they are met or it is unreasonable to meet one or more of them. DOE has completed the required review and determined that, to the extent permitted by law, this final rule meets the relevant standards of Executive Order 12988.

G. Review Under the Unfunded Mandates Reform Act of 1995

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA) requires each Federal agency to assess the effects of Federal regulatory actions on State, local, and Tribal governments and the private sector. Public Law 104–4, sec. 201 (codified at 2 U.S.C. 1531). For a regulatory action resulting in a rule that may cause the expenditure by State, local, and Tribal governments, in the aggregate, or by the private sector of $100 million or more in any one year (adjusted annually for inflation), section 202 of UMRA requires a Federal agency to publish a written statement that estimates the resulting costs, benefits, and other effects on the national economy. (2 U.S.C. 1532(a), (b)) The UMRA also requires a Federal agency to develop an effective process to permit timely input by elected officers of State, local, and Tribal governments on a proposed ''significant intergovernmental mandate,'' and requires an agency plan for giving notice and opportunity for timely input to potentially affected small governments before establishing any requirements that might significantly or uniquely affect small governments. On March 18, 1997, DOE published a statement of policy on its process for intergovernmental consultation under UMRA. 62 FR 12820; also available at *http://energy.gov/gc/office-general-counsel.* DOE examined this final rule according to UMRA and its statement of policy and determined that the rule contains neither an intergovernmental mandate, nor a mandate that may result in the expenditure of $100 million or more in any year, so these requirements do not apply.

H. Review Under the Treasury and General Government Appropriations Act, 1999

Section 654 of the Treasury and General Government Appropriations Act, 1999 (Public Law 105–277) requires Federal agencies to issue a Family Policymaking Assessment for any rule that may affect family well-being. This final rule will not have any impact on the autonomy or integrity of the family as an institution. Accordingly, DOE has concluded that it is not necessary to prepare a Family Policymaking Assessment.

I. Review Under Executive Order 12630

DOE has determined, under Executive Order 12630, ''Governmental Actions and Interference with Constitutionally Protected Property Rights'' 53 FR 8859 (March 18, 1988), that this regulation will not result in any takings that might require compensation under the Fifth Amendment to the U.S. Constitution.

J. Review Under Treasury and General Government Appropriations Act, 2001

Section 515 of the Treasury and General Government Appropriations Act, 2001 (44 U.S.C. 3516 note) provides for agencies to review most disseminations of information to the public under guidelines established by each agency pursuant to general guidelines issued by OMB. OMB's guidelines were published at 67 FR 8452 (Feb. 22, 2002), and DOE's guidelines were published at 67 FR 62446 (Oct. 7, 2002). DOE has reviewed this final rule under the OMB and DOE guidelines and has concluded that it is consistent with applicable policies in those guidelines.

K. Review Under Executive Order 13211

Executive Order 13211, ''Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use,'' 66 FR 28355 (May 22, 2001), requires Federal agencies to prepare and submit to OMB, a Statement of Energy Effects for any significant energy action. A ''significant energy action'' is defined as any action by an agency that promulgated or is expected to lead to promulgation of a final rule, and that (1) is a significant regulatory action under Executive Order 12866, or any successor order; and (2) is likely to have a significant adverse effect on the supply, distribution, or use of energy; or (3) is designated by the Administrator of OIRA as a significant energy action. For any significant energy action, the agency must give a detailed statement of any adverse effects on energy supply, distribution, or use if the regulation is implemented, and of reasonable alternatives to the action and their expected benefits on energy supply, distribution, and use.

This regulatory action is not a significant regulatory action under Executive Order 12866. Moreover, it would not have a significant adverse effect on the supply, distribution, or use of energy, nor has it been designated as a significant energy action by the Administrator of OIRA. Therefore, it is not a significant energy action, and, accordingly, DOE has not prepared a Statement of Energy Effects.

L. Review Under Section 32 of the Federal Energy Administration Act of 1974

Under section 301 of the Department of Energy Organization Act (Public Law 95–91; 42 U.S.C. 7101), DOE must comply with section 32 of the Federal Energy Administration Act of 1974, as amended by the Federal Energy Administration Authorization Act of 1977. (15 U.S.C. 788; FEAA) Section 32 essentially provides in relevant part that, where a proposed rule authorizes or requires use of commercial standards, the notice of proposed rulemaking must inform the public of the use and background of such standards. In addition, section 32(c) requires DOE to consult with the Attorney General and the Chairman of the Federal Trade Commission (FTC) concerning the impact of the commercial or industry standards on competition.

The modifications to the test procedure for commercial packaged boilers adopted in this final rule incorporate testing methods contained in certain sections of the commercial standard ANSI/AHRI Standard 1500–2015. DOE has evaluated this standard and is unable to conclude whether it fully complies with the requirements of section 32(b) of the FEAA (*i.e.,* whether it was developed in a manner that fully provides for public participation, comment, and review). DOE has consulted with both the Attorney General and the Chairwoman of the FTC about the impact on competition of using the methods contained in this standard and has received no comments objecting to their use.

M. Congressional Notification

As required by 5 U.S.C. 801, DOE will report to Congress on the promulgation of this rule before its effective date. The report will state that it has been determined that the rule is not a ''major rule'' as defined by 5 U.S.C. 804(2).

N. Description of Materials Incorporated by Reference

In this final rule, DOE incorporates by reference the following:

Part 429—ANSI/AHRI Standard 1500–2015, (''ANSI/AHRI Standard 1500–2015''), ''2015 Standard for Performance Rating of Commercial Space Heating Boilers,'' ANSI approved November 28, 2014: Figure C9, Suggested Piping Arrangement for Hot Water Boilers.

Part 431—ANSI/AHRI Standard 1500–2015, (''ANSI/AHRI Standard 1500–2015''), ''2015 Standard for Performance Rating of Commercial Space Heating Boilers,'' ANSI approved November 28, 2014: Section 3, ''Definitions,'' Section 5, ''Rating Requirements,'' Appendix C, ''Methods of Testing for Rating Commercial Space Heating Boilers—Normative,'' Appendix D, ''Properties of Saturated Steam—Normative,'' and Appendix E, ''Correction Factors for Heating Values of Fuel Gases—Normative.''

ANSI/AHRI Standard 1500–2015 is an industry-accepted test procedure that provides methods, requirements, and calculations for determining the thermal and/or combustion efficiency of a commercial space heating boiler. ANSI/AHRI Standard 1500–2015 is available at: *http://www.ahrinet.org/App_Content/ahri/files/standards%20pdfs/ANSI%20standards%20pdfs/ANSI.AHRI_Standard_1500–2015.pdf.*

V. Approval of the Office of the Secretary

The Secretary of Energy has approved publication of this final rule.

List of Subjects

10 CFR Part 429

Administrative practice and procedure, Confidential business information, Energy conservation, Household appliances, Incorporation by reference, Reporting and recordkeeping requirements.

10 CFR Part 431

Administrative practice and procedure, Confidential business information, Energy conservation test procedures, Incorporation by reference, Reporting and recordkeeping requirements, Test procedures.

Issued in Washington, DC, on October 21, 2016.

Kathleen B. Hogan,

Deputy Assistant Secretary for Energy Efficiency, Energy Efficiency and Renewable Energy.

For the reasons stated in the preamble, DOE amends parts 429 and 431 of Chapter II of Title 10, Code of Federal Regulations as set forth below:

PART 429—CERTIFICATION, COMPLIANCE, AND ENFORCEMENT FOR CONSUMER PRODUCTS AND COMMERCIAL AND INDUSTRIAL EQUIPMENT

■ 1. The authority citation for part 429 continues to read as follows:

Authority: 42 U.S.C. 6291—6317; 28 U.S.C. 2461 note.

■ 2. Section 429.4 is amended by adding paragraph (c)(2) to read as follows:

§ 429.4 Materials incorporated by reference.

* * * * *

(c) * * *

(2) AHRI Standard 1500–2015, (''ANSI/AHRI Standard 1500–2015''), ''2015 Standard for Performance Rating of Commercial Space Heating Boilers,'' ANSI approved November 28, 2014: Figure C9, Suggested Piping Arrangement for Hot Water Boilers; IBR approved for § 429.60.

* * * * *

■ 3. Section 429.11 is amended by revising paragraph (b) to read as follows:

§ 429.11 General sampling requirements for selecting units to be tested.

* * * * *

(b) The minimum number of units tested shall be no less than two, except where:

(1) A different minimum limit is specified in §§ 429.14 through 429.65 of this subpart; or

(2) Only one unit of the basic model is produced, in which case, that unit must be tested and the test results must demonstrate that the basic model performs at or better than the applicable standard(s). If one or more units of the basic model are manufactured subsequently, compliance with the default sampling and representations provisions is required.

■ 4. Section 429.60 is amended by:

■ a. Revising paragraphs (a) introductory text and (a)(1)(i);

■ b. Adding paragraphs (a)(3) and (4);

■ c. Revising paragraph (b)(2); and

■ d. Adding paragraphs (b)(3)(iii) and (b)(5).

The revisions and additions read as follows:

§ 429.60 Commercial packaged boilers.

(a) *Determination of represented value.* Manufacturers must determine the represented value, which includes the certified rating, for each basic model of commercial packaged boilers either by testing in accordance with § 431.86 of this chapter, in conjunction with the applicable sampling provisions, or by applying an AEDM.

(1) * * *

(i) If the represented value is determined through testing, the general requirements of § 429.11 are applicable, except that, if the represented value is determined through testing pursuant to § 431.86(c) of this chapter, the number of units selected for testing may be one; and

* * * * *

(3) The rated input for a basic model reported in accordance with paragraph (b)(2) of this section must be the

maximum rated input listed on the nameplate and in manufacturer literature for the commercial packaged boiler basic model.

(4) For a model of commercial packaged boiler capable of supplying either steam or hot water, representative values for steam mode must be based on performance in steam mode and representative values for hot water mode must be based on either the efficiency in hot water mode or steam mode in accordance with the test procedure in § 431.86 of this chapter and the provisions of this section.

(b) * * *

(2) Pursuant to § 429.12(b)(13), a certification report must include the following public, equipment-specific information:

(i) The manufacturer (including brand, if applicable) and model number of the burner;

(ii) The rated input in British thermal units per hour (Btu/h);

(iii) The representative value of combustion efficiency in percent (%) to the nearest tenth of one percent or the representative value of thermal efficiency in percent (%) to the nearest one tenth of one percent, as specified in § 431.87 of this chapter; and

(iv) For a basic model of commercial packaged boiler that cannot be tested using the standard inlet temperatures required in appendix A to subpart E of part 431, the average inlet water temperature measured at Point B in Figure C9 of ANSI/AHRI Standard 1500–2015 (incorporated by reference, see § 429.4) at which the model was tested.

(3) * * *

(iii) For basic models of commercial packaged boilers that have a rated input greater than 5,000,000 Btu/h, a declaration about whether the certified efficiency rating is based on testing conducted pursuant to § 431.86(c) of this chapter.

* * * * *

(5) Any field tested pursuant to § 431.86(c) of this chapter basic model of a commercial packaged boiler that has not been previously certified through testing or an AEDM must be certified within 15 days of commissioning.

* * * * *

■ 5. Section 429.70 is amended by adding paragraph (c)(2)(iii)(D) to read as follows:

§ 429.70 Alternative methods for determining energy efficiency and energy use.

* * * * *

(c) * * *

(2) * * *

(iii) * * *

(D) An AEDM that is validated based on test results obtained from one or more field tests (pursuant to § 431.86(c) of this chapter) can only be used to certify the performance of basic models of commercial packaged boilers with a certified rated input greater than 5,000,000 Btu/h.

* * * * *

■ 6. Section 429.110 is amended by revising paragraph (a)(3) and adding paragraph (c)(1)(iii) to read as follows:

§ 429.110 Enforcement testing.

(a) * * *

(3) Testing will be conducted at a laboratory accredited to the International Organization for Standardization (ISO)/International Electrotechnical Commission (IEC), ''General requirements for the competence of testing and calibration laboratories,'' ISO/IEC 17025:2005(E) (incorporated by reference; see § 429.4). If testing cannot be completed at an independent laboratory, DOE, at its discretion, may allow enforcement testing at a manufacturer's laboratory, so long as the lab is accredited to ISO/IEC 17025:2005(E) and DOE representatives witness the testing. In addition, for commercial packaged boilers with rated input greater than 5,000,000 Btu/h, DOE, at its discretion, may allow enforcement testing of a commissioned commercial packaged boiler in the location in which it was commissioned for use, pursuant to the test provisions at § 431.86(c) of this chapter, for which accreditation to ISO/IEC 17025:2005(E) would not be required.

* * * * *

(c) * * *

(1) * * *

(iii) Previously commissioned commercial packaged boilers with a certified rated input greater than 5,000,000 Btu/h. DOE may test a sample of at least one unit in the location in which it was commissioned for use.

* * * * *

■ 7. Section 429.134 is amended by adding paragraph (m) to read as follows:

§ 429.134 Product-specific enforcement provisions.

* * * * *

(m) *Commercial packaged boilers*—(1) *Verification of fuel input rate.* The fuel input rate of each tested unit will be measured pursuant to the test requirements of § 431.86 of this chapter. The results of the measurement(s) will be compared to the value of rated input certified by the manufacturer. The certified rated input will be considered valid only if the measurement(s) (either the measured fuel input rate for a single unit sample or the average of the measured fuel input rates for a multiple unit sample) is within two percent of the certified rated input.

(i) If the certified rated input is found to be valid, the certified rated input will serve as the basis for determination of the appropriate equipment class(es) and the mean measured fuel input rate will be used as the basis for calculation of combustion and/or thermal efficiency for the basic model.

(ii) If the certified rated input for a gas-fired commercial packaged boiler is found to be invalid, DOE will first attempt to increase or decrease the gas manifold pressure within the range specified in manufacturer's installation and operation manual shipped with the commercial packaged boiler being tested (or, if not provided in the manual, in supplemental instructions provided by the manufacturer pursuant to § 429.60(b)(4) of this chapter) to achieve the certified rated input (within two-percent). If the fuel input rate is still not within two-percent of the certified rated input, DOE will attempt to increase or decrease the gas inlet pressure within the range specified in manufacturer's installation and operation manual shipped with the commercial packaged boiler being tested (or, if not provided in the manual, in supplemental instructions provided by the manufacturer pursuant to § 429.60(b)(4) of this chapter) to achieve the certified rated input (within two-percent). If the fuel input rate is still not within two-percent of the certified rated input, DOE will attempt to modify the gas inlet orifice if the unit is equipped with one. If the fuel input rate still is not within two percent of the certified rated input, the mean measured fuel input rate (either for a single unit sample or the average of the measured fuel input rates for a multiple unit sample) will serve as the basis for determination of the appropriate equipment class(es) and calculation of combustion and/or thermal efficiency for the basic model.

(iii) If the certified rated input for an oil-fired commercial packaged boiler is found to be invalid, the mean measured fuel input rate will serve as the basis for determination of the appropriate equipment class(es) and calculation of combustion and/or thermal efficiency for the basic model.

(2) *Models capable of producing both hot water and steam.* For a model of commercial packaged boiler that is capable of producing both hot water and steam, DOE may measure the thermal or combustion efficiency as applicable (see § 431.87 of this chapter) for steam and/

or hot water modes. DOE will evaluate compliance based on the measured thermal or combustion efficiency in steam and hot water modes, independently.

PART 431—ENERGY EFFICIENCY PROGRAM FOR CERTAIN COMMERCIAL AND INDUSTRIAL EQUIPMENT

■ 8. The authority citation for part 431 continues to read as follows:

Authority: 42 U.S.C. 6291–6317; 28 U.S.C. 2461 note.

■ 9. Section 431.82 is amended by:
■ a. Revising the definitions of ''Combustion efficiency'' and ''Commercial packaged boiler;''
■ b. Adding in alphabetical order definitions for ''Field-constructed'' and ''Fuel input rate;''
■ c. Revising the definition for ''Packaged boiler;''
■ d. Removing the definitions for ''Packaged high pressure boiler'' and ''Packaged low pressure boiler;'' and
■ e. Adding in alphabetical order a definition for ''Rated input.''

The revisions and additions read as follows:

§ 431.82 Definitions concerning commercial packaged boilers.

* * * * *

Combustion efficiency for a commercial packaged boiler is a measurement of how much of the fuel input energy is converted to useful heat in combustion and is calculated as 100-percent minus percent losses due to dry flue gas, incomplete combustion, and moisture formed by combustion of hydrogen, as determined with the test procedures prescribed under § 431.86 of this chapter.

Commercial packaged boiler means a packaged boiler that meets all of the following criteria:

(1) Has rated input of 300,000 Btu/h or greater;

(2) Is, to any significant extent, distributed in commerce for space conditioning and/or service water heating in buildings but does not meet the definition of ''hot water supply boiler'' in this part;

(3) Does not meet the definition of ''field-constructed'' in this section; and

(4) Is designed to:

(i) Operate at a steam pressure at or below 15 psig;

(ii) Operate at or below a water pressure of 160 psig and water temperature of 250 °F; or

(iii) Operate at the conditions specified in both paragraphs (4)(i) and (ii) of this definition.

* * * * *

Field-constructed means custom-designed equipment that requires welding of structural components in the field during installation. For the purposes of this definition, welding does not include attachment using mechanical fasteners or brazing; any jackets, shrouds, venting, burner, or burner mounting hardware are not structural components.

* * * * *

Fuel input rate for a commercial packaged boiler means the maximum measured rate at which the commercial packaged boiler uses energy and is determined using test procedures prescribed under § 431.86 of this chapter.

* * * * *

Packaged boiler means a boiler that is shipped complete with heating equipment, mechanical draft equipment, and automatic controls and is usually shipped in one or more sections. If the boiler is shipped in more than one section, the sections may be produced by more than one manufacturer, and may be originated or shipped at different times and from more than one location.

* * * * *

Rated input means the maximum rate at which the commercial packaged boiler has been rated to use energy as indicated by the nameplate and in the manual shipped with the commercial packaged boiler.

* * * * *

■ 10. Section 431.85 is amended by revising paragraph (b) to read as follows:

§ 431.85 Materials incorporated by reference.

* * * * *

(b) *AHRI.* Air-Conditioning, Heating, and Refrigeration Institute, 2111 Wilson Blvd., Suite 500, Arlington, VA 22201, (703) 524–8800, or go to: *http://www.ahrinet.org.*

(1) AHRI Standard 1500–2015, (''ANSI/AHRI Standard 1500–2015''), ''2015 Standard for Performance Rating of Commercial Space Heating Boilers,'' ANSI approved November 28, 2014, IBR approved for appendix A to subpart E as follows:

(i) Section 3—Definitions (excluding introductory text to section 3, introductory text to 3.2, 3.2.4, 3.2.7, 3.6, 3.12, 3.13, 3.20, 3.23, 3.24, 3.26, 3.27, and 3.31);

(ii) Section 5—Rating Requirements, 5.3 Standard Rating Conditions: (excluding introductory text to section 5.3, 5.3.5, 5.3.8, and 5.3.9);

(iii) Appendix C—Methods of Testing for Rating Commercial Space Heating Boilers—Normative, excluding C2.1, C2.7.2.2.2, C3.1.3, C3.5—C3.7, C4.1.1.1.2, C4.1.1.2.3, C4.1.2.1.5, C4.1.2.2.2, C4.1.2.2.3, C4.2, C5, C7.1, C7.2.12, C7.2.20

(iv) Appendix D. Properties of Saturated Steam—Normative.

(v) Appendix E. Correction Factors for Heating Values of Fuel Gases—Normative.

(2) [Reserved].

■ 11. Section 431.86 is revised to read as follows:

§ 431.86 Uniform test method for the measurement of energy efficiency of commercial packaged boilers.

(a) *Scope.* This section provides test procedures, pursuant to the Energy Policy and Conservation Act (EPCA), as amended, which must be followed for measuring the combustion efficiency and/or thermal efficiency of a gas- or oil-fired commercial packaged boiler.

(b) *Testing and Calculations.* Determine the thermal efficiency or combustion efficiency of commercial packaged boilers by conducting the appropriate test procedure(s) indicated in Table 1 of this section.

TABLE 1—TEST REQUIREMENTS FOR COMMERCIAL PACKAGED BOILER EQUIPMENT CLASSES

Equipment category	Subcategory	Certified rated input *Btu/h*	Standards efficiency metric (§ 431.87)	Test procedure (corresponding to standards efficiency metric required by § 431.87)
Hot Water	Gas-fired	≥300,000 and ≤2,500,000	Thermal Efficiency	Appendix A, Section 2.
Hot Water	Gas-fired	>2,500,000	Combustion Efficiency	Appendix A, Section 3.
Hot Water	Oil-fired	≥300,000 and ≤2,500,000	Thermal Efficiency	Appendix A, Section 2.
Hot Water	Oil-fired	>2,500,000	Combustion Efficiency	Appendix A, Section 3.
Steam	Gas-fired (all*)	≥300,000 and ≤2,500,000	Thermal Efficiency	Appendix A, Section 2.

TABLE 1—TEST REQUIREMENTS FOR COMMERCIAL PACKAGED BOILER EQUIPMENT CLASSES—Continued

Equipment category	Subcategory	Certified rated input *Btu/h*	Standards efficiency metric (§ 431.87)	Test procedure (corresponding to standards efficiency metric required by § 431.87)
Steam	Gas-fired (all*)	>2,500,000 and ≤5,000,000.	Thermal Efficiency	Appendix A, Section 2.
		>5,000,000	Thermal Efficiency	Appendix A, Section 2. OR Appendix A, Section 3 with Section 2.4.3.2.
Steam	Oil-fired	≥300,000 and ≤2,500,000	Thermal Efficiency	Appendix A, Section 2.
Steam	Oil-fired	>2,500,000 and ≤5,000,000.	Thermal Efficiency	Appendix A, Section 2.
		>5,000,000	Thermal Efficiency	Appendix A, Section 2. OR Appendix A, Section 3. with Section 2.4.3.2.

* Equipment classes for commercial packaged boilers as of July 22, 2009 (74 FR 36355) distinguish between gas-fired natural draft and all other gas-fired (except natural draft). The test procedure indicated in Table 1 applies to both of these equipment classes. If these equipment classes are amended, the test procedure will continue to apply as indicated in Table 1 to all gas-fired commercial packaged boilers.

(c) *Field Tests.* The field test provisions of appendix A may be used only to test a unit of commercial packaged boiler with rated input greater than 5,000,000 Btu/h.

■ 12. Section 431.87 is revised to read as follows:

§ 431.87 Energy conservation standards and their effective dates.

(a) Each commercial packaged boiler listed in Table 1 of this section and manufactured on or after the effective date listed must meet the indicated energy conservation standard.

TABLE 1—COMMERCIAL PACKAGED BOILER ENERGY CONSERVATION STANDARDS

Equipment category	Subcategory	Certified rated input Btu/h	Efficiency level—effective date: March 2, 2012*
Hot Water Commercial Packaged Boilers	Gas-fired	≥300,000 and ≤2,500,000	80.0% E_T
Hot Water Commercial Packaged Boilers	Gas-fired	>2,500,000	82.0% E_C
Hot Water Commercial Packaged Boilers	Oil-fired	≥300,000 and ≤2,500,000	82.0% E_T
Hot Water Commercial Packaged Boilers	Oil-fired	>2,500,000	84.0% E_C
Steam Commercial Packaged Boilers	Gas-fired—all, except natural draft.	≥300,000 and ≤2,500,000	79.0% E_T
Steam Commercial Packaged Boilers	Gas-fired—all, except natural draft.	>2,500,000	79.0% E_T
Steam Commercial Packaged Boilers	Gas-fired—natural draft	≥300,000 and ≤2,500,000	77.0% E_T
Steam Commercial Packaged Boilers	Gas-fired—natural draft	>2,500,000	77.0% E_T
Steam Commercial Packaged Boilers	Oil-fired	≥300,000 and ≤2,500,000	81.0% E_T
Steam Commercial Packaged Boilers	Oil-fired	>2,500,000	81.0% E_T

* Where E_C is combustion efficiency and E_T is thermal efficiency.

(b) Each commercial packaged boiler listed in Table 2 of this section and manufactured on or after the effective date listed in Table 2 must meet the indicated energy conservation standard.

TABLE 2—COMMERCIAL PACKAGED BOILER ENERGY CONSERVATION STANDARDS

Equipment category	Subcategory	Certified rated input Btu/h	Efficiency level—effective date: March 2, 2022*
Steam Commercial Packaged Boilers	Gas-fired—natural draft	≥300,000 and ≤2,500,000	79.0% E_T
Steam Commercial Packaged Boilers	Gas-fired—natural draft	>2,500,000	79.0% E_T

* Where E_T is thermal efficiency.

■ 13. Add appendix A to subpart E of part 431 to read as follows:

Appendix A to Subpart E of Part 431—Uniform Test Method for the Measurement of Thermal Efficiency of Commercial Packaged Boilers

Note: Prior to November 6, 2017, manufacturers must make any representations with respect to the energy use or efficiency of commercial packaged boilers in accordance with the results of testing pursuant to this Appendix or the test procedures as they appeared in 10 CFR 431.86 revised as of January 1, 2016. On and after November 6, 2017, manufacturers must make any representations with respect to energy use or efficiency in accordance with the results of testing pursuant to this appendix.

1. Definitions.

For purposes of this appendix, the Department of Energy incorporates by reference the definitions established in section 3 of the American National Standards Institute (ANSI) and Air-Conditioning, Heating, and Refrigeration Institute (AHRI) Standard 1500, ''2015 Standard for Performance Rating of Commercial Space Heating Boilers,'' beginning with 3.1 and ending with 3.35 (incorporated by reference, see § 431.85; hereafter ''ANSI/AHRI Standard 1500–2015''), excluding the introductory text to section 3, the introductory text to 3.2, ''Boiler''; 3.2.4, ''Heating Boiler''; 3.2.7, ''Packaged Boiler''; 3.6, ''Combustion Efficiency''; 3.12, ''Efficiency, Combustion''; 3.13, ''Efficiency, Thermal''; 3.20, ''Gross Output''; 3.23, ''Input Rating''; 3.24, ''Net Rating''; 3.26, ''Published Rating''; 3.26.1 ''Standard Rating''; 3.27, ''Rating Conditions''; 3.27.1, ''Standard Rating Conditions''; and 3.31, ''Thermal Efficiency.'' In cases where there is a conflict, the language of the test procedure in this appendix takes precedence over ANSI/AHRI Standard 1500–2015.

1.1. In all incorporated sections of ANSI/AHRI Standard 1500–2015, references to the manufacturer's ''specifications,'' ''recommendations,'' ''directions,'' or ''requests'' mean the manufacturer's instructions in the installation and operation manual shipped with the commercial packaged boiler being tested or in supplemental instructions provided by the manufacturer pursuant to § 429.60(b)(4) of this chapter. For parameters or considerations not specified in this appendix, refer to the manual shipped with the commercial packaged boiler. Should the manual shipped with the commercial packaged boiler not provide the necessary information, refer to the supplemental instructions for the basic model pursuant to § 429.60(b)(4) of this chapter. The supplemental instructions provided pursuant to § 429.60(b)(4) of this chapter do not replace or alter any requirements in this appendix nor do they override the manual shipped with the commercial packaged boiler. In cases where these supplemental instructions conflict with any instructions or provisions provided in the manual shipped with the commercial packaged boiler, use the manual shipped with the commercial packaged boiler.

1.2. Unless otherwise noted, in all incorporated sections of ANSI/AHRI Standard 1500–2015, the term ''boiler'' means a commercial packaged boiler as defined in § 431.82.

1.3. Unless otherwise noted, in all incorporated sections of ANSI/AHRI Standard 1500–2015, the term ''input rating'' means ''rated input'' as defined in § 431.82.

2. Thermal Efficiency Test

2.1. *Test Setup.*

2.1.1. *Instrumentation.* Use instrumentation meeting the minimum requirements found in Table C1 of Appendix C of ANSI/AHRI Standard 1500–2015 (incorporated by reference, see § 431.85).

2.1.2. *Data collection and sampling.* Record all test data in accordance with Table 2.1 and Table 2.2. Do not use Section C5 and Table C4 of Appendix C of ANSI/AHRI Standard 1500–2015.

TABLE 2.1—DATA TO BE RECORDED BEFORE TESTING

Item recorded	Additional instruction
Date of Test	
Manufacturer	
Boiler Model Number	
Burner Model Number & Manufacturer	
Nozzle description and oil pressure	
Oil Analysis—H, C, API Gravity, lb/gal and Btu/lb	
Gas Manifold Pressure	Record at start and end of test.
Gas line pressure at meter	Measurement may be made manually.
Gas temperature	Measurement may be made manually.
Barometric Pressure (Steam and Natural Gas Only)	Measurement may be made manually.
Gas Heating Value, Btu/ft*	Record at start and end of test.

* Multiplied by correction factors, as applicable, in accordance with Appendix E of ANSI/AHRI Standard 1500–2015.

BILLING CODE 6450–01–P

Table 2.2. Data to be Recorded During Testing

Item Recorded		Digital Acquisition Required?	Record and Maintain Data		For Use in Calculations, Section 2.4	
			Every 1 Minute	Every 15 Minutes	Average During Test Period	Total During Test Period
Time, minutes/seconds		Yes	X			
Flue Gas Temperature, °F		Yes	X			
Pressure in Firebox, in H_2O (if required per Section C3.4 of ANSI/AHRI Standard 1500-2015)		No		X		
Flue Gas Smoke Spot Reading (oil)		No		X		
Room Air Temperature		Yes	X			
Fuel Weight or Volume, lb (oil) or ft^3 (gas)		Yes		X		X
Test Air Temperature, °F		Yes	X			
Draft in Vent, in H_2O (oil and non-atmospheric gas)		No		X		
Flue Gas CO_2 or O_2, %		No		X		
Flue Gas CO, ppm		No		At Least Start and End		
Relative Humidity, %		No		X		
STEAM	Separator water weight, lb	No		At Least Start and End		X
	Steam Pressure, in Hg	No		X	X	
	Steam Temperature, °F (if used)	Yes	X		X	
	Condensate collected, or water fed, lb	No		X		X
WATER	Outlet Water Temperature, °F	Yes	X		X	
	Water fed, lb	No	X	X		X
	Inlet Water Temperature at Points A and B of Figure 9 of ANSI/AHRI Standard 1500-2015, °F	Yes	X		X	

BILLING CODE 6450–01–C

2.1.3. *Instrument Calibration.* Instruments must be calibrated at least once per year and a calibration record containing the date of calibration and the method of calibration must be maintained as part of the data underlying each basic model certification, pursuant to § 429.71 of this chapter.

2.1.4. *Test Setup and Apparatus.* Set up the commercial packaged boiler for thermal efficiency testing according to the provisions of Section C2 (except section C2.1) of Appendix C of ANSI/AHRI Standard 1500–2015 (incorporated by reference, see § 431.85).

2.1.4.1. For tests of oil-fired commercial packaged boilers, determine the weight of fuel consumed using one of the methods specified in the following sections 2.1.4.1.1. or 2.1.4.1.2. of this appendix:

2.1.4.1.1. If using a scale, determine the weight of fuel consumed as the difference between the weight of the oil vessel before and after each measurement period, as specified in sections 2.1.4.1.3.1. or 2.1.4.1.3.2. of this appendix, determined using a scale meeting the accuracy requirements of Table C1 of Appendix C of ANSI/AHRI Standard 1500–2015.

2.1.4.1.2. If using a flow meter, first determine the volume of fuel consumed as the total volume over the applicable measurement period as specified in sections 2.1.4.1.3.1. or 2.1.4.1.3.2. of this appendix and as measured by a flow meter meeting the accuracy requirements of Table C1 of Appendix C of ANSI/AHRI Standard 1500–2015 upstream of the oil inlet port of the commercial packaged boiler. Then determine the weight of fuel consumed by multiplying the total volume of fuel over the applicable measurement period by the density of oil, in pounds per gallon, as determined pursuant to C3.2.1.1.3. of Appendix C of ANSI/AHRI Standard 1500–2015.

2.1.4.1.3. The applicable measurement period for the purposes of determining fuel input rate must be as specified in section 2.1.4.1.3.1. of this appendix for the ''Warm-Up Period'' or section 2.1.4.1.3.2. of this appendix for the ''Test Period.''

2.1.4.1.3.1. For the purposes of confirming steady-state operation during the ''Warm-Up Period,'' the measurement period must be 15 minutes and t_T in Equation C2 in Section C7.2.3.1 of Appendix C of ANSI/AHRI Standard 1500–2015 must be 0.25 hours to determine fuel input rate.

2.1.4.1.3.2. For the purposes of determining thermal efficiency during the ''Test Period,'' the measurement period and t_T are as specified in sections 2.3.4 and 2.3.5 of this appendix.

2.1.4.2 For tests of gas-fired commercial packaged boilers, install a volumetric gas meter meeting the accuracy requirements of Table C1 of Appendix C of ANSI/AHRI Standard 1500–2015 upstream of the gas inlet port of the commercial packaged boiler. Record the accumulated gas volume consumed for each applicable measurement period. Use Equation C7.2.3.2. of Appendix C of ANSI/AHRI Standard 1500–2015 to calculate fuel input rate.

2.1.4.2.1. The applicable measurement period for the purposes of determining fuel input rate must be as specified in section 2.1.4.2.1.1. of this appendix, for the ''Warm-Up Period'' and section 2.1.4.2.1.2. of this appendix, for the ''Test Period.''

2.1.4.2.1.1. For the purposes of confirming steady-state operation during the ''Warm-Up Period,'' the measurement period must be 15 minutes and t_T in Equation C2 in Section C7.2.3.1 of Appendix C of ANSI/AHRI Standard 1500–2015 must be 0.25 hours to determine fuel input rate.

2.1.4.2.1.2. For the purposes of determining thermal efficiency during the ''Test Period,'' the measurement period and t_T are as specified in sections 2.3.4 and 2.3.5 of this appendix.

2.1.4.3 In addition to the provisions of Section C2.2.1.2 of ANSI/AHRI Standard 1500–2015, vent gases may alternatively be discharged vertically into a straight stack section without elbows. R–7 minimum insulation must extend 6 stack diameters above the flue collar, the thermocouple grid must be located at a vertical distance of 3 stack diameters above the flue collar, and the sampling tubes for flue gases must be installed 1 stack diameter beyond the thermocouple grid.

2.1.5. *Additional Requirements for Outdoor Commercial Packaged Boilers.* If the manufacturer provides more than one outdoor venting arrangement, the outdoor commercial packaged boiler as defined in Section 3.2.6 of ANSI/AHRI Standard 1500–2015 (incorporated by reference, see § 431.85) must be tested with the shortest total venting arrangement as measured by adding the straight lengths of venting supplied with the equipment. If the manufacturer does not provide an outdoor venting arrangement, install the outdoor commercial packaged boiler venting consistent with the procedure specified in Section C2.2 of Appendix C of ANSI/AHRI Standard 1500–2015. If the vent is rectangular sample the flue gas at a location one third the distance from either side of the exhaust in its longer dimension and half the distance between its edges in the shorter dimension.

2.1.6. *Additional Requirements for Steam Tests.* In addition to the provisions of Section C2 of Appendix C of ANSI/AHRI Standard 1500–2015 (incorporated by reference, see § 431.85), the following requirements apply for steam tests.

2.1.6.1. Insulate all steam piping from the commercial packaged boiler to the steam separator, and extend insulation at least one foot (1 ft.) beyond the steam separator, using insulation meeting the requirements specified in Table 2.3 of this appendix.

TABLE 2.3—MINIMUM PIPING INSULATION THICKNESS REQUIREMENTS

Fluid temperature range °F	Insulation conductivity		Nominal pipe size Inches				
	Conductivity $BTU \times in/(h \times ft^2 \times °F)$	Mean rating temperature °F	<1	1 to < 1–1/2	1–12 to < 4	4 to <8	≥8
> 350 °F	0.32–0.34	250	4.5	5.0	5.0	5.0	5.0
251 °F–350 °F	0.29–0.32	200	3.0	4.0	4.5	4.5	4.5
201 °F–250 °F	0.27–0.30	150	2.5	2.5	2.5	3.0	3.0
141 °F–200 °F	0.25–0.29	125	1.5	1.5	2.0	2.0	2.0
105 °F–140 °F	0.22–0.28	100	1.0	1.0	1.5	1.5	1.5

2.1.6.2. A temperature sensing device must be installed in the insulated steam piping prior to the water separator if the commercial packaged boiler produces superheated steam.

2.1.6.3. Water entrained in the steam and water condensing within the steam piping must be collected and used to calculate the quality of steam during the ''Test Period.'' Steam condensate must be collected and measured using either a cumulative (totalizing) flow rate or by measuring the mass of the steam condensate. Instrumentation used to determine the amount of steam condensate must meet the requirements identified in Table C1 in Appendix C of ANSI/AHRI Standard 1500–2015.

2.1.7. *Additional Requirements for Water Tests.* In addition to the provisions of section C2 of Appendix C of ANSI/AHRI Standard 1500–2015 (incorporated by reference, see § 431.85), the following requirements apply for water tests.

2.1.7.1. Insulate all water piping between the commercial packaged boiler and the location of the temperature measuring equipment, including one foot (1 ft.) beyond the sensor, using insulation meeting the requirements specified in Table 2.2 of this appendix.

2.1.7.2. Install a temperature measuring device at Point B of Figure C9 of ANSI/AHRI Standard 1500–2015 (incorporated by reference, see § 431.85). Water entering the commercial packaged boiler must first enter the run of a tee and exit from the top outlet of the tee. The remaining connection of the tee shall be plugged. Measure the inlet water temperature at Point B in the run of a second tee located 12 ± 2 pipe diameters downstream from the first tee and no more than the greater of 12 inches or 6 pipe diameters from the inlet of the commercial packaged boiler. The temperature measuring device shall extend into the water flow at the point of exit from the side outlet of the second tee. All inlet piping between the temperature measuring device and the inlet of the commercial packaged boilers must be wrapped with R–7 insulation.

2.1.7.3. Do not use Section C2.7.2.2.2 or its subsections of ANSI/AHRI Standard 1500–2015 for water meter calibration.

2.1.8. *Flue Gas Sampling.* In section C2.5.2 of Appendix C of ANSI/AHRI Standard 1500–2015, replace the last sentence with the following: When taking flue gas samples from

a rectangular plane, collect samples at ¼, ½, and ¾ the distance from one side of the rectangular plane in the longer dimension and along the centerline midway between the edges of the plane in the shorter dimension and use the average of the three samples. The tolerance in each dimension for each measurement location is ± 1 inch.

2.2. *Test Conditions.*

2.2.1. *General.* Use the test conditions from Section 5.3 and Section C3 of Appendix C of ANSI/AHRI Standard 1500–2015 (incorporated by reference, see § 431.85) for thermal efficiency testing but do not use the following sections:

(1) 5.3 Introductory text
(2) 5.3.5 (and subsections)
(3) 5.3.8
(4) 5.3.9
(5) C3.1.3
(6) C3.5 (including Table C2)
(7) C3.6
(8) C3.7

2.2.2. *Burners for Oil-Fired Commercial Packaged Boilers.* In addition to section C3.3 of Appendix C of ANSI/AHRI Standard 1500–2015, the following applies: For oil-fired commercial packaged boilers, test the unit with the particular make and model of burner as certified (or to be certified) by the manufacturer. If multiple burners are specified in the certification report for that basic model, then use any of the listed burners for testing.

2.2.3. *Water Temperatures.* Maintain the outlet temperature measured at Point C in Figure C9 of Appendix C of ANSI/AHRI Standard 1500–2015 at 180 °F ± 2 °F and maintain the inlet temperature measured at Point B at 80 °F ± 5 °F during the ''Warm-up Period'' and ''Test Period'' as indicated by 1-minute interval data pursuant to Table 2.2 of this appendix. Each reading must meet these temperature requirements. Use the inlet temperature and flow rate measured at Point B in Figure C9 of Appendix C of ANSI/AHRI Standard 1500–2015 for calculation of thermal efficiency.

2.2.4 *Exceptions to Water Temperature Requirements.* For commercial packaged boilers that require a higher flow rate than that resulting from the water temperature requirements of sections 2.2.3 of this appendix to prevent boiling, use a recirculating loop and maintain the inlet temperature at Point B of Figure C9 of Appendix C of ANSI/AHRI Standard 1500–2015 at 140 °F ± 5 °F during the ''Warm-up Period'' and ''Test Period'' as indicated by 1-minute interval data pursuant to Table 2.2 of this appendix. Each reading must meet these temperature requirements. Use the inlet temperature and flow rate measured at Point A in Figure C9 of Appendix C of ANSI/AHRI Standard 1500–2015 for calculation of thermal efficiency.

2.2.5 *Air Temperature.* For tests of non-condensing boilers, maintain ambient room temperature between 65 °F and 100 °F at all times during the ''Warm-up Period'' and ''Test Period'' (as described in Section C4 of Appendix C of ANSI/AHRI Standard 1500–2015) as indicated by 1-minute interval data pursuant to Table 2.2 of this appendix. For tests of condensing boilers, maintain ambient room temperature between 65 °F and 85 °F at all times during the ''Warm-up Period'' and ''Test Period'' (as described in Section C4 of Appendix C of ANSI/AHRI Standard 1500–2015) as indicated by 1-minute interval data pursuant to Table 2.2 of this appendix. The ambient room temperature may not differ by more than ± 5 °F from the average ambient room temperature during the entire ''Test Period'' at any reading. Measure the room ambient temperature within 6 feet of the front of the unit at mid height. The test air temperature, measured at the air inlet of the commercial packaged boiler, must be within ± 5 °F of the room ambient temperature when recorded at the 1-minute interval defined by Table 2.2.

2.2.6. *Ambient Humidity.* For condensing boilers, maintain ambient room relative humidity below 80-percent relative humidity at all times during both the ''Warm-up Period'' and ''Test Period'' (as described in Section C4 of Appendix C of ANSI/AHRI Standard 1500–2015) pursuant to Table 2.2 of this appendix. Measure the ambient humidity in the same location as air temperature.

2.2.7. *Flue Gas Temperature.* The flue gas temperature during the test must not vary from the flue gas temperature measured at the start of the Test Period (as defined in Section C4 of ANSI/AHRI Standard 1500–2015) when recorded at the interval defined in Table 2.2 of this appendix by more than the limits prescribed in Table 2.4 of this appendix.

TABLE 2.4—FLUE GAS TEMPERATURE VARIATION LIMITS DURING TEST PERIOD

Fuel type	Non-condensing	Condensing
Gas	± 2 percent	Greater of ± 3 percent and ± 5 °F.
Light Oil	± 2 percent.	
Heavy Oil	Greater of ± 3 percent and ± 5 °F.	

2.3. *Test Method.*

2.3.1. *General.* Conduct the thermal efficiency test as prescribed in Section C4 ''Test Procedure'' of Appendix C of ANSI/AHRI Standard 1500–2015 (incorporated by reference, see § 431.85) excluding sections:

(1) C4.1.1.1.2
(2) C4.1.1.2.3 (see 2.3.4 of this appendix)
(3) C4.1.2.1.5
(4) C4.1.2.2.2
(5) C4.1.2.2.3 (see 2.3.5 of this appendix)
(6) C4.2
(7) C4.2.1
(8) C4.2.2

2.3.1.1. Adjust oil or non-atmospheric gas to produce the required firebox pressure and CO_2 or O_2 concentration in the flue gas, as described in Section 5.3.1 of ANSI/AHRI Standard 1500–2015. Conduct steam tests with steam pressure at the pressure specified in the manufacturer literature shipped with the commercial packaged boiler or in the manufacturer's supplemental testing instructions pursuant to § 429.60(b)(4) of this chapter, but not exceeding 15 psig. If no pressure is specified in the manufacturer literature shipped with the commercial packaged boiler or in the manufacturer's supplemental testing instructions (pursuant to § 429.60(b)(4)) of this chapter, or if a range of operating pressures is specified, conduct testing at a steam pressure equal to atmospheric pressure. If necessary to maintain steam quality as required by Section 5.3.7 of ANSI/AHRI Standard 1500–2015, increase steam pressure in 1 psig increments by throttling with a valve beyond the separator until the test is completed and the steam quality requirements have been satisfied, but do not increase the steam pressure to greater than 15 psig.

2.3.2. *Water Test Steady-State.* Ensure that a steady-state is reached by confirming that three consecutive readings have been recorded at 15-minute intervals that indicate that the measured fuel input rate is within ± 2-percent of the rated input. Water temperatures must meet the conditions specified in sections 2.2.3 and 2.2.4 of this appendix as applicable.

2.3.3. *Condensate Collection for Condensing Commercial Packaged Boilers.* Collect condensate in a covered vessel so as to prevent evaporation.

2.3.4. *Steam Test Duration.* Replace Section C4.1.1.2.3 of ANSI/AHRI Standard 1500–2015 with the following: The test period is one hour in duration if the steam condensate is measured or two hours if feedwater is measured. The test period must end with a 15-minute reading (steam condensate or feedwater and separator weight reading) pursuant to Table 2.2 of this appendix. When feedwater is measured, the water line at the end of the test must be within 0.25 inches of the starting level.

2.3.5. *Water Test Duration.* Replace Section C4.1.2.2.3 of ANSI/AHRI Standard 1500–2015 with the following: The test period is one hour for condensing commercial packaged boilers and 30 minutes for non-condensing commercial packaged boilers, and ends with a 15-minute interval reading pursuant to Table 2.2 of this appendix.

2.4. *Calculations.*

2.4.1. *General.* To determine the thermal efficiency of commercial packaged boilers, use the variables in section C6 of Appendix C of ANSI/AHRI Standard 1500–2015 and calculation procedure for the thermal efficiency test specified in section C7.2 of Appendix C of ANSI/AHRI Standard 1500–2015, excluding sections C7.2.12 and C7.2.20.

2.4.2. *Use of Steam Properties Table.* If the average measured temperature of the steam is higher than the value in Table D1 in Appendix D of ANSI/AHRI Standard 1500–2015 that corresponds to the average measured steam pressure, then use Table 2.5 of this appendix to determine the latent heat of superheated steam in (Btu/lb). Use linear interpolation for determining the latent heat of steam in Btu/lb if the measured steam pressure is between two values listed in Table D1 in Appendix D of ANSI/AHRI Standard 1500–2015 or in Table 2.5 of this appendix.

TABLE 2.5—LATENT HEAT (Btu/lb) OF SUPERHEATED STEAM

Average measured steam pressure (psi)	Temperature (°F)							
	220	240	260	280	300	320	340	360
13	1155.1	1164.7	1174.3	1183.8	1193.2	1202.6	1212.0	1221.4
14	1154.6	1164.4	1174.0	1183.5	1193.0	1202.4	1211.8	1221.2
14.696	1154.4	1164.2	1173.8	1183.3	1192.8	1202.3	1211.7	1221.1
15	1154.3	1164.1	1173.7	1183.2	1192.8	1202.2	1211.7	1221.1
16	1153.8	1163.7	1173.4	1183.0	1192.5	1202.0	1211.5	1220.9
17	1153.4	1163.4	1173.1	1182.7	1192.3	1201.8	1211.3	1220.7
18	.....	1163.0	1172.8	1182.5	1192.1	1201.6	1211.1	1220.6
19	.....	1162.7	1172.5	1182.2	1191.9	1201.4	1210.9	1220.4
20	.....	1162.3	1172.2	1182.0	1191.6	1201.2	1210.8	1220.3
21	.....	1162.0	1171.9	1181.7	1191.4	1201.0	1210.6	1220.1
22	.....	1161.6	1171.6	1181.4	1191.2	1200.8	1210.4	1219.9
23	.....	1161.2	1171.3	1181.2	1190.9	1200.6	1210.2	1219.8
24	.....	1160.9	1171.0	1180.9	1190.7	1200.4	1210.0	1219.6
25	.....	.....	1170.7	1180.6	1190.5	1200.2	1209.8	1219.4
26	.....	.....	1170.4	1180.4	1190.2	1200.0	1209.7	1219.3
27	.....	.....	1170.1	1180.1	1190.0	1199.8	1209.5	1219.1
28	.....	.....	1169.7	1179.8	1189.8	1199.6	1209.3	1218.9
29	.....	.....	1169.4	1179.6	1189.5	1199.3	1209.1	1218.8
30	.....	.....	1169.1	1179.3	1189.3	1199.1	1208.9	1218.6
31	.....	.....	1168.8	1179.0	1189.0	1198.9	1208.7	1218.4

Absolute pressure (psi)	Temperature (°F)							
	380	400	420	440	460	480	500	600
13	1230.8	1240.2	1249.5	1258.9	1268.4	1277.8	1287.3	1334.9
14	1230.6	1240.0	1249.4	1258.8	1268.3	1277.7	1287.2	1334.8
14.696	1230.5	1239.9	1249.3	1258.8	1268.2	1277.6	1287.1	1334.8
15	1230.5	1239.9	1249.3	1258.7	1268.2	1277.6	1287.1	1334.8
16	1230.3	1239.8	1249.2	1258.6	1268.0	1277.5	1287.0	1334.7
17	1230.2	1239.6	1249.1	1258.5	1267.9	1277.4	1286.9	1334.6
18	1230.0	1239.5	1248.9	1258.4	1267.8	1277.3	1286.8	1334.6
19	1229.9	1239.4	1248.8	1258.3	1267.7	1277.2	1286.7	1334.5
20	1229.7	1239.2	1248.7	1258.2	1267.6	1277.1	1286.6	1334.4
21	1229.6	1239.1	1248.6	1258.1	1267.5	1277.0	1286.5	1334.4
22	1229.5	1239.0	1248.4	1257.9	1267.4	1276.9	1286.4	1334.3
23	1229.3	1238.8	1248.3	1257.8	1267.3	1276.8	1286.7	1334.2
24	1229.2	1238.7	1248.2	1257.7	1267.2	1276.7	1286.3	1334.2
25	1229.0	1238.5	1248.1	1257.6	1267.1	1276.6	1286.2	1334.1
26	1228.9	1238.4	1248.0	1257.5	1267.0	1276.5	1286.1	1334.0
27	1228.7	1238.3	1247.8	1257.4	1266.9	1276.4	1286.0	1334.0
28	1228.6	1238.1	1247.7	1257.2	1266.8	1276.3	1285.9	1333.9
29	1228.4	1238.0	1247.6	1257.1	1266.7	1276.2	1285.8	1333.9
30	1228.3	1237.9	1247.5	1257.0	1266.6	1276.2	1285.7	1333.8
31	1228.1	1237.7	1247.3	1256.9	1266.5	1276.1	1285.6	1333.7

Absolute pressure (psi)	Temperature (°F)							
	700	800	900	1000	1200	1400	1600	
13	1383.2	1432.4	1482.3	1533.2	1637.5	1745.5	1857.3	.....
14	1383.2	1432.3	1482.3	1533.1	1637.5	1745.5	1857.3	.....
14.696	1383.2	1432.3	1482.3	1533.1	1637.5	1745.5	1857.3	.....
15	1383.1	1432.3	1482.3	1533.1	1637.5	1745.5	1857.3	.....
16	1383.1	1432.3	1482.2	1533.1	1637.4	1745.5	1857.3	.....
17	1383.0	1432.2	1482.2	1533.1	1637.4	1745.5	1857.3	.....
18	1383.0	1432.2	1482.2	1533.0	1637.4	1745.5	1857.2	.....
19	1382.9	1432.1	1482.1	1533.0	1637.4	1745.4	1857.2	.....
20	1382.9	1432.1	1482.1	1533.0	1637.4	1745.4	1857.2	.....
21	1382.8	1432.0	1482.1	1532.9	1637.3	1745.4	1857.2	.....
22	1382.8	1432.0	1482.0	1532.9	1637.3	1745.4	1857.2	.....

Absolute pressure (psi)	Temperature (°F)							
	700	800	900	1000	1200	1400	1600	
23	1382.7	1432.0	1482.0	1532.9	1637.3	1745.4	1857.2	
24	1382.7	1431.9	1482.0	1532.9	1637.3	1745.4	1857.2	
25	1382.6	1431.9	1481.9	1532.8	1637.3	1745.3	1857.2	
26	1382.6	1431.8	1481.9	1532.8	1637.2	1745.3	1857.1	
27	1382.5	1431.8	1481.9	1532.8	1637.2	1745.3	1857.1	
28	1382.5	1431.8	1481.8	1532.8	1637.2	1745.3	1857.1	
29	1382.4	1431.7	1481.8	1532.7	1637.2	1745.3	1857.1	
30	1382.4	1431.7	1481.8	1532.7	1637.2	1745.3	1857.1	
31	1382.3	1431.6	1481.7	1532.7	1637.1	1745.2	1857.1	

2.4.3. *Alternative Thermal Efficiency Calculation for Large Steam Commercial Packaged Boilers.* To determine the thermal efficiency of commercial packaged boilers with a fuel input rate greater than 5,000,000 Btu/h according to the steam test pursuant to Section C4.1.1 of ANSI/AHRI Standard 1500–2015, either:

2.4.3.1. Calculate the thermal efficiency of commercial packaged boiler models in steam mode in accordance with the provisions of section 2.4.1. of this appendix, or

2.4.3.2. Measure and calculate combustion efficiency $Effy_{SS}$ in steam mode according to Section 3. *Combustion Efficiency Test of this appendix* and convert to thermal efficiency using the equation:

$$Effy_T = Effy_{SS} - 2.0$$

where $Effy_T$ is the thermal efficiency and $Effy_{SS}$ is the combustion efficiency as defined in C6 of ANSI/AHRI Standard 1500–2015. The combustion efficiency $Effy_{SS}$ is as calculated in Section C7.2.14 of ANSI/AHRI Standard 1500–2015.

2.4.4. *Rounding.* Round the final thermal efficiency value to nearest one tenth of one percent.

3. Combustion Efficiency Test

3.1. *Test Setup.*

3.1.1. *Instrumentation.* Use instrumentation meeting the minimum requirements found in Table C1 of ANSI/AHRI Standard 1500–2015 (incorporated by reference, see § 431.85).

3.1.2. *Data collection and sampling.* Record all test data in accordance with Table 3.1 and Table 3.2 of this appendix. Do not use Section C5 and Table C4 of Appendix C in ANSI/AHRI Standard 1500–2015.

TABLE 3.1—DATA TO BE RECORDED BEFORE TESTING

Item recorded	Additional instruction
Date of Test.	
Manufacturer.	
Commercial Packaged Boiler Model Number.	
Burner Model Number & Manufacturer.	
Nozzle description and oil pressure.	
Oil Analysis—H, C, API Gravity, lb/gal and Btu/lb.	
Gas Manifold Pressure	Record at start and end of test.
Gas line pressure at meter	Measurement may be made manually.
Gas temperature	Measurement may be made manually.
Barometric Pressure (Steam and Natural Gas Only)	Measurement may be made manually.
Gas Heating Value, Btu/ft*	Record at start and end of test.

*Multiplied by correction factors, as applicable, in accordance with Appendix E of ANSI/AHRI Standard 1500–2015.

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Table 3.2. Data to be Recorded During Testing

Item Recorded		Digital Acquisition Required?	Required Data Recording		For Use in Calculations, Section 2.4	
			Every 1 Minute	Every 15 Minutes	Average During Test Period	Total During Test Period
Time, minutes/seconds		Yes	X			
Flue Gas Temperature, °F		Yes	X		X	
Pressure in Firebox, in H_2O (if required per Section C3.4 of ANSI/AHRI Standard 1500-2015)		No		X	X	
Flue Gas Smoke Spot Reading (oil)		No		X	X	
Room Air Temperature		Yes	X			
Fuel Weight or Volume, lb (oil) or ft^3 (gas)		Yes		X		X
Test Air Temperature, °F		Yes	X			
Draft in Vent, in H_2O (oil and non-atmospheric gas)		No		X	X	
Flue Gas CO_2 or O_2, %		No		X	X	
Flue Gas CO, ppm		No		At Least Start and End	X	
Relative Humidity, %		No		X		
STEAM	Separator water weight, lb	No		At Least Start and End		X
	Steam Pressure, in Hg	No		X	X	
	Steam Temperature, °F (if used)	Yes	X		X	
	Condensate collected, or water fed, lb	No		X		X
WATER	Outlet Water Temperature, °F	Yes	X			
	Water fed, lb	No	X	X		X
	Inlet Water Temperature at Points A and B of Figure 9 of ANSI/AHRI Standard 1500-2015, °F	Yes	X			

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3.1.3. *Instrument Calibration.* Instruments must be calibrated at least once per year and a record must be kept as part of the data underlying each basic model certification, pursuant to § 429.71 of this chapter, containing, at least, the date of calibration and the method of calibration.

3.1.4. *Test Setup and Apparatus.* Set up the commercial packaged boiler for combustion efficiency testing according to the provisions of Section C2 (except section C2.1) of Appendix C of ANSI/AHRI Standard 1500–2015.

3.1.4.1. For tests of oil-fired commercial packaged boilers, determine the weight of fuel consumed using one of the methods specified in sections 3.1.4.1.1. or 3.1.4.1.2. of this appendix.

3.1.4.1.1. If using a scale, determine the weight of fuel consumed as the difference between the weight of the oil vessel before and after each measurement period, as specified in sections 3.1.4.1.3.1. or 3.1.4.1.3.2. of this appendix, determined using a scale meeting the accuracy requirements of Table C1 of ANSI/AHRI Standard 1500–2015.

3.1.4.1.2. If using a flow meter, first determine the volume of fuel consumed as the total volume over the applicable measurement period, as specified in sections 3.1.4.1.3.1. or 3.1.4.1.3.2. of this appendix, and as measured by a flow meter meeting the accuracy requirements of Table C1 of ANSI/AHRI Standard 1500–2015 upstream of the oil inlet port of the commercial packaged boiler. Then determine the weight of fuel consumed by multiplying the total volume of fuel over the applicable measurement period by the density of oil, in pounds per gallon, as determined pursuant to Section C3.2.1.1.3. of ANSI/AHRI Standard 1500–2015.

3.1.4.1.3. The applicable measurement period for the purposes of determining fuel input rate must be as specified in section 3.1.4.1.3.1. of this appendix for the ''Warm-Up Period'' or 3.1.4.1.3.2. of this appendix for the ''Test Period.''

3.1.4.1.3.1. For the purposes of confirming steady-state operation during the ''Warm-Up Period,'' the measurement period must be 15 minutes and t_T in Equation C2 in Section C7.2.3.1 of ANSI/AHRI Standard 1500–2015 must be 0.25 hours to determine fuel input rate.

3.1.4.1.3.2. For the purposes of determining combustion efficiency during the ''Test Period,'' the measurement period and t_T are 0.5 hours pursuant to section 3.3.1.1. of this appendix.

3.1.4.2 For tests of gas-fired commercial packaged boilers, install a volumetric gas meter meeting the accuracy requirements of Table C1 of ANSI/AHRI Standard 1500–2015 upstream of the gas inlet port of the commercial packaged boiler. Record the accumulated gas volume consumed for each applicable measurement period. Use Equation C7.2.3.2. of ANSI/AHRI Standard 1500–2015 to calculate fuel input rate.

3.1.4.2.1. The applicable measurement period for the purposes of determining fuel input rate must be as specified in section 3.1.4.2.1.1. of this appendix for the ''Warm-Up Period'' and 3.1.4.2.1.2. of this appendix for the ''Test Period.''

3.1.4.2.1.1. For the purposes of confirming steady-state operation during the ''Warm-Up Period,'' the measurement period must be 15 minutes and t_T in Equation C2 in Section C7.2.3.1 of ANSI/AHRI Standard 1500–2015 must be 0.25 hour to determine fuel input rate.

3.1.4.2.1.2. For the purposes of determining combustion efficiency during the ''Test Period,'' the measurement period and t_T are 0.5 hour pursuant to section 3.3.1.1.of this appendix.

3.1.4.3. In addition to the provisions of Section C2.2.1.2 of ANSI/AHRI Standard 1500–2015, vent gases may alternatively be discharged vertically into a straight stack section without elbows. R–7 minimum insulation must extend 6 stack diameters above the flue collar, the thermocouple grid must be located at a vertical distance of 3 stack diameters above the flue collar, and the sampling tubes for flue gases must be installed 1 stack diameter beyond the thermocouple grid.

3.1.5. *Additional Requirements for Outdoor Commercial Packaged Boilers.* If the manufacturer provides more than one outdoor venting arrangement, the outdoor commercial packaged boiler (as defined in section 3.2.6 of ANSI/AHRI Standard 1500–2015 (incorporated by reference, see § 431.85)) must be tested with the shortest total venting arrangement as measured by adding the straight lengths of venting supplied with the equipment.

3.1.6. *Additional Requirements for Field Tests.*

3.1.6.1 Field tests are exempt from the requirements of Section C2.2 of Appendix C of ANSI/AHRI Standard 1500–2015. Measure the flue gas temperature according to Section C2.5.1 of Appendix C of ANSI/AHRI Standard 1500–2015 and the thermocouple grids identified in Figure C12 of ANSI/AHRI Standard 1500–2015, with the following modification: The thermocouple grid may be staggered vertically by up to 1.5 inches to allow the use of instrumented rods to be inserted through holes drilled in the venting.

3.1.6.2. Field tests are exempt from the requirements of Section C2.6.3 of Appendix C of ANSI/AHRI Standard 1500–2015.

3.1.7. *Additional Requirements for Water Tests.* In addition to the provisions of Section C2 of Appendix C of ANSI/AHRI Standard 1500–2015 (incorporated by reference, see § 431.85) the following requirements apply for water tests:

3.1.7.1. Insulate all water piping between the commercial packaged boiler and the location of the temperature measuring equipment, including one foot (1 ft.) beyond the sensor, using insulation meeting the requirements specified in Table 2.3 of this appendix.

3.1.7.2. Install a temperature measuring device at Point B of Figure C9 of ANSI/AHRI Standard 1500–2015. Water entering the commercial packaged boiler must first enter the run of a tee and exit from the top outlet of the tee. The remaining connection of the tee shall be plugged. Measure the inlet water temperature at Point B in the run of a second tee located 12 ± 2 pipe diameters downstream from the first tee and no more than the greater of 12 inches or 6 pipe diameters from the inlet of the commercial packaged boiler. The temperature measuring device shall extend into the water flow at the point of exit from the side outlet of the second tee. All inlet piping between the temperature measuring device and the inlet of the commercial packaged boilers must be wrapped with R–7 insulation. Field tests must also measure the inlet water temperature at Point B in Figure C9, however they are not required to use the temperature measurement piping described in this section 3.1.7. of this appendix.

3.1.7.3. Do not use Section C2.7.2.2.2 or its subsections of ANSI/AHRI Standard 1500–2015 for water meter calibration.

3.1.8. *Flue Gas Sampling.* In section C2.5.2 of Appendix C of ANSI/AHRI Standard 1500–2015, replace the last sentence with the following: When taking flue gas samples from a rectangular plane, collect samples at ¼, ½, and ¾ the distance from one side of the rectangular plane in the longer dimension and along the centerline midway between the edges of the plane in the shorter dimension and use the average of the three samples. The tolerance in each dimension for each measurement location is ± 1 inch.

3.2. *Test Conditions.*

3.2.1. *General.* Use the test conditions from Sections 5.3 and C3 of Appendix C of ANSI/AHRI Standard 1500–2015 (incorporated by reference; see § 431.85) for combustion efficiency testing but do not use the following sections:

(1) 5.3 Introductory text
(2) 5.3.5
(3) 5.3.7 (excluded for field tests only)
(4) 5.3.8
(5) 5.3.9
(6) C3.1.3 (and subsections)
(7) C3.5 (including Table C2)
(8) C3.6
(9) C3.7

3.2.2. *Burners for Oil-Fired Commercial Packaged Boilers.* In addition to Section C3.3 of Appendix C of ANSI/AHRI Standard 1500–2015, the following applies: For oil-fired commercial packaged boilers, test the unit with the particular make and model of burner as certified by the manufacturer. If multiple burners are specified in the certification report for that basic model, then use any of the listed burners for testing.

3.2.3. *Water Temperatures.* Maintain the outlet temperature measured at Point C in Figure C9 at 180 °F ± 2 °F and maintain the inlet temperature measured at Point B at 80 °F ± 5 °F during the ''Warm-up Period'' and ''Test Period'' as indicated by 1-minute interval data pursuant to Table 3.1 of this appendix. Each reading must meet these temperature requirements. Use the inlet temperature and flow rate measured at Point B in Figure C9 of Appendix C of ANSI/AHRI Standard 1500–2015 for calculation of thermal efficiency. Field tests are exempt from this requirement and instead must comply with the requirements of section 3.2.3.1 of this appendix.

3.2.3.1. For field tests, the inlet temperature measured at Point A and Point B in Figure C9 and the outlet temperature measured and Point C in Figure C9 of ANSI/AHRI Standard 1500–2015 must be recorded in the data underlying that model's certification pursuant to § 429.71 of this chapter, and the difference between the inlet (measured at Point B) and outlet temperature (measured at Point C) must not be less than 20 °F at any point during the ''Warm-up Period'' and ''Test Period,'' after stabilization has been achieved, as indicated by 1-minute interval data pursuant to Table 3.2 of this appendix.

3.2.3.2. For commercial packaged boilers that require a higher flow rate than that resulting from the water temperature requirements of section 3.2.3 of this

appendix to prevent boiling, use a recirculating loop and maintain the inlet temperature at Point B of Figure C9 of ANSI/AHRI Standard 1500–2015 at 140 °F ± 5 °F during the ''Warm-up Period'' and ''Test Period'' as indicated by 1-minute interval data pursuant to Table 3.2 of this appendix. Each reading must meet these temperature requirements. Use the inlet temperature and flow rate measured at Point A in Figure C9 of Appendix C of ANSI/AHRI Standard 1500–2015 for calculation of thermal efficiency.

3.2.4. *Air Temperature.* For tests of non-condensing boilers (except during field tests), maintain ambient room temperature between 65 °F and 100 °F at all times during the ''Warm-up Period'' and ''Test Period'' (as described in Section C4 of Appendix C of ANSI/AHRI Standard 1500–2015) as indicated by 1-minute interval data pursuant to Table 3.2 of this appendix. For tests of condensing boilers (except during field tests), maintain ambient room temperature between 65 °F and 85 °F at all times during the ''Warm-up Period'' and ''Test Period'' (as described in Section C4 of Appendix C of ANSI/AHRI Standard 1500–2015) as indicated by 1-minute interval data pursuant to Table 3.2 of this appendix. The ambient room temperature may not differ by more than ± 5 °F from the average ambient room temperature during the entire ''Test Period'' at any 1-minute interval reading. Measure the room ambient temperature within 6 feet of the front of the unit at mid height. The test air temperature, measured at the air inlet of the commercial packaged boiler, must be within ± 5 °F of the room ambient temperature when recorded at the 1-minute interval defined by Table 3.2. For field tests, record the ambient room temperature at 1-minute intervals in accordance with Table 3.2 of this appendix.

3.2.5. *Ambient Humidity.* For condensing boilers (except during field tests), maintain ambient room relative humidity below 80-percent relative humidity at all times during both the ''Warm-up Period'' and ''Test Period'' (as described in Section C4 of Appendix C of ANSI/AHRI Standard 1500–2015) pursuant to Table 3.2 of this appendix. Measure the ambient humidity in the same location as air temperature. For field tests of condensing boilers, record the ambient room relative humidity in accordance with Table 3.2 of this appendix.

3.2.6. *Flue Gas Temperature.* The flue gas temperature during the test must not vary from the flue gas temperature measured at the start of the Test Period (as defined in Section C4 of ANSI/AHRI Standard 1500–2015) when recorded at the interval defined in Table 3.2 by more than the limits prescribed in Table 3.4 of this appendix. For field tests, flue gas temperature does not need to be within the limits in Table 3.3 of this appendix but must be recorded at the interval specified in Table 3.2 of this appendix.

TABLE 3.3—FLUE GAS TEMPERATURE VARIATION LIMITS DURING TEST PERIOD

Fuel type	Non-condensing	Condensing
Gas	± 2 percent	Greater of ± 3 percent and ± 5 °F.
Light Oil	± 2 percent.	
Heavy Oil	Greater of ± 3 percent and ± 5 °F.	

3.3. *Test Method.*

3.3.1. *General.* Conduct the combustion efficiency test using the test method prescribed in Section C4 ''Test Procedure'' of Appendix C of ANSI/AHRI Standard 1500–2015 excluding sections:

(1) C4.1.1.1.2
(2) C4.1.1.2.3 (see 3.3.4 of this appendix)
(3) C4.1.2.1.5
(4) C4.1.2.2.2
(5) C4.1.2.2.3 (see 3.3.5 of this appendix)
(6) C4.2
(7) C4.2.1
(8) C4.2.2

3.3.1.1. The duration of the ''Test Period'' outlined in sections C4.1.1.2 of Appendix C of ANSI/AHRI Standard 1500–2015 (incorporated by reference, see § 431.85) and C4.1.2.2 of Appendix C of ANSI/AHRI Standard 1500–2015 is 30 minutes. For condensing commercial packaged boilers, condensate must be collected for the 30 minute Test Period.

3.3.1.2. Adjust oil or non-atmospheric gas to produce the required firebox pressure and CO_2 or O_2 concentration in the flue gas, as described in section 5.3.1 of ANSI/AHRI Standard 1500–2015. Conduct steam tests with steam pressure at the pressure specified in the manufacturer literature shipped with the commercial packaged boiler or in the manufacturer's supplemental testing instructions pursuant to § 429.60(b)(4) of this chapter, but not exceeding 15 psig. If no pressure is specified in the manufacturer literature shipped with the commercial packaged boiler or in the manufacturer's supplemental testing instructions (pursuant to § 429.60(b)(4)) of this chapter, or if a range of operating pressures is specified, conduct testing at a steam pressure equal to atmospheric pressure. If necessary to maintain steam quality as required by section 5.3.7 of ANSI/AHRI Standard 1500–2015, increase steam pressure in 1 psig increments by throttling with a valve beyond the separator until the test is completed and the steam quality requirements have been satisfied, but do not increase the steam pressure to greater than 15 psig.

3.3.2. *Water Test Steady-State.* Ensure that a steady-state is reached by confirming that three consecutive readings have been recorded at 15-minute intervals that indicate that the measured fuel input rate is within ± 2-percent of the rated input. Water temperatures must meet the conditions specified in sections 3.2.3, 3.2.3.1, and 3.2. 3.2 of this appendix as applicable.

3.3.3. *Procedure for the Measurement of Condensate for a Condensing Commercial Packaged Boiler.* Collect flue condensate using a covered vessel so as to prevent evaporation. Measure the condensate from the flue gas during the ''Test Period.'' Flue condensate mass must be measured within 5 minutes after the end of the ''Test Period'' (defined in C4.1.1.2 and C4.1.2.2 of ANSI/AHRI Standard 1500–2015) to prevent evaporation loss from the sample. Determine the mass of flue condensate for the ''Test Period'' by subtracting the tare container weight from the total weight of the container and flue condensate measured at the end of the ''Warm-up Period.''

3.4. *Calculations.*

3.4.1. *General.* Use the variables in Section C6 and calculation procedure for the combustion efficiency test specified in Section C7.3 of Appendix C (including the specified subsections of C7.2) of ANSI/AHRI Standard 1500–2015 (incorporated by reference, see § 431.85).

3.4.2. *Rounding.* Round combustion efficiency to nearest one tenth of a percent.

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DEPARTMENT OF ENERGY

10 CFR Parts 429, 430, and 431

[Docket No. EERE–2014–BT–TP–0008]

RIN 1904–AD18

Energy Conservation Program for Certain Commercial and Industrial Equipment: Test Procedure for Commercial Water Heating Equipment

AGENCY: Office of Energy Efficiency and Renewable Energy, Department of Energy.

ACTION: Final rule.

SUMMARY: On May 9, 2016, the U.S. Department of Energy (DOE) published a notice of proposed rulemaking (NOPR) to amend its test procedures for commercial water heaters, unfired hot water storage tanks, and hot water supply boilers (henceforth, ''commercial water heating (CWH) equipment''). That proposed rulemaking serves as the basis for this final rule. Specifically, this final rule incorporates by reference the most recent versions of relevant industry standards; modifies the existing test methods for certain classes of CWH equipment; establishes new test procedures for determining the

efficiency of commercial heat pump water heaters and standby loss for instantaneous water heaters and hot water supply boilers; clarifies test set-up and settings for various classes of CWH equipment; revises the certification requirements for CWH equipment; and establishes associated definitions.

DATES: The effective date of this rule is December 12, 2016. The final rule changes will be mandatory for representations related to energy efficiency or energy use starting November 6, 2017. The incorporation by reference of certain publications listed in this rule is approved by the Director of the **Federal Register** on December 12, 2016.

ADDRESSES: The docket, which includes **Federal Register** notices, public meeting attendee lists and transcripts, comments, and other supporting documents/materials, is available for review at *www.regulations.gov.* All documents in the docket are listed in the *www.regulations.gov* index. However, not all documents listed in the index may be publicly available, such as those containing information that is exempt from public disclosure.

A link to the docket Web page can be found at: *https://www.regulations.gov/docket?D=EERE-2014-BT-TP-0008.* This Web page contains a link to the docket for this rulemaking on the *www.regulations.gov* site. The docket Web page contains simple instructions on how to access all documents, including public comments, in the docket.

For further information on how to review the docket, contact the Appliance and Equipment Standards Program staff at (202) 586–6636 or by email: *CommWaterHeatingEquip2014TP0008@;ee.doe.gov.*

FOR FURTHER INFORMATION CONTACT:

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Mr. Eric Stas or Ms. Jennifer Tiedeman, U.S. Department of Energy, Office of the General Counsel, GC–33, 1000 Independence Avenue SW., Washington, DC 20585–0121. Telephone: (202) 586–9507 or (202) 287–6111. Email: *Eric.Stas@hq.doe.gov* or *Jennifer.Tiedman@hq.doe.gov.*

SUPPLEMENTARY INFORMATION: This final rule incorporates by reference the following industry standards into part 431:

(1) American National Standards Institute, (ANSI) Standard Z21.10.3–2015/Canadian Standards Association (CSA) Standard 4.3–2015, ''Gas-fired water heaters, volume III, storage water heaters with input ratings above 75,000 Btu per hour, circulating and instantaneous,'' ANSI approved on October 5, 2015, Annex E (normative) Efficiency test procedures—E.1 ''Method of test for measuring thermal efficiency,'' Paragraph c, ''Vent requirements'' and Paragraph f, ''Installation of temperature sensing means'';

(2) American Society of Heating, Refrigeration and Air-Conditioning Engineers, ANSI/ASHRAE Standard 118.1–2012, ANSI approved on October 27, 2012, ''Method of Testing for Rating Commercial Gas, Electric, and Oil Service Water-Heating Equipment''; Section 3 ''Definition and Symbols,'' Section 4 ''Classifications by Mode of Operation,'' Section 6 ''Instruments,'' Section 7 ''Apparatus,'' Section 8 ''Methods of Testing,'' Section 9 ''Test Procedures,'' and Section 10 ''Calculation of Results'';

(3) ASTM International (ASTM) C177–13, ''Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus,'' approved September 15, 2013;

(4) ASTM C518–15, ''Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus,'' approved September 1, 2015; and

(5) ASTM D2156–09 (Reapproved 2013), ''Standard Test Method for Smoke Density in Flue Gases from Burning Distillate Fuels,'' approved October 1, 2013.

Copies of ANSI Z21.10.3–2015/CSA 4.3–2015 and ANSI/ASHRAE 118.1–2012 can be obtained from the American National Standards Institute, 25 W. 43rd Street, 4th Floor, New York, NY 10036, (212) 642–4800, or by going to *http://webstore.ansi.org/.*

Copies of ASTM C177–13, ASTM C518–15, and ASTM D2156–09 can be obtained from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428–2959, (610) 832–9585, or by going to *http://www.astm.org/Standard/index.html.*

See section IV.N of this final rule for further discussion of these standards.

Table of Contents

I. Authority and Background

Title III, Part C [1] of the Energy Policy and Conservation Act of 1975 (EPCA or the Act), Public Law 94–163 (42 U.S.C. 6311–6317, as codified), added by Public Law 95–619, Title IV, section 441(a), sets forth a variety of provisions designed to improve energy efficiency.[2] It established the ''Energy Conservation Program for Certain Industrial Equipment,'' a program covering certain commercial and industrial equipment (hereafter referred to as ''covered equipment''), which includes the commercial water heating (CWH) equipment that is the subject of this rulemaking. (42 U.S.C. 6311(1)(K)) Title III, Part B [3] of EPCA (42 U.S.C. 6291–6309, as codified) sets forth a variety of provisions designed to improve energy efficiency and established the Energy Conservation Program for Consumer Products Other Than Automobiles. This includes consumer water heaters, which are also addressed in this rulemaking. (42 U.S.C. 6292(a)(4))

Under EPCA, the energy conservation programs for consumer products and industrial equipment generally consist of four parts: (1) Testing; (2) labeling; (3) establishing Federal energy conservation standards; and (4) certification and enforcement procedures. The testing requirements consist of test procedures that manufacturers of covered products and equipment must use as both the basis for certifying to DOE that their products and equipment comply with the applicable energy conservation standards adopted pursuant to EPCA, and for making representations about the efficiency of that equipment. (42 U.S.C. 6293(c); 42 U.S.C. 6295(s); 42 U.S.C. 6314; 42 U.S.C. 6316)

The initial test procedures for CWH equipment were added to EPCA by the Energy Policy Act of 1992 (EPACT 1992), Public Law 102–486, and correspond to those referenced in ASHRAE and Illuminating Engineering Society of North America (IESNA) Standard 90.1–1989 (*i.e.,* ASHRAE Standard 90.1–1989) which went into effect on October 24, 1992. (42 U.S.C. 6314(a)(4)(A)) EPCA requires that if an industry test procedure that is referenced in ASHRAE Standard 90.1 is amended, DOE must amend its test procedure to be consistent with the amended industry test procedure, unless DOE determines that the amended test procedure is not reasonably designed to produce test results that reflect the energy efficiency, energy use, or estimated operating costs of the equipment during a representative average use cycle. In addition, DOE must determine that the amended test procedure is not unduly burdensome to conduct. (42 U.S.C. 6314(a)(2), (3) and (4)(B))

If DOE determines that a test procedure amendment is warranted, it must publish a proposed test procedure in the **Federal Register** and offer the public an opportunity to present oral and written comments. (42 U.S.C. 6314(b)(1)–(2)) When amending a test procedure, DOE must determine to what extent, if any, the proposed test procedure would alter the equipment's energy efficiency as determined under the existing test procedure. (42 U.S.C. 6293(e); 42 U.S.C. 6314(a)(4)(C))

The Energy Independence and Security Act of 2007 (EISA 2007), Public Law 110–140, amended EPCA to require that at least once every 7 years, DOE must review test procedures for each type of covered equipment, including CWH equipment, and either: (1) Amend the test procedures if the Secretary of Energy (Secretary) determines that the amended test procedures would more accurately or fully comply with the requirements of 42 U.S.C. 6314(a)(2)–(3),[4] or (2) publish a notice of determination not to amend a test procedure. (42 U.S.C. 6314(a)(1)(A)) Under this requirement, DOE must review the test procedures for CWH equipment no later than May 16, 2019, which is 7 years after the most recent final rule amending the Federal test method for CWH equipment.[5] This final rule satisfies the requirement to review the test procedure for CWH equipment within 7 years, as well as the aforementioned requirement that DOE amend its test procedure if an industry test procedure is updated.

DOE's test procedure for CWH equipment is found at 10 CFR 431.106, *Uniform test method for the measurement of energy efficiency of commercial water heaters and hot water supply boilers (other than commercial heat pump water heaters).*[6] DOE's test procedure for CWH equipment provides a method for determining the thermal efficiency and standby loss of CWH equipment. In a direct final rule for test procedures for CWH equipment, DOE incorporated by reference certain sections of ANSI Standard Z21.10.3–1998 (ANSI Z21.10.3–1998), *Gas Water Heaters, Volume III, Storage Water Heaters With Input Ratings Above 75,000 Btu Per Hour, Circulating and Instantaneous.* 69 FR 61974, 61983 (Oct. 21, 2004). On May 16, 2012, DOE published a final rule for certain commercial heating, air-conditioning, and water heating equipment in the **Federal Register** that, among other things, updated the test procedures for certain CWH equipment by incorporating by reference ANSI

[1] For editorial reasons, Part C was codified as Part A–1 in the U.S. Code.

[2] All references to EPCA in this document refer to the statute as amended through the Energy Efficiency Improvement Act of 2015 (EEIA 2015), Public Law 114–11 (April 30, 2015).

[3] For editorial reasons, upon codification in the U.S. Code, Part B was redesignated as Part A.

[4] 42 U.S.C. 6314(a)(2) requires that test procedures be reasonably designed to produce test results which reflect energy efficiency, energy use, and estimated operating costs of a type of industrial equipment (or class thereof) during a representative average use cycle (as determined by the Secretary), and not be unduly burdensome to conduct.

42 U.S.C. 6314(a)(3) requires that if the test procedure is a procedure for determining estimated annual operating costs, such procedure must provide that such costs are calculated from measurements of energy use in a representative average-use cycle (as determined by the Secretary), and from representative average unit costs of the energy needed to operate such equipment during such cycle. The Secretary must provide information to manufacturers of covered equipment regarding representative average unit costs of energy.

[5] DOE published a final rule in the **Federal Register** on May 16, 2012, that, in relevant part, amended its test procedure for commercial water heating equipment. 77 FR 28928.

[6] DOE has reserved a place in its regulations for a test procedure for commercial heat pump water heaters at 10 CFR 431.107, *Uniform test method for the measurement of energy efficiency for commercial heat pump water heaters.* However, in this final rule, DOE is removing 431.107 and addressing the test method for commercial heat pump water heaters in Appendix E to Subpart G of 10 CFR 431.

Z21.10.3–2011. 77 FR 28928, 28996. These updates did not materially alter DOE's test procedure for CWH equipment.

The American Energy Manufacturing Technical Corrections Act (AEMTCA), Public Law 112–210, was signed into law on December 18, 2012, and amended EPCA to require that DOE publish a final rule establishing a uniform efficiency descriptor and accompanying test methods for consumer water heaters and certain CWH equipment. (42 U.S.C. 6295(e)(5)) AEMTCA required DOE to replace the current efficiency metric for consumer water heaters (energy factor) and the current efficiency metrics for commercial water heaters (thermal efficiency and standby loss) with a uniform efficiency descriptor. (42 U.S.C. 6295(e)(5)(C)) Further, AEMTCA required that the uniform efficiency descriptor and accompanying test method apply, to the maximum extent possible, to all water heating technologies currently in use and to future water heating technologies. (42 U.S.C. 6295(e)(5)(H)) However, AEMTCA allowed DOE to exclude from the uniform efficiency descriptor specific categories of covered water heaters that do not have residential uses, that can be clearly described, and that are effectively rated using the current thermal efficiency and standby loss descriptors. (42 U.S.C. 6295(e)(5)(F))

DOE published a final rule for test procedures for certain CWH equipment on July 11, 2014 (''July 2014 final rule''). 79 FR 40542. The July 2014 final rule modified the current consumer water heater metric (energy factor) to create uniform energy factor (UEF), the descriptor to be used as the uniform efficiency descriptor for all consumer water heaters and CWH equipment that have residential uses. *Id.* at 40544. The July 2014 final rule excluded CWH equipment from the uniform descriptor equipment that has no residential use, that can be clearly identified and described, and that is effectively rated using the current thermal efficiency and standby loss efficiency descriptors. In the July 2014 final rule, DOE defined and adopted a new test method for ''residential-duty commercial water heaters,'' which are commercial water heaters that have residential uses. *Id.*

For this final rule for CWH equipment test procedures, DOE is only amending test procedures for the CWH equipment classes that are not ''residential-duty commercial water heaters'' as adopted in the July 2014 final rule.[7] On February 27, 2014, DOE published in the **Federal Register** a request for information (February 2014 RFI) to seek public comments on several issues associated with the current test procedure for CWH equipment. 79 FR 10999. On May 9, 2016, DOE published a NOPR proposing amendments to its procedures for certain CWH equipment (May 2016 NOPR). 81 FR 28588. The May 2016 NOPR considered and responded to comments received in response to the February 2014 RFI.

In this final rule, DOE responds to all comments received from interested parties in response to the proposals presented in the May 2016 NOPR, either during the May 2016 NOPR public meeting or in subsequent written comments.

II. Synopsis of the Final Rule

As explained in detail in section III, in this final rule, DOE amends subpart G of 10 CFR part 431 to:

- Incorporate by reference certain provisions of the most current version of the following industry standards, older versions of which are currently incorporated into DOE's regulations: (1) ANSI Z21.10.3–2015/CSA 4.3–2015, *Gas-fired Water Heaters, Volume III, Storage Water Heaters with Input Ratings Above 75,000 Btu Per Hour, Circulating and Instantaneous*; (2) ASTM Standard Test Method D2156–09, *Standard Test Method for Smoke Density in Flue Gases from Burning Distillate Fuels*; (3) ASTM Standard Test Method C177–13, *Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus*; and (4) ASTM Test Standard Method C518–15, *Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus*;
- Update the requirements for ambient condition requirements, measurement locations, and measurement intervals for the thermal efficiency and standby loss test procedures;
- Amend the test set-up requirements for storage water heaters, storage-type instantaneous water heaters, instantaneous water heaters, and hot water supply boilers;
- Update provisions for setting the tank thermostat for storage and storage-type instantaneous water heaters prior to the thermal efficiency and standby loss tests;
- Update requirements for establishing steady-state operation for CWH equipment;
- Update existing and adopt new definitions for certain consumer water heaters, certain CWH equipment, residential-duty commercial water heater and storage-type instantaneous water heaters;
- Update the test set-up for instantaneous water heaters and hot water supply boilers that are tested using a recirculating loop;
- Adopt a new standby loss test procedure for flow-activated and externally-activated instantaneous water heaters;
- Modify the standby loss test procedure for internally thermostatically-activated instantaneous water heaters;
- Update the test procedure for determination of storage volume for instantaneous water heaters and hot water supply boilers (other than storage-type instantaneous water heaters);
- Adopt requirements for gas supply pressure and gas outlet pressure of gas-fired CWH equipment;
- Adopt a new test procedure for rating commercial heat pump water heaters (CHPWHs) based on certain sections incorporated by reference from ANSI/ASHRAE Standard 118.1–2012, *Method of Testing for Rating Commercial Gas, Electric, and Oil Service Water-Heating Equipment;*
- Adopt provisions for measurement and enforcement of fuel input rate; and
- Specify default values for certain parameters for testing oil-fired CWH equipment.

The final rule also amends 10 CFR part 429 to clarify certification requirements and enforcement procedures for certain CWH equipment, and amends certain definitions in 10 CFR part 430. Specifically, in 10 CFR part 430, this final rule removes the definitions of ''Electric heat pump water heater'' and ''Gas-fired heat pump water heater,'' and revises the definitions of ''Electric instantaneous water heater,'' ''Electric storage water heater,'' ''Gas-fired instantaneous water heater,'' ''Gas-fired storage water heater,'' ''Oil-fired instantaneous water heater,'' and ''Oil-fired storage water heater.''

III. Discussion

Table III–1 presents the list of interested parties that submitted written comments in response to the May 2016 NOPR.

[7] Although DOE did not consider amended test procedures for residential-duty commercial water heaters, DOE is amending the definition for ''residential-duty commercial water heater,'' as discussed in section III.G.3.

TABLE III–1—INTERESTED PARTIES PROVIDING COMMENT IN RESPONSE TO THE MAY 2016 NOPR

Name	Abbreviation	Commenter type*
A.O. Smith Corporation and Lochinvar, LLC	A.O. Smith	M
Air-Conditioning, Heating, and Refrigeration Institute	AHRI	IR
American Gas Association and American Public Gas Association	Gas Associations	IR
Appliance Standards Awareness Project and American Council for an Energy-Efficient Economy.	Joint Advocates (ASAP and ACEEE)	EA
Bock Water Heaters, Inc	Bock	M
Bradford White Corporation	Bradford White	M
Bradley Corporation	Bradley	M
California Investor Owned Utilities	CA IOUs	IR
Earthlinked Technologies Inc	Earthlinked	M
Edison Electric Institute	EEI	IR
GE Appliances	GE	M
HTP, Inc	HTP	M
Lochinvar, LLC	Lochinvar	M
Northwest Energy Efficiency Alliance	NEEA	EA
Raypak, Inc	Raypak	M
Rheem Corporation	Rheem	M
Rinnai America Corporation	Rinnai	M

* ''IR'': Industry Representative; ''M'': Manufacturer; ''EA'': Efficiency/Environmental Advocate.

These interested parties commented on a range of issues, including those identified by DOE in the May 2016 NOPR, as well as other issues related to the proposed test procedure. The issues, the comments received, DOE's responses to those comments, and the resulting changes to the NOPR test procedure proposals for CWH equipment adopted in this final rule are discussed in the following subsections.

A. Updated Industry Test Methods

DOE's test procedure for measuring the energy efficiency for CWH equipment currently incorporates by reference the industry standard ANSI Z21.10.3–2011 at 10 CFR 431.105. Additionally, DOE lists ASTM Standard Test Methods D2156–80, C177–97, and C518–91 as sources of information and guidance in 10 CFR 431.104. DOE defines ''ASTM Standard Test Method D2156–80'' at 10 CFR 431.102, and points to this source in DOE's current test procedure at 10 CFR 431.106. DOE points to ASTM C177–97 and ASTM C518–91 in its definition of ''R-value'' at 10 CFR 431.102. In the May 2016 NOPR, DOE proposed to update the references to industry test methods to incorporate the most recent version available of each of these standards.

As described in section I, with respect to CWH equipment, EPCA initially directs DOE to use industry test methods as referenced in ASHRAE/IES Standard 90.1, ''Energy Standard for Buildings Except Low-Rise Residential Buildings.'' (42 U.S.C. 6314(a)(4)(A)) If and when such an industry test method is amended, EPCA requires that DOE amend its test procedure as necessary to be consistent with the amended industry test method unless it determines, by rule published in the **Federal Register** and supported by clear and convincing evidence, that the amended test procedure would be unduly burdensome to conduct or would not produce test results that reflect the energy efficiency, energy use, and estimated operating costs of that equipment during a representative average use cycle. (42 U.S.C. 6314(a)(2), (3) and (4)(B))

AHRI and Rheem stated that DOE is obligated to adopt generally accepted industry testing procedures and may only adopt an alternate procedure upon proving by clear and convincing evidence that the industry test standard is not designed to reflect the energy efficiency of the equipment being tested or is unduly burdensome to conduct. (AHRI, No. 26 at pp. 3–4, Rheem No. 34 at p. 2) AHRI argued that the May 2016 NOPR does not address this statutory requirement and instead shifts the burden of data production to the regulated industry, and further argued that DOE must quantify the benefits of the proposed test procedure over the industry test standards. (AHRI, No. 26 at pp. 3–4) Rheem asserted that the appropriate reason to amend the current Federal test procedure is the statutory requirement to amend the Federal test procedure whenever the industry-accepted test standard for commercial water heating equipment is amended, and recommended that DOE adopt the industry-accepted test procedure rather than amendments to it. Rheem added that, in its view, the proposed test procedures lack justification, are burdensome, and are contradictory to the requirements of Executive Order 12988, ''Civil Justice Reform.'' (Rheem, No. 34 at pp. 1–4) A. O. Smith stated that the proposed test procedure is not justified by empirical and qualitative data. (A. O. Smith, No. 27 at p. 1)

DOE does not agree with commenters' interpretations of the relevant statutory provisions at issue here. Under 42 U.S.C. 6314(a)(4)(B), when DOE is triggered by the amendment of an industry test method applicable to ASHRAE equipment, the Secretary is directed to undertake an assessment of that industry test method to determine whether amendments to the Federal test procedure are ''necessary'' to be ''consistent'' with the amended industry test method. (There may be cases where the industry standard-setting organization reviews its method and puts out a new version with minimal or no changes, in which case it may not be necessary for DOE to amend its own test procedure.) The term ''consistent'' does not equate to ''identical,'' so Congress envisioned that some differentiation from the industry standard may be necessary. However, in the event DOE determines that a more significant deviation from the industry test method is needed (*i.e.,* a change that would not be ''consistent'' with the industry method), the Secretary must determine by rule published in the **Federal Register** and supported by clear and convincing evidence that a Federal test procedure consistent with the industry test method would not meet the requirements of 42 U.S.C. 6314(a)(2) and (3). It is only in the latter case that the clear and convincing evidence standard would apply.

In DOE's experience, industry standard-setting bodies typically

undertake a thorough and professional approach to their test procedures. However, DOE must remain cognizant of its statutory duty to ensure that the Federal test method be consistent with the industry test method while meeting other statutory requirements at 42 U.S.C. 6314(a)(2)–(3) (including that the procedure produces test results that reflect the energy efficiency, energy use, and estimated operating costs of that equipment during a representative average use cycle and is not unduly burdensome to conduct). To the extent that DOE identifies provisions of the relevant industry test method that would produce inaccurate, inconsistent, or unrepeatable results, as demonstrated by DOE's testing or analysis, such results would be unlikely to reflect a product's representative average energy efficiency or use. Such findings would demonstrate that the industry test procedure would not meet the statutory requirements of 42 U.S.C. 6314(a)(2)–(3) without alteration, thereby justifying DOE's decision to modify the industry test procedure (or in certain instances, even to deviate from the industry test procedure entirely, in which case the clear and convincing evidence standard would apply). That is why DOE usually adopts certain sections of industry test methods rather than adopting industry methods wholesale and adjusts the industry test methods as needed to satisfy the aforementioned statutory requirements. Such is the case here, where DOE is adopting amended test procedures that are largely consistent with the industry test methods (parts of which are incorporated by reference), and any deviations from those industry test methods adopted in this final rule are intended to clarify the test method to ensure consistent application, improve repeatability, or make the test method more representative of the energy efficiency during a representative average use cycle, and ensure that the test procedure is not unduly burdensome to conduct.

DOE is tasked with providing clear, repeatable procedures through the rulemaking process. The differences between the Federal test methods that DOE is adopting in this final rule and the industry test methods, and the rationale for these differences, are explained in detail in the sections that follow. As one example, a major difference between the test method DOE is adopting in this final rule and the method contained in ANSI Z21.10.3–2015 is the method for setting the thermostat for gas-fired and oil-fired storage water heaters—DOE requires the thermostat be set based on the reading from the top-most thermostat, while ANSI Z21.10.3–2015 requires the thermostat be set based on the mean temperature of the water stored within the tank. As discussed in detail in section III.E.1 below, certain CWH designs having a large amount of stratification cannot achieve the mean tank temperature of 140 ± 5 °F required by ANSI Z21.10.3–2015. Thus, if DOE were to adopt the industry method wholesale, there would be certain models that could not be tested in accordance with the test procedure. Further, the thermostats of gas-fired and oil-fired storage water heaters are generally set in the field to deliver water at the temperature needed for the application, without regard to the mean temperature of the water stored within the tank, as it is typically not relevant to the user as long as the water at the outlet can meet the temperature requirement for the application. Therefore, for this particular example, the DOE test method adopted in this final rule differs from the industry standard only to the extent that it is appropriate for and can be used for all types of CWH equipment. This approach to amending test procedures both maintains consistency with the industry test method and ensures that the Federal test method meets the statutory requirements set forth above.

Nonetheless, assuming that DOE requires clear and convincing evidence for its amendments to industry standards here, DOE believes its findings fully satisfy that threshold. To explain that conclusion, DOE articulates how it understands the ''clear and convincing evidence'' concept to operate in the context of DOE's establishing of test procedures. A rulemaking procedure is unlike the context of litigation, where ''clear and convincing'' means that the evidence must ''place in the ultimate factfinder an abiding conviction that the truth'' of its conclusions is ''highly probable.'' [8] Nonetheless, DOE fully recognizes that whenever it must have ''clear and convincing evidence'' pursuant to 42 U.S.C. 6314(a), it needs a higher degree of confidence in its conclusions than would be required under the ''preponderance'' standard that ordinarily applies in agency rulemaking. In such matters, the administrative record, taken as a whole, must justify DOE in a strong conviction that its conclusions are highly likely to be correct.[9]

For purposes of establishing test procedures under 42 U.S.C. 6314(a), ''clear and convincing evidence'' can include the same sorts of evidence that DOE would use in any other rulemaking. But DOE will conclude it has ''clear and convincing evidence'' only when it is strongly convinced that it is highly likely to have reached appropriate findings. With respect to the findings discussed in this rulemaking, DOE does have that strong conviction.

In addition, contrary to AHRI's assertion, DOE is under no statutory obligation to quantify the benefits of adopting improved test procedures other than to find that the test procedures are not unduly burdensome to conduct. In response to Rheem's suggestion that DOE simply adopt industry test methods without amendment, where the industry-based test procedure contains one or more provisions that would prevent it from generating results that meet the requirements of the statute, EPCA directs DOE to adopt a Federal test procedure that resolves the identified problem(s)—not to adopt the industry method unquestioned. See 42 U.S.C. 6314(a)(2), (3) and (4). For the example given above, the industry test method cannot be used without modification for certain CWH equipment, as those equipment are not designed to operate in the manner prescribed by the industry test method. Therefore, the energy efficiency resulting from the industry test method (if possible to test) would not reflect the energy efficiency of that equipment during a representative average use cycle, and in such instances EPCA requires DOE to modify the test procedure.

Consistent with this authority, DOE is adopting a test procedure that is generally consistent with the industry-based test procedure. The justification and evidence supporting each provision adopted is described in the sections that follow, including DOE's compliance with Executive Order 12988, which is addressed in section IV.F of this final rule.

The following subsections discuss revisions to DOE's test procedure for CWH equipment vis-à-vis these industry standards.

1. ANSI Z21.10.3 Testing Standard

As previously noted, DOE's test procedure for measuring the energy efficiency for CWH equipment currently incorporates by reference the industry

[8] *Colorado* v. *New Mexico,* 467 U.S. 310, 316 (1984).

[9] Because a test procedure rulemaking is not a litigation, the differences warrant some differences in how the ''clear and convincing evidence'' threshold operates. DOE both develops the record and reviews it to make findings. Also, as an agency tasked with setting policy, DOE is ordinarily expected to use its technical judgment.

standard ANSI Z21.10.3–2011 at 10 CFR 431.105. Specifically, the DOE test procedures at 10 CFR 431.106 directs one to follow Exhibits G.1 and G.2 of ANSI Z21.10.3–2011 for measuring thermal efficiency and standby loss, respectively. An updated edition of the industry test method, ANSI Z21.10.3–2015/CSA 4.3–2015, *Gas-fired Water Heaters, Volume III, Storage Water Heaters with Input Ratings Above 75,000 Btu Per Hour, Circulating and Instantaneous* (hereinafter referred to as ''ANSI Z21.10.3–2015''), was approved on October 5, 2015, and released in November 2015.

In the May 2016 NOPR, DOE proposed to incorporate by reference certain sections of ANSI Z21.10.3–2015 in its test procedures for CWH equipment. 81 FR 28588, 28595 (May 9, 2016). Specifically, DOE proposed to incorporate by reference only Annex E.1 of ANSI Z21.10.3–2015 (which corresponds to Exhibit G.1 of ANSI Z21.10.3–2011). As discussed in the May 2016 NOPR, DOE did not propose to incorporate by reference Annex E.2 of ANSI Z21.10.3–2015 (which corresponds to Exhibit G.2 of ANSI Z21.10.3–2011) because of an error in a standby loss equation; however, DOE included certain language from Annex E.2 in its standby loss test procedures proposed in the May 2016 NOPR. *Id.* DOE has concluded that the standby loss test procedure for storage-type CWH equipment adopted in this final rule is consistent with the approach taken by Annex E.2 of ANSI Z21.10.3–2015; nonetheless, any differences in the DOE test method (as discussed in the applicable subsections within section III of this notice) are also supported by clear and convincing evidence. CA IOUs responded to the May 2016 NOPR by expressing support for updating the reference to ANSI Z21.10.3–2015 with as-needed modifications. (CA IOUs, No. 23 at p. 1) In the May 2016 NOPR, DOE's proposed test procedures included specific references to sections c, f, and j of Annex E.1 of ANSI Z21.10.3–2015. 81 FR 28588, 28595 (May 9, 2016) However, as discussed in section III.F.1 of this final rule, DOE is adopting new requirements for establishing steady-state operation prior to the thermal efficiency test, as recommended by several stakeholders. Therefore, in this final rule, DOE is not referencing section j of Annex E.1 of ANSI Z21.10.3–2015, which includes conduct of the thermal efficiency test and establishment of steady-state operation. However, DOE is adopting language and equations for determination of thermal efficiency that are similar to those included in section j of Annex E.1 of ANSI Z21.10.3–2015. Consequently, in this final rule DOE is amending its test procedures for CWH equipment by incorporating by reference sections c and f (''Vent requirements'' and ''Installation of temperature-sensing means,'' respectively) of Annex E.1 of ANSI Z21.10.3–2015.

ANSI Z21.10.3–2015 also includes a new standby loss test procedure—Annex E.3, *Method of test for measuring standby loss for tube type instantaneous water heaters with 10 or greater gallons of storage.* This procedure provides a method to test standby loss of instantaneous water heaters and hot water supply boilers, including those that require continuous flow of water to activate the burner or heating element (*i.e.,* ''flow-activated instantaneous water heaters''). DOE reviewed this test procedure for the May 2016 NOPR and discussed the issues with incorporating Annex E.3 of ANSI Z21.10.3–2015 as a test procedure for conducting the standby loss test for flow-activated instantaneous water heaters. Specifically, DOE noted that Annex E.3 of ANSI Z21.10.3–2015 contained several apparent errors, such as equations that appeared to have typos and variables that were incorrectly defined. Further, the test method in Annex E.3 would have ended the test after 1 hour, and assumed that the entire amount of thermal energy contained in the stored water above room temperature is lost in exactly 1 hour, regardless of the rate at which the equipment actually loses heat. DOE tentatively concluded that such a procedure would unfairly assume the same rate of standby losses for models that may lose heat at different rates, and would not be representative of the energy efficiency of this equipment. DOE discussed these issues in detail in section III.G of the May 2016 NOPR. Ultimately, in the May 2016 NOPR, DOE proposed a test procedure similar to Annex E.3 of ANSI Z21.10.3–2015 with modifications to: (1) The equation to calculate the standby loss; (2) the conduct of the test; (3) the parameters that need to be measured; and (4) the stopping criteria for the test. 81 FR 28588, 28607–28613 (May 9, 2016). In the May 2016 NOPR, DOE also proposed to adopt a different method for determining the storage volume for use in the standby loss calculation for flow-activated instantaneous water heaters than that specified by Annex E.3 of ANSI Z21.10.3–2015. Specifically, DOE proposed to use a weight-based method similar to the method specified in section 5.27 of ANSI Z21.10.3–2015, rather than the method included in section 5.28 of ANSI Z21.10.3–2015, which leaves the actual method for determining storage volume to the discretion of the test entity.

In section III.H of this final rule, DOE discusses the comments received from interested parties on the proposed test procedure for flow-activated instantaneous water heaters, including comments on the methodology used to determine the storage volume. In addition, based on the comments received, DOE has expanded the applicability of the adopted test procedure to externally thermostatically-activated instantaneous water heaters and modified the methodology to determine the storage volume to allow the measurement using calculations of physical (or design drawing) based dimensions. For additional details, see section III.H of this final rule.

2. ASTM Standard Test Method D2156 and Smoke Spot Test

DOE's current test procedure for oil-fired CWH equipment at 10 CFR 431.106 points to ASTM Standard Test Method D2156–80. Specifically, DOE requires that smoke in the flue does not exceed No. 1 smoke [10] as measured by the procedure in ASTM D2156–80. A more recent version of ASTM D2156 was approved on December 1, 2009, and reapproved on October 1, 2013. After reviewing D2156–80 and D2156–09 for the May 2016 NOPR, DOE tentatively concluded that no substantive changes were made between these versions in the test method for determining the smoke spot number, and therefore DOE proposed to incorporate by reference ASTM D2156–09 in its test procedures for oil-fired CWH equipment. 81 FR 28588, 28595 (May 9, 2016). In response to the May 2016 NOPR, several parties expressed support in updating references to ASTM D1246–09. (Bock, No. 19 at p. 1; AHRI, No. 26 at p. 13; A.O. Smith, No. 27 at p. 2) DOE did not receive any other comments on this proposal, and, therefore, DOE is incorporating by reference ASTM D2156–09 in its test procedures for oil-fired CWH equipment in appendices A, C, and E to subpart G of 10 CFR part 431.

DOE's current requirement for the flue gas smoke spot number for oil-fired CWH equipment requires that the smoke in the flue does not exceed No. 1 smoke;

[10] The smoke scale, as described in ASTM D156, consists of ten spots numbered consecutively from 0 to 9, ranging in equal photometric steps from white through neutral shades of gray to black.

however, the regulations do not specify when during the test to determine the smoke spot number. To improve consistency and repeatability of testing CWH equipment, in the May 2016 NOPR, DOE proposed to specify when to conduct the smoke spot test. 81 FR 28588, 28596 (May 9, 2016). Specifically, DOE proposed to require determination of the smoke spot number after steady-state operation has been achieved, but prior to beginning measurement for the thermal efficiency test. For the thermal efficiency test, DOE proposed to require that the smoke spot number be determined after steady-state condition has been reached (with steady-state defined as being achieved when there is no variation of the outlet water temperature in excess of 2 °F over a 3-minute period). For the standby loss test, DOE proposed to require determination of the smoke spot number after the first cut-out [11] before beginning measurements for the standby loss test. DOE also proposed to require that the CO°reading, which is required to be measured when testing oil-fired CWH equipment under DOE's current test procedures specified at 10 CFR 431.106, also be measured at the time required for determination of the smoke spot number.

DOE also proposed to clarify that the smoke spot test and measurement of CO_2 reading are required before each thermal efficiency test or standby loss test (as applicable) of oil-fired CWH equipment unless no settings on the water heater have been changed and the water heater has not been turned off since the end of a previously run efficiency test, in which case a second smoke spot test or CO_2 reading is not required prior to beginning another efficiency test (*i.e.,* thermal efficiency or standby loss). *Id.*

In response to the May 2016 NOPR, AHRI commented that the CO_2 reading and smoke spot number should only be measured once when input rate of the burner is being set, not before both the thermal efficiency and standby loss tests. (AHRI, No. 26 at pp. 8–9) A.O. Smith agreed with DOE's proposal regarding when the smoke spot test and measurement of CO_2 reading are not required, and agreed with DOE's proposal that the same requirement for when to measure apply to both CO_2 reading and the smoke spot test. (A.O. Smith, No. 27 at p. 2) Bock agreed with the proposal regarding when to conduct the smoke spot measurement before the thermal efficiency test, but disagreed with the proposal regarding when to conduct the measurement prior to the standby loss test. Specifically, Bock stated that confining the smoke spot measurement to the short time period between the second cut-in [12] and second cut-out would add unnecessary complexity to the procedure, and that the timing of the second cut-in varies. Bock suggested measurement of the smoke spot number 15 minutes into initial warm-up, before the first cut-out. (Bock, No. 19 at p. 1)

In this final rule, DOE is adopting a requirement similar to its proposal that the smoke spot test and CO_2 reading measurement be conducted before beginning the thermal efficiency test. However, given DOE's updated requirements that establish a steady-state verification period immediately preceding the thermal efficiency test (discussed in section III.F.1 of this final rule), the testing body may not know when the steady-state verification period ends and the thermal efficiency test begins until after testing is complete. Therefore, DOE is requiring that the smoke spot test and CO_2 reading measurement must be conducted with the burner firing prior to beginning measurements for the steady-state verification period.

In response to AHRI, DOE notes that the determination of the smoke spot number and measurement of the CO_2 reading is only required before the standby loss test if a thermal efficiency test or standby loss test was not previously conducted, or if the settings have been changed or the water heater turned off after a previously conducted test. Therefore, if efficiency tests are conducted consecutively, and the water heater settings are not changed or the water heater turned off between tests, the method adopted in this final rule is in line with AHRI's suggestion that the smoke spot test only be required once.

DOE also recognizes that there may be a short time period between the second cut-in and second cut-out for determining the smoke spot number, and that the timing of the second cut-in may not be easily predictable. Therefore, DOE agrees with Bock that measurement of the smoke spot number prior to the first cut-out would be less burdensome. When conducting the standby loss test when a thermal efficiency test was not conducted immediately prior, the thermostat must be set for the standby loss test prior to the first cut-out, but there is no specified duration for warm-up. For oil-fired CWH equipment for which a test was not previously conducted (or for which settings on the water heater have changed since the previous test), DOE is therefore specifying that the smoke spot number be determined with the burner firing prior to beginning the standby loss test. DOE is not adopting a requirement that the smoke spot test number be determined after any specific time before beginning the standby loss test, because DOE recognizes that different models will take different amounts of time to warm up.

Additionally, DOE is adopting specifications for the test procedure for the set-up for measuring the smoke density for oil-fired CWH equipment, as proposed in the May 2016 NOPR. 81 FR 28588, 28641 (May 9, 2016). Specifically, DOE is establishing a requirement that the smoke-measuring device be connected to an open-ended tube, and that this tube must project into the flue by ¼ to ½ of the pipe diameter. These requirements are the same as those specified for commercial space-heating boilers in AHRI 1500–2015, and DOE did not receive any comments related to this proposal.

3. ASTM Test Standards C177 and C518

DOE's current definition for ''R-value'' at 10 CFR 431.102 references two industry test methods: ASTM Standard Test Method C177–97 and ASTM Test Standard Method C518–91.

A more recent version of ASTM C177 was approved in September 2013 and published in October 2013 (ASTM C177–13). Additionally, a more recent version of ASTM C518 was approved in May 2010 and published in June 2010 (ASTM C518–10). After comparing both versions of each standard for the May 2016 NOPR, DOE tentatively concluded that, for both standards, there are no substantive differences in the procedures for measuring R-value between the new and old versions. Therefore, in the May 2016 NOPR, DOE proposed to incorporate by reference ASTM Standard Test Methods C177–13 and C518–10, and to update its references to these versions in the definition for ''R-value'' at 10 CFR 431.102. 81 FR 28588, 28592 (May 9, 2016).

In response to the May 2016 NOPR, several interested parties expressed support for updating references to ASTM C518 and C177. (Bradford White, No. 21 at p.1; AHRI, No. 26 at p. 13; A.

[11] Cut-out refers to the de-activation of the burner or heating element following a control signal that the stored water is heated to the thermostat set-point temperature or the call for hot water has ended. The thermostat that signals the burner to activate or de-activate may be located inside the unit or outside the unit at a remote location (*e.g.,* in an external hot water storage tank).

[12] Cut-in refers to the initiation of the burner or heating element operation based on a control signal to raise the temperature of stored hot water that has fallen below the required thermostat set-point temperature, or to meet an external demand for hot water.

O. Smith, No. 27 at p. 2; Rheem, No. 34 at p. 4) DOE did not receive any other comments on this proposal, and, therefore, DOE is incorporating by reference ASTM Standard Test Method C177–13. However, since publication of the May 2016 NOPR, DOE became aware of a more recent version of ASTM C518 that was approved in September 2015 and published in December 2015, ASTM C518–15. After careful review, DOE has determined that there are no substantive differences between ASTM C518–10 and ASTM C518–15. DOE received no feedback which disagreed with DOE's proposal to update its reference to ASTM C518 to the 2010 version. Since the 2015 version of ASTM C518 is not substantially different than the 2010 version and in order to maintain up-to-date references to industry test methods, DOE is incorporating by reference the most recent version of the standard, ASTM C518–15.

B. Ambient Test Conditions and Measurement Intervals

To improve the repeatability of the thermal efficiency and standby loss tests in DOE's current test procedures for CWH equipment, DOE proposed several changes to its required ambient test conditions. These proposals included: (1) Tightening the ambient room temperature tolerance from ± 10.0 °F to ± 5.0 °F and the allowed variance from mean ambient temperature from ± 7.0 °F to ± 2.0 °F; (2) requiring measurement of test air temperature—the temperature of entering combustion air—and requiring that the test air temperature not vary by more than ± 5 °F from the ambient room temperature at any measurement interval during the thermal efficiency and standby loss tests for gas-fired and oil-fired CWH equipment; (3) establishing a requirement for ambient relative humidity of 60 percent ± 5 percent during the thermal efficiency and standby loss tests for gas-fired and oil-fired CWH equipment; (4) setting a maximum air draft requirement of 50 ft/min as measured prior to beginning the thermal efficiency or standby loss tests; and (5) decreasing the time interval for data collection from one minute to 30 seconds for the thermal efficiency test and from 15 minutes to 30 seconds for the standby loss test. 81 FR 28588, 28597 (May 9, 2016).

In response to the May 2016 NOPR, several stakeholders disagreed with DOE's proposals to tighten requirements on ambient conditions and argued that DOE's proposals would be overly burdensome to manufacturers. (Bock, No. 19 at p. 1; Bradford White, No. 21 at p. 3; CA IOUs, No. 23 at pp. 2–3; HTP, No. 24 at p. 1; AHRI, No. 26 at pp. 6–8; A.O. Smith, No. 27 at p. 2; Raypak, No. 28 at pp. 5–6; Bradley, NOPR Public Meeting Transcript, No. 20 at p. 33; Rheem, No. 34 at pp. 4–6) Bock stated that it supports using the procedures in the most updated versions of ANSI Z21.10.3 and ASHRAE 118.1. (Bock, No. 19 at p. 1) Bradford White further argued that the proposed changes are not merited because they would not affect efficiency ratings. (Bradford White, No. 21 at p. 3) CA IOUs stated that the proposed tightening of requirements would not provide a significant improvement in accuracy. (CA IOUs, No. 23 at pp. 2–3)

A.O. Smith suggested that DOE's proposed modifications to the required ambient conditions would be very difficult to meet with large equipment with significant makeup air requirements. A.O. Smith also pointed out that a model of CWH equipment with a rated input of 2 million Btu/h would consume fresh air at a rate of 400 cfm, and that there are over 30 models of CWH equipment on the market with a rated input of 2 million Btu/h or greater. (A.O. Smith, No. 27 at p. 2) AHRI, A.O. Smith, and Raypak argued that laboratories in which CWH equipment is typically tested have multiple ongoing activities, with doors opening and closing, and that conditioning air in such a facility to meet DOE's proposed ambient condition requirements would be unduly burdensome to manufacturers. (AHRI, No. 26 at p. 7; A.O. Smith, No. 27 at p. 2; Raypak, No. 28 at p. 6) Bradford White indicated that costs per manufacturer to laboratory upgrades required to meet DOE's proposed requirements would be hundreds of thousands of dollars or require purchase of environmental chambers which cost at least $120,000 each; AHRI suggested that the cost of complying with the proposed requirements would range from $250,000 to $1 million per manufacturer; Raypak suggested the cost to upgrade its facility would be $500,000 to $1.5 million; Rinnai suggested that meeting DOE's proposed requirements would require environmental chambers which cost more than $250,000 each; and Rheem suggested that the cost for laboratory upgrades would be greater than $500,000. (Bradford White, No. 21 at p. 3; AHRI, No. 26 at p. 7; Raypak, No. 28 at p. 6; Rinnai, No. 34 at p. 1; Rheem, No. 34 at p. 5) NEEA agreed with DOE's proposed ambient condition requirements and suggested that the requirements would improve the consistency of DOE's test procedures with little or no additional test burden. (NEEA, No. 30 at p. 2)

In light of comments received, DOE is not adopting the more stringent ambient conditions (*i.e.,* tighter tolerance on ambient room temperature, ambient relative humidity requirements) that were proposed in the May 2016 NOPR that may have added to test burden for manufacturers. Therefore, DOE considers these comments mitigated. However, DOE is adopting changes related to its other proposals regarding test air temperature, maximum air draft, and data collection intervals, and the specific actions that DOE is taking on each of the proposed requirements and the potential test burden associated with each action are discussed separately in detail in this section.

Joint Advocates suggested that DOE should require collection and reporting of data for relative humidity, air temperature, and barometric pressure. (Joint Advocates, No. 32 at p. 2) CA IOUs commented that DOE should consider the impact of barometric pressure on the results of efficiency testing of CWH equipment because it affects how much moisture can be held in air. CA IOUs also requested that DOE conduct an uncertainty analysis to demonstrate that tighter temperature and humidity tolerances are warranted. (CA IOUs, No. 23 at p. 3) DOE is not aware of any data demonstrating that barometric pressure significantly affects the measured efficiency for CWH equipment, and has therefore not found it necessary to regulate the ambient barometric pressure of test rooms for any heating products. In response to the May 2016 NOPR, no commenters provided such data. Therefore, DOE is not adopting barometric pressure requirements in this final rule. Furthermore, with regard to the Join Advocates suggestion, DOE notes that reported values resulting from testing are typically based on test results of a sample that contains two or more units, which could have slightly different relative humidity and air temperatures during testing. Manufacturers then report representative values in accordance with the requirements of 10 CFR 429. Because reported values for relative humidity and air temperature would be based on multiple unit samples and would not correspond to a single efficiency rating resulting from a specific set of ambient conditions, this information would be of little value to commercial consumers. Therefore, DOE is declining to adopt these reporting requirements at this time.

The following subsections discuss the specific comments on each of the proposed changes for the ambient test

conditions, along with DOE's response and decision.

1. Ambient Room Temperature

Bradford White, AHRI, and Rheem noted that DOE's proposal to tighten the ambient room temperature requirement from 75 °F ± 10.0 °F to 75 °F ± 5.0 °F would preclude the testing of both consumer water heaters and commercial water heating equipment in the same test laboratory, because DOE's test procedure for consumer water heaters requires that the ambient room temperature be maintained between 65 °F and 70 °F. (Bradford White, No. 19 at p. 3; AHRI, No. 26 at p. 7; Rheem, No. 34 at p. 5) While Bradford White, AHRI, and A.O. Smith argued that DOE's proposal to decrease the permitted variance from mean ambient temperature during testing from ± 7.0 °F to ± 2.0 °F would require costly upgrades to HVAC systems in testing facilities, they supported decreasing the allowed variance from ± 7.0 °F to ± 5.0 °F. (Bradford White, No. 19 at p. 3; AHRI, No. 26 at p. 7; A.O. Smith, No. 27 at p. 18) Bradford White further noted that most manufacturers could accommodate a decrease in the allowed variance to ± 5.0 °F using their existing laboratory HVAC systems. (Bradford White, No. 19 at p. 3) A.O. Smith further noted that decreasing the allowed variance to ± 5.0 °F would not be burdensome to manufacturers because rapid variations in supply air flow and temperature could be avoided. (A.O. Smith, No. 27 at p. 18)

DOE agrees with commenters that establishing a narrower range for ambient room temperature such that consumer water heaters and commercial water heating equipment cannot be tested at the same time could be overly burdensome to some manufacturers. Therefore, DOE is maintaining its current ambient room temperature requirement for testing of CWH equipment at 75 °F ± 10.0 °F. In light of comments from several commenters that a decrease in the permitted variance from mean ambient temperature during testing from ± 7.0 °F to ± 5.0 °F would not be burdensome to manufacturers, DOE is adopting a requirement that the ambient temperature must not vary from the mean temperature during testing by more than ± 5.0 °F. This requirement is consistent with the requirement in ANSI Z21.10.3–2015, but slightly more stringent to improve repeatability. Based on the comments received, DOE believes this change would not add undue burden and would improve the repeatability of the test.

In the May 2016 NOPR, DOE proposed that the ambient room temperature be measured at the same interval during the soak-in period as during the thermal efficiency and standby loss tests—30 seconds. 81 FR 28588, 28641, 289644 (May 9, 2016). However, DOE believes that measurement of the ambient room temperature at frequent intervals throughout the 12-hour soak-in period is unnecessary. Unlike for an efficiency test (*i.e.,* thermal efficiency or standby loss) or the steady-state verification period, measurements from the soak-in period are not used in calculation of an efficiency metric or in verification of steady-state operation. The purpose of the soak-in period is simply to allow the tank insulation of storage water heaters and storage-type instantaneous water heaters to reach thermal equilibrium between the ambient room temperature and the stored water temperature. DOE believes that as long as no actions are taken that would change the ambient room temperature during the soak-in period, the ambient room temperature need only be measured prior to beginning the soak-in period. Therefore, DOE is adopting a requirement that the ambient room temperature be maintained at 75 °F ± 10 °F during the soak-in period as measured prior to beginning the soak-in period, and that no actions be taken during the soak-in period that would cause the ambient room temperature to deviate from this range.

2. Test Air Temperature

In the May 2016 NOPR, DOE proposed to require measurement of test air temperature—the temperature of entering combustion air—and require that the test air temperature not vary by more than ± 5 °F from the ambient room temperature at any measurement interval during the thermal efficiency and standby loss tests for gas-fired and oil-fired CWH equipment. 81 FR 28588, 28597 (May 9, 2016). Bradford White and Raypak disagreed with DOE's proposed requirements for test air temperature. (Bradford White, No. 19 at pp. 3–4; Raypak, No. 28 at pp. 5–6) Bradford White and AHRI argued that measurement of test air temperature at each air inlet would be redundant given the required measurement of ambient room temperature, because DOE's ambient room temperature requirement would apply to entering combustion air. (Bradford White, No. 19 at pp. 3–4; AHRI, No. 26 at p. 8) Bradford White further argued that DOE's ambient room temperature requirement would apply to entering combustion air because most models of CWH equipment are tested with minimal vent length, and therefore the combustion air inlet would be very close to the water heater and location of ambient room temperature measurement. Bradford White also asserted that DOE's proposal would present complications for water heaters with air inlets on the bottom of the unit and for models that draw combustion air from the periphery of the water heater, and that at least three thermocouples would likely be needed in these cases to measure test air temperature. Braford White also stated that adding multiple additional thermocouples to a data acquisition system would be more burdensome than suggested by DOE. (Bradford White, No. 19 at pp. 3–4) AHRI commented that the requirement to measure test air temperature within 2 feet of the combustion air inlet would not be possible for models with concentric direct venting. AHRI also argued that measuring the test air temperature for each air inlet for water heaters with multiple air inlets would be an unnecessary burden, and that one properly located temperature sensor could adequately monitor incoming air temperature for such water heaters. (AHRI, No. 26 at pp. 7–8) Raypak questioned why DOE proposed to require measurement of test air temperature, arguing that it does not affect measured efficiency and that DOE has not provided evidence that test air temperature affects accuracy or repeatability of test results. (Raypak, No. 28 at pp. 5–6)

DOE believes that the temperature of entering combustion air, or test air temperature, can have a significant effect on the measured efficiency of a water heater. An increased combustion air temperature increases the enthalpy of the entering air to the water heater, and this increased combustion air enthalpy provides for additional heating of water that is not reflected in the calculation of thermal efficiency. While DOE's current test procedure for CWH equipment does include a requirement for ambient room temperature, this value is only measured at a single location. Therefore, it is possible that the air temperatures could differ between the locations of measurement of ambient room temperature and test air temperature. As mentioned by AHRI, some models of CWH equipment are tested with direct venting systems, and DOE notes that the combustion air intake vent for such equipment would likely not be located in the immediate vicinity of the CWH equipment. Therefore, measurement of ambient room temperature would not be representative of the test air temperature for such equipment. DOE notes that

Raypak did not provide a rationale to support its assertion that test air temperature does not affect the measured efficiency. DOE also notes that AHRI 1500–2015, the industry-consensus test standard for commercial packaged boilers, includes similar requirements for measurement of both ambient room temperature and test air temperature. DOE does not believe that there is a significant difference between testing CWH equipment and commercial packaged boilers that would make measuring and recording test air temperature overly burdensome for CWH equipment. DOE acknowledges that, in certain cases, the air inlet(s) to the water heater may be close enough to the required location for measurement of ambient room temperature that there may not be a significant difference in temperature measured at the two locations. However, after consultation with independent testing laboratories, requiring additional temperature sensors to a data acquisition system to record another air temperature measurement (or multiple measurements) for the combustion air does not appear to present a significant burden to manufacturers, as it would be a simple, one-time task.

In this final rule, for gas-fired and oil-fired CWH equipment, DOE is adopting a requirement that test air temperature be measured within 2 feet of the air inlet to the water heater. DOE also is adopting a requirement that the test air temperature may not vary by more than ± 5 °F from the ambient room temperature at any measurement interval during the thermal efficiency or standby loss tests, as applicable. DOE concludes that the additional requirements for test air temperature are consistent with the industry standard, ANSI Z21.10.3–2015, as these requirements do not change or conflict with any requirements in the industry standard. Instead, the requirements pertaining to test air temperature provide a more detailed approach to maintaining the room temperature and will ensure consistent and repeatable temperatures within the test area.

Regarding AHRI's comments with respect to measuring test air temperature for models with direct venting, DOE's intent by the phrase ''air inlet to the water heater'' in the proposed requirement was to refer to the site where combustion air enters either the water heater or air intake vent, if applicable. However, DOE acknowledges that more specific phrasing is warranted to clarify the measurement location for models tested with direct venting. Therefore, DOE is adopting language such that the test air temperature must be measured within two feet of the air inlet to the water heater or the inlet to the combustion air intake vent, as applicable.

In the May 2016 NOPR, DOE proposed a location for the measurement of the test air temperature for units without a dedicated air inlet. 81 FR 28588, 28597 (May 9, 2016). Specifically, DOE proposed that in this case, the test air temperature would be measured within two feet of a location on the water heater where combustion air would enter the unit. DOE believes that this provision provide adequate instruction as to how to test units that draw combustion air from the periphery of the water heater, which was raised as a potential issue by Bradford White. Therefore, DOE is adopting the language proposed in the May 2016 NOPR for how to measure test air temperature for units without a dedicated air inlet. For such a unit, the test air temperature must be measured within two feet of any location on the water heater where combustion air is drawn. Additionally, for such a unit, DOE's adopted requirements would only require measurement of test air temperature at one location, not three, as asserted by Bradford White. For example, if a unit draws combustion air through a gap between the burner tray and the bottom of the tank, then the test air temperature must be measured within two feet of that gap.

Regarding Bradford White's comment that test air temperature measurement would be complicated for units with an air inlet on the bottom of the water heater, DOE believes that its provisions adopted in this final rule adequately address this issue. For water heaters that draw air from the periphery of the bottom of the water heater, DOE's previously discussed provision for how to measure test air temperature for units without a dedicated air inlet would apply. DOE is unaware of any models of CWH equipment on the market with a dedicated air inlet on the bottom of the water heater (*i.e.,* in between the water heater bottom and the ground), and suspects that this would be a undesirable configuration, as the small clearance between the water heater bottom and the ground would likely obstruct adequate flow of entering combustion air. However, if such a configuration of CWH equipment exists, the test air temperature would be measured at any location within two feet of the air inlet on the bottom of the water heater under the procedure adopted in this final rule. DOE presumes that any clearance between the bottom of the water heater and the ground that is sufficiently large for providing adequate air flow would also be sufficiently large for installing a temperature sensor(s) for measurement of test air temperature.

DOE disagrees with AHRI that measurement of test air temperature should not be required at each air inlet for models of CWH equipment with multiple air inlets. For units that have multiple air inlets (such as stacked, modular units with multiple air inlets that each correspond to a separate burner and heat exchanger), DOE believes that the efficiency of the unit would be affected by the entering combustion air temperature to all air inlets, and that a requirement to measure test air temperature at each air inlet is justified. As previously discussed, DOE does not believe that installing multiple temperature sensors to measure test air temperature would present a significant burden to manufacturers. Therefore, DOE is adopting a requirement that test air temperature be measured at each air inlet for units with multiple air inlets, and that the specification for no variation of more than ± 5 °F from the ambient room temperature applies to the test air temperature measured at each air inlet.

Given the requirement to measure test air temperature within two feet of the air inlet to the water heater, the location of test air temperature measurement may be close to the water heater burner. Therefore, DOE suspects that the temperature sensor used to measure test air temperature might be subject to radiation from the burner. To prevent an impact from such radiation on the measurement of test air temperature, DOE is adopting a requirement that the temperature sensor used to measure test air temperature be shielded from radiation. DOE notes that such a requirement for shielding temperature measurement from radiation is included in ANSI Z21.10.3–2015 for the temperature sensor used to measure ambient room temperature. Additionally, DOE understands that shielding temperature measurements from radiation is common industry practice and would not present any significant burden to manufacturers.

3. Ambient Relative Humidity

In response to DOE's proposed requirements for ambient relative humidity, several commenters argued that relative humidity does not have an effect on results of efficiency testing of CWH equipment because the tests do not require collection of condensate. (Bradford White, No. 19 at p. 2; AHRI, No. 26 at p. 8; A.O. Smith, No. 27 at p. 2; Raypak, No. 28 at p. 6; Rinnai, No. 31

at p. 1) CA IOUs commented that the extent to which relative humidity affects the measured efficiency of condensing water heaters is unclear. (CA IOUs, No. 24 at p. 3) Joint Advocates suggested that relative humidity requirements should not apply to non-condensing gas-fired and oil-fired CWH equipment. (Joint Advocates, No. 32 at p. 2) Bradford White and Rheem commented that it would be difficult to meet DOE's proposed relative humidity requirements in all geographic locations at all times of the year, as these factors can result in significant variation in ambient relative humidity. (Bradford White, No. 21 at pp. 2–3; Rheem, No. 34 at p. 5) Rheem further argued that meeting DOE's proposed relative humidity requirements would likely require that a test room be maintained at a positive pressure, and asserted that it would be difficult to connect humidistats to a data acquisition system. Rheem also stated that a less stringent tolerance is needed for an ambient relative humidity requirement, and that more data showing any correlation between relative humidity and water heater performance are needed before DOE sets a requirement for relative humidity. (Rheem, No. 34 at p. 5)

In light of comments received, DOE has concluded that the potential burden of controlling ambient humidity is not justified at this time, given the amount of make-up air for combustion that would need to be conditioned to supply larger CWH equipment during testing. Manufacturers asserted that controlling the ambient humidity will not have a substantial impact on ratings and should not be held within a tolerance. In DOE's view any variation in the resulting energy efficiency rating from varying levels of ambient humidity would be adequately captured by the existing tolerances for both certification and enforcement in DOE's regulations. Therefore, DOE is not adopting a requirement that ambient relative humidity be maintained at any specific level for CWH equipment other than commercial heat pump water heaters. DOE is establishing a wet bulb temperature requirement for commercial heat pump water heaters based on relevant industry test standards, as discussed in section III.J of this final rule.

4. Maximum Air Draft

In the May 2016 NOPR, DOE proposed a maximum air draft requirement of 50 ft/min as measured prior to beginning the thermal efficiency or standby loss tests. 81 FR 28588, 28597 (May 9, 2016). Bradford White and A.O. Smith agreed with DOE's proposed maximum air draft requirement, but commented that the requirement should not necessitate the connection of the draft-measuring device to the data acquisition system. (Bradford White, No. 19 at p. 4; A.O. Smith, No. 27 at p. 17) A.O. Smith also stated that measurement of air draft may have a large uncertainty at 50 ft/min, and recommended that DOE assign a tolerance for the measurement of air draft and require the draft-measuring device to meet International Organization for Standardization (ISO) requirements. (A.O. Smith, No. 27 at p. 17) Raypak disagreed with DOE's proposed maximum air draft requirement, and argued that there is no evidence that such a requirement would affect results of testing of CWH equipment. Additionally, Raypak argued that most CWH manufacturers do not manufacture residential water heaters, and that DOE was therefore mistaken to presume that many CWH equipment manufacturers would not need to purchase devices for measuring air draft as these devices are already required for testing residential water heaters. (Raypak, No. 28 at p. 5) Rheem argued that DOE's proposed maximum air draft requirement would be appropriate for the standby loss test, but unnecessary for the thermal efficiency test. Rheem also asserted that maintaining a maximum air draft less than 50 ft/min would be difficult while also maintaining the stricter ambient conditions proposed by DOE in the May 2016 NOPR. (Rheem, No. 34 at p. 6)

In this final rule, DOE is adopting its proposed requirement for a maximum air draft of 50 ft/min to clarify the requirement in ANSI Z21.10.3–2015 that the test area be ''protected from drafts.'' Because ANSI Z21.10.3–2015 already includes a requirement for protecting the test area from drafts, DOE concludes that this change provides additional detail but is consistent with the industry standard. DOE believes that this clarification reduces ambiguity in ANSI Z21.10.3–2015 to allow for a more repeatable test. This requirement is also similar to the requirement that DOE adopted for testing consumer water heaters and certain commercial water heaters in the July 2014 final rule. 79 FR 40542, 40569 (July 11, 2014). Specifically, DOE is adopting a requirement that the air draft be measured prior to beginning the thermal efficiency and standby loss tests, within three feet of the jacket of the water heater, and that no actions can be taken during the conduct of the tests that would increase the air draft near the water heater being tested.

In response to Raypak's comment that there is no evidence that the air draft affects the performance of CWH equipment, DOE notes that Annex E.1 of ANSI Z21.10.3–2015 already requires that water heater placement in the test room shall be protected from drafts. DOE believes that if the draft had no impact on the test result, the industry test standard, ANSI Z21.10.3–2015, would not require the test to be done in an area protected from drafts. Therefore, DOE believes that there is an understanding amongst the majority of the industry that air draft from sources such as room ventilation registers, windows, or other external sources of air movement, during the test can affect the performance of CWH equipment. DOE also believes that 50 ft/min is a reasonable maximum value, as it is consistent with DOE's requirement for consumer water heaters. DOE also notes that many manufacturers of CWH equipment also manufacture consumer water heaters and residential-duty commercial water heaters. DOE identified at least 17 of 29 CWH equipment manufacturers (excluding rebranders) that also manufacture consumer water heaters or residential-duty commercial water heaters. For CWH equipment manufacturers who do not also manufacture water heaters subject to the Part 430, Appendix E test procedure (and therefore may not already have draft-measuring devices in their test labs), DOE expects the costs and burden associated with purchasing air draft-measuring devices that do not have the capability of connection to data acquisition system to be insignificant. DOE discusses the potential costs of these requirements as they pertain to small business manufacturers in section 0.

Regarding digital measurement of air draft, DOE's maximum air draft requirement does not require digital measurement. DOE is only adopting a requirement to measure the air draft once at the beginning of the test, so connection to a data acquisition system would be unnecessary. Additionally, DOE is not establishing any requirements on the type or accuracy of device used to measure the air draft. DOE notes that it currently prescribes a similar maximum air draft requirement for consumer and residential-duty commercial water heaters and has no such requirements on the draft-measuring device in that test procedure at appendix E to subpart B of 10 CFR part 430. DOE believes the test entity can determine the appropriate device and accuracy for this measurement.

Additionally, DOE is not establishing a tolerance on its maximum air draft requirement. DOE believes that a tolerance is unnecessary on a maximum value—the air draft must be no greater than 50 ft/min, but any draft below this value meets the requirement.

DOE acknowledges that the air draft may potentially have a greater impact on the results of the standby loss test than on those of the thermal efficiency test. However, once again noting the draft protection provision in ANSI Z21.10.3–2015, DOE has concluded that there may still be an effect on the results of the thermal efficiency test, and that the measurement of air draft, just once before the test begins, does not present a significant burden to manufacturers. Therefore, DOE is adopting the maximum air draft requirement for both the thermal efficiency and standby loss tests. DOE notes that it is not adopting in this final rule the more stringent ambient condition requirements (*i.e.,* narrower tolerance on ambient room temperature, requirement to maintain ambient relative humidity within a specified range) that Rheem argued would make the proposed maximum air draft requirement difficult to meet.

In the May 2016 NOPR, DOE proposed that the maximum draft requirement also apply to the soak-in period. 81 FR 28588, 28597 (May 9, 2016). However, DOE has determined that this requirement is not necessary for the soak-in period. The purpose of the maximum air draft requirement is to improve repeatability of the thermal efficiency and standby loss tests by preventing large air drafts that might cause significantly higher tank heat losses in some tests than in others. DOE believes that this concern does not apply to the soak-in period, the purpose of which is simply to establish thermal equilibrium in the tank insulation, and during which energy consumption is not measured. Therefore, DOE is not adopting a maximum air draft requirement for the soak-in period.

5. Measurement Intervals

Bradford White, AHRI, and Raypak opposed DOE's proposal to decrease the required data collection interval from 1 minute to 30 seconds for the thermal efficiency test and from 15 minutes to 30 seconds for the standby loss test. (Bradford White, No. 19 at p. 4; AHRI, No. 26 at pp. 6–7; Raypak, No. 28 at pp. 6–7) A.O. Smith and Rheem opposed DOE's proposal to decrease the time interval to 30 seconds specifically for the standby loss test. (A.O. Smith, No. 27 at p. 19; Rheem, No. 34 at p. 5)

AHRI and Raypak stated that DOE did not provide evidence or data to suggest that decreasing the time interval would improve accuracy or affect efficiency. (AHRI, No. 26 at pp. 6–7; Raypak, No. 28 at pp. 6–7) AHRI argued that measurements every 15 minutes during the standby loss test are sufficient, and that, if a measurement is within tolerance at two consecutive 15-minute readings, then it is reasonable to assume that the measurement was maintained within tolerance during the entire 15-minute period between measurements. (AHRI, NOPR Public Meeting Transcript, No. 20 at pp. 32–33)

Bradford White argued that DOE's proposal would make data files large and difficult to analyze. (Bradford White, No. 19 at p. 4) To accommodate DOE's proposed time intervals for data collection, AHRI commented that some manufacturers might need to upgrade their facilities, and Raypak and Rheem argued that small manufacturers might need to purchase or upgrade data acquisition systems. (AHRI, No. 26 at pp. 6–7; Raypak, No. 28 at pp. 6–7; Rheem, No. 34 at p. 5) A.O. Smith argued that no readings other than time and temperature should be required at intervals that would necessitate connection to a data acquisition system because most other measurement devices used for testing CWH equipment are not designed to communicate with a data acquisition system. (A.O. Smith, No. 27 at p. 18) Raypak argued that the costs for connecting devices to a data acquisition system are 4–5 times higher than suggested by DOE in the May 2016 NOPR. (Raypak, No. 28 at pp. 6–7) Rheem further acknowledged that data collection intervals can be reduced with current equipment. A.O. Smith and Rheem also asserted that DOE's proposed reduced measurement interval would lead to an increased likelihood that tests would have to be re-run if any parameters were to fall out of the allowable range during the test. (A.O. Smith, No. 27 at p. 18; Rheem, No. 34 at p. 5)

DOE proposed requirements for more frequent data collection to improve the resolution of test data, and therefore, to ensure that test conditions are adequately met throughout the test. DOE disagrees with AHRI that a value can be assumed to be maintained within tolerance in a 15-minute period between readings when measurements at each 15-minute interval are within tolerance, which is further supported by the comments of Rheem and A.O. Smith. DOE believes that 15 minutes is a sufficiently long time for variation in any one of several parameters to potentially have a significant effect on measured standby loss. DOE notes that the standby loss test measures a significantly lower energy consumption than does the thermal efficiency test, and that the measured standby loss is therefore particularly sensitive to fluctuations in ambient conditions. Therefore, DOE believes that recording measurements every 15 minutes does not provide sufficient resolution of test data to ensure that the test results accurately capture the variability in the measurement and could lead to inaccurate and/or inconsistent results. A requirement for data collection every minute ensures that only momentary fluctuations outside of the ambient condition tolerances (*i.e.,* those that occur between consecutive 1-minute readings and are therefore unlikely to have an effect on the measured efficiency) are permitted under DOE's test procedure.

DOE disagrees that its proposed measurement intervals for data collection would make data analysis significantly more burdensome. Analysis of whether all parameters were maintained within their allowable tolerances during testing should be quick and simple in spreadsheet software, and the time required for such analysis should not depend on the number of data entries to any significant extent.

DOE also disagrees that its proposed measurement intervals would require costly upgrades to laboratory facilities. Given that DOE's proposed measurement interval was only slightly different from the current requirement included in Exhibit G.1 of ANSI Z21.10.3–2011 (which DOE currently incorporates by reference for the thermal efficiency test)—30 seconds vs. 1 minute—DOE does not believe that this provision will require any upgrades. The duration of the standby loss test exceeds 24 hours and can reach up to 48 hours; therefore, DOE does not believe that any manufacturers are performing this test without an automated data acquisition system. The one-time cost of a data acquisition system would likely be much less than the recurring labor costs of having a lab technician constantly monitor and record measurements every 15 minutes for every standby loss test for up to 48 hours. Bradford White and Rheem acknowledged that they use data acquisition systems in their facilities, and no stakeholders have commented to DOE that they do not use data acquisition systems for testing of CWH equipment. (Bradford White, Rheem, NOPR Public Meeting Transcript, No. 20 at pp. 43–44) Additionally, DOE does not believe that increasing the frequency of data collection would require any

significant upgrades to existing data acquisition systems. Rather, DOE believes that changing the measurement frequency would require a simple one-time software change and that the additional amount of data collected could be stored inexpensively given the low cost of computer storage. Additionally, DOE is not adopting any requirements in this final rule that would require measurement with a data acquisition system other than time and temperature.

DOE believes that more frequent data collection allows the capture of any variation in parameters that might affect the measured efficiency of CWH equipment. If variation is detected such that a parameter does not meet the DOE test procedure requirements, then DOE believes that re-running the test would be warranted. However, DOE acknowledges that there is a possibility that there could be momentary fluctuations in ambient conditions and/or water temperatures that do not have a significant effect on efficiency. In such a case, a single data point out of the allowable range of the DOE test procedure could require a test to be re-run. The likelihood of such a momentary fluctuation being captured in a test data point is directly proportional to the frequency of data collection. For this reason, DOE is not adopting the proposed 30-second data collection intervals and is instead maintaining the existing 1-minute data collection interval requirement for the thermal efficiency test and decreasing the required data collection interval for the standby loss test from 15 minutes to 1 minute. For the thermal efficiency test, the 1-minute time interval applies to the measurement of (1) ambient room temperature, (2) test air temperature, (3) supply water temperature, and (4) outlet water temperature. For the standby loss test, the 1-minute time interval applies to the measurement of (1) ambient room temperature, (2) test air temperature, (3) mean tank temperature for storage water heaters and storage type-instantaneous water heaters, and (4) outlet water temperature for instantaneous water heaters and hot water supply boilers other than storage type-instantaneous water heaters. DOE concludes that these changes to the data recording intervals improve repeatability, while maintaining consistency with the test method in ANSI Z21.10.3–2015.

This 1-minute data collection interval is consistent with the required 1-minute measurement interval for inlet and outlet water temperatures included in the 2011 and 2015 versions of ANSI Z21.10.3. For the standby loss test, DOE believes that the benefits of finer granularity in data collected from 1-minute intervals instead of 15-minute intervals will provide confirmation that variation in ambient conditions does not occur during the test that could have a significant impact on the measured standby loss. DOE believes that this benefit outweighs any potential burden that might occur from the possibility of having to re-run a test because momentary fluctuations of ambient conditions out of tolerance were captured that would not affect the measured standby loss.

As discussed in sections III.F.1 and III.L of this final rule, DOE is also adopting requirements that the gas consumption be measured at 10-minute intervals during the steady-state verification period and thermal efficiency test. These gas consumption measurements are used to determine fuel input rate. As discussed in section III.F.1 of this final rule, DOE does not expect its requirements that gas consumption be measured at 10-minute intervals during the steady-state verification period and thermal efficiency test to impose any significant burden on manufacturers.

C. Test Set-Up for Storage and Storage-Type Instantaneous Water Heaters

DOE's current test procedure for CWH equipment incorporates by reference the requirement in Exhibit G.1 of ANSI Z21.10.3–2011 that the inlet and outlet piping be immediately turned vertically downward from the connections on a tank-type water heater to form heat traps, and that the thermocouples for measuring supply and outlet water temperatures be installed before the inlet heat trap piping and after the outlet heat trap piping. DOE noted in the May 2016 NOPR that the absence of a clearly defined location for the thermocouples could contribute to variability in the test results. As a result, DOE proposed particular locations for installing the supply and outlet water temperature sensors based on piping distance from the water heater connections. Specifically, DOE proposed that the sensors be placed after a total vertical piping distance of 24 inches and total horizontal piping that is (1) two inches plus the piping distance between the water connection and the edge of the water heater with top and bottom openings for water connections and (2) 6 inches for horizontal opening water connections. DOE also provided separate figures for each configuration of storage water heaters (*i.e.,* top, bottom and horizontal opening water connections) and included them in the proposed appendix A to subpart G of part 431 of the regulatory text of the May 2016 NOPR. 81 FR 28588, 28598–28599 (May 9, 2016).

Rheem stated that it agrees with the standardization of the location of temperature measurements, but disagrees with the distance of 24 inches for measuring the water temperature. Rheem argued that having an outlet water temperature measured at the proposed distance would result in inclusion of the piping losses, which may also differ between the piping configurations and outlet water temperature sensor locations adopted by each lab, and recommended that the water temperature for storage water heaters should be measured at a distance of 5 inches away from the water heater to achieve comparable results with instantaneous water heaters. Last, Rheem stated that the proposed inlet water temperature location for CWH equipment with water connections on the side of the tank is not feasible in the case of some of its models that have inlet water openings only 6 inches above the floor. (Rheem, No. 34 at pp. 6–7)

DOE agrees with Rheem that the total piping distance from the water heater to the temperature sensors (particularly the outlet water temperature) should be consistent between both storage type and instantaneous type water heaters, so that any piping losses are comparable. In the May 2016 NOPR, DOE proposed to specify the measurement location for outlet water temperature at 5 inches from the enclosure for instantaneous water heaters, because that measurement was proposed to be used for both outlet water temperature for the thermal efficiency test and to approximate the water temperature of stored water within the heat exchanger for the standby loss test. 81 FR 28588, 28613–28615 (May 9, 2016) Thus, for the standby loss test, it was important for that measurement to occur close to the unit. However, as discussed in section III.I.1, in this final rule, DOE is adopting a separate temperature measurement location for measuring water to approximate the water temperature within the heat exchanger for the standby loss test, and for measuring the outlet water temperature for the thermal efficiency test. As a result, in section III.I.1 of this final rule, DOE has modified the test set-up for instantaneous water heaters and hot water supply boilers so that: (1) Outlet water temperature for the thermal efficiency test is measured at the second elbow in the outlet water piping; (2) heat exchanger outlet water temperature measured for the standby loss test is within one inch of the outlet water port

(inside or outside); and (3) total piping distance between the water heater and supply and outlet water temperature sensors is consistent with that specified in the test set-up for water heaters with horizontal opening water connections. Rather than change the location of the temperature measurements for storage water heaters, as suggested by Rheem, DOE changed the measurement location for instantaneous water heaters. By using separate temperature sensors to measure the outlet water temperature for the standby loss test (within one inch of outlet) and the thermal efficiency test (at the second elbow), it is no longer necessary to have a temperature sensor for the outlet water temperature that is as close as possible to the water heater. Further, the additional piping length allows installation of two elbows in the piping and the measurement of the water temperature downstream (for outlet) and upstream (for supply) of the heat traps that are required for the test set-up. Installing the outlet water temperature sensor for the thermal efficiency test at the second elbow ensures that the water flow will be well mixed, resulting in more accurate temperature readings (as recommended by stakeholders). For a detailed explanation on test set up for instantaneous water heaters and hot water supply boilers and DOE's responses to public comments, see section III.I of this final rule.

With regard to Rheem's concerns about piping losses if the outlet water temperature is measured at a piping distance of 30 inches away from the water heater, DOE notes that the current and the proposed test set up both require the water piping to be insulated up to a distance of 4 feet from the water connections, which should minimize piping losses. In addition, water heaters with large pipe diameters may not be able to install outlet water temperature sensors with two elbows in the piping (to yield sufficient flow mixing) at 5 inches from the water heater.

DOE also considered Rheem's other comments on the inability of certain water heater models with horizontal water connections, to meet the vertical piping distance of 24 inches as proposed in May 2016 NOPR for the inlet water connection. To address this issue, DOE is adopting a requirement that the vertical piping distance be 24 inches, unless 24 inches is not possible, in which case the maximum possible distance for a given water heater model must be used.

Based on the foregoing, DOE is adopting the test set-ups shown in Figures III.1, III.2, and III.3 for gas-fired and oil-fired storage water heaters and gas-fired and oil-fired storage-type instantaneous water heaters. In addition, DOE uses very similar test set-ups for other types of CWH equipment. Specifically, as discussed in section III.I.5, the set-up for instantaneous water heaters and hot water supply boilers is the same as shown in Figures III.1, III.2, and III.3, except that an outlet water valve and heat exchanger outlet temperature sensor are required. DOE has concluded that these changes are consistent with the approach in ANSI Z21.10.3–2015, but will provide additional specificity and improve test repeatability. The test set-ups for electric storage water heaters and storage-type instantaneous water heaters are similar to the test set-ups shown in Figures III.1, III.2, and III.3, with the only difference being that the outlet water temperature sensor is not present. An outlet water temperature sensor is not needed for testing electric storage water heaters and storage-type instantaneous water heaters, because the outlet water temperature is not measured during the conduct of the test.

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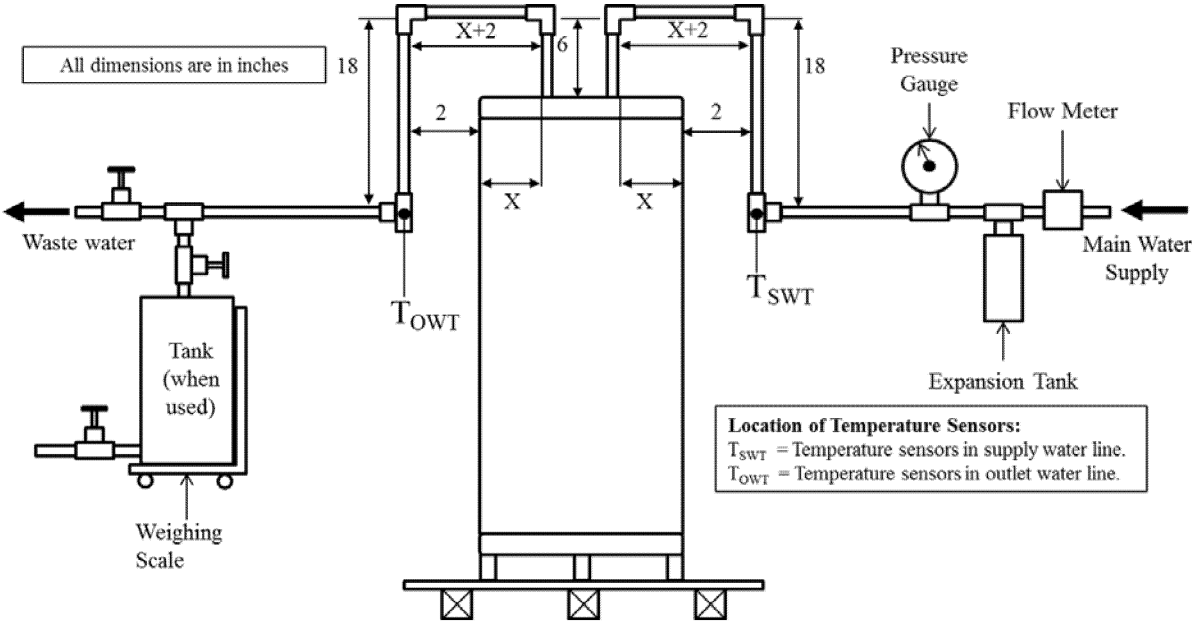

Figure III.1. Test set-up for gas-fired and oil-fired storage water heaters and storage-type instantaneous water heaters equipped with vertical (top) connections

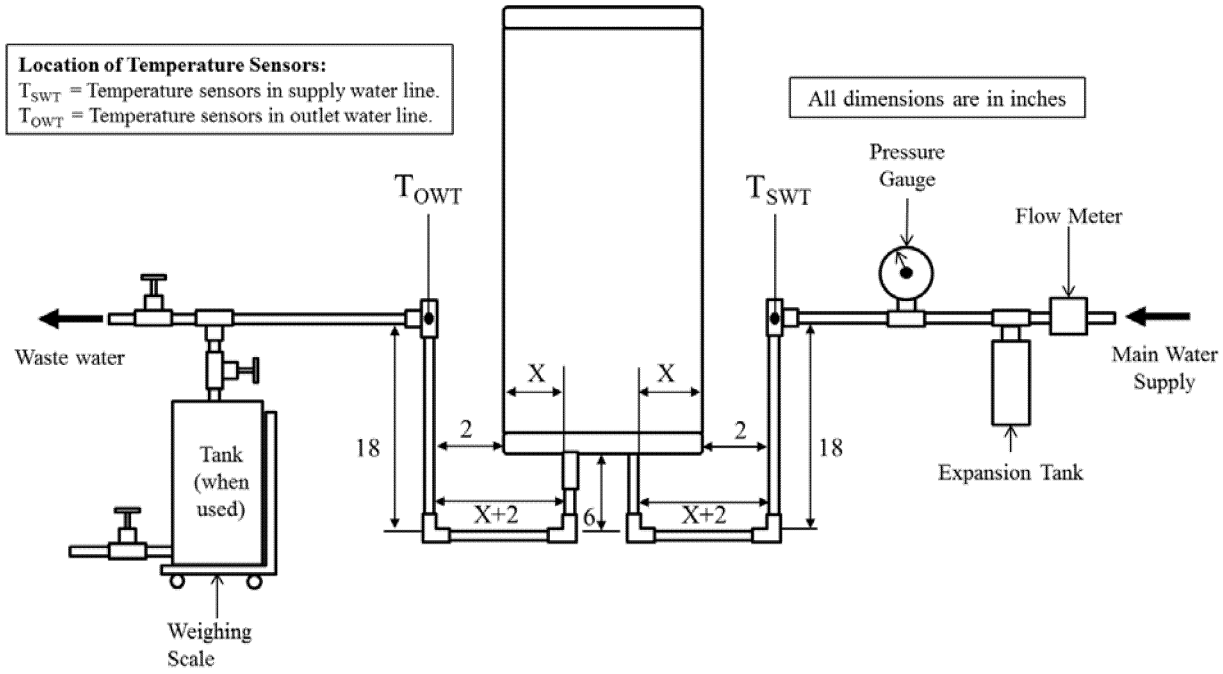

Figure III.2. Test set-up for gas-fired and oil-fired storage water heaters and storage-type instantaneous water heaters equipped with vertical (bottom) connections

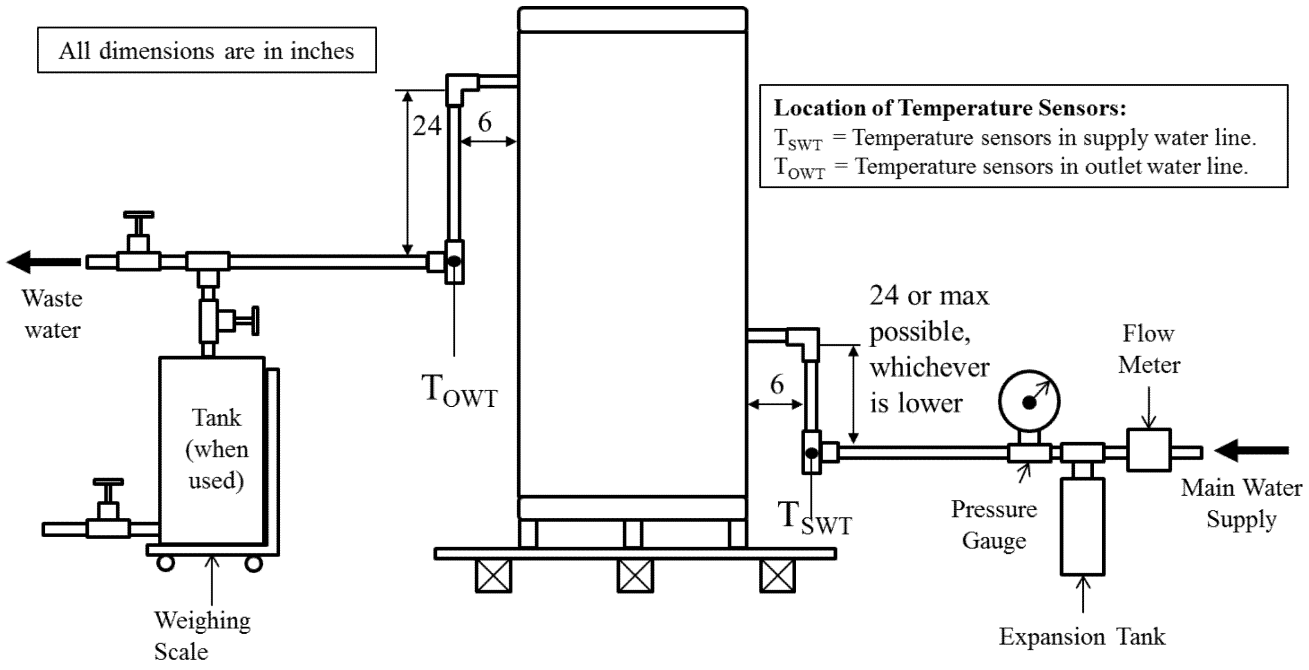

Figure III.3. Test set-up for gas-fired and oil-fired storage water heaters and storage-type instantaneous water heaters equipped with horizontal connections

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D. Test Method for Unfired Hot Water Storage Tanks

EPCA defines an ''unfired hot water storage tank'' (UFHWST) as a tank used to store water that is heated externally. (42 U.S.C. 6311(12)(C)) The current Federal standard for this equipment type requires a minimum thermal insulation (R-value) of 12.5. 10 CFR 431.110. DOE defines ''R-value'' as the thermal resistance of insulating material as determined based on ASTM Standard Test Method C177–97 or ASTM Standard Test Method C518–91 and expressed in °F·ft²·h/Btu. 10 CFR 431.102. In section III.A.3 of this rulemaking, DOE updates references to these standards in its definition for ''R-value'' by incorporating by reference ASTM C177–13 and ASTM C518–15. In the May 2016 NOPR, DOE proposed to adopt a method for testing the standby loss for UFHWSTs in lieu of relying on the current R-value metric and ASTM standards. DOE received numerous comments on this topic, and is still considering those comments. Therefore, DOE will address the comments and its proposed test procedure for UFHWSTs in a separate rulemaking notice.

DOE is aware that some manufacturers ship UFHWSTs without insulation and that uninsulated UFHWSTs may or may not then be insulated on-site. In the May 2016 NOPR, DOE clarified that UFHWSTs shipped without insulation are not compliant with the Federal R-value standard. 81 FR 28588, 28601–28602 (May 9, 2016). All UFHWSTs must either be shipped insulated to the R-value standard or shipped together with insulation meeting the R-value standard. Manufacturers of UFHWSTs must certify that the insulation meets the R-value standard prescribed in 10 CFR 431.110, and this certification must be based on testing according to the methods prescribed in the R-value definition. A UFHWST manufacturer may demonstrate compliance with the insulation requirements either by conducting testing itself or by using test data from the insulation material producer. Further, manufacturers of UFHWSTs are responsible for retaining records of the underlying test data used for certification in accordance with current maintenance of records requirements set forth at 10 CFR 429.71.

In response to the May 2016 NOPR, Bock and Raypak disagreed with DOE's clarification that all UFHWSTs must be shipped insulated or with insulation. (Bock, No. 19 at p. 2; Raypak, No. 28 at p. 3) Bock argued that some units have to be shipped without insulation to allow entry into a building, and that requiring shipping with insulation will increase expense and in some cases prevent installation. (Bock, No. 19 at p. 2) Raypak argued that tank insulation might be damaged beyond repair in shipping, and then require re-installation of insulation in the field. Raypak further suggested that DOE allow UFHWSTs with a volume greater than 200 gallons to be field-insulated. (Raypak, No. 28 at p. 3)

DOE disagrees with the commenters that manufacturers can distribute UFHWSTs in commerce without insulation. The standard, which was set by statute, requires a minimum thermal insulation (R-value) of 12.5 for UFHWSTs. The covered equipment must be compliant at the time the manufacturer distributes it in commerce. *See* 42 U.S.C. 6316, 6302. Therefore, if a manufacturer distributes a UFHWST without insulation, the manufacturer has distributed a UFHWST without a minimum thermal insulation of 12.5. DOE's interpretation gives manufacturers a great deal of flexibility and accommodates commenters' concerns that insulation already wrapped on the UFHWST may be damaged during shipment or that insulated UFHWSTs may not fit through the entryway to some buildings, as manufacturers can either ship the tank already wrapped in insulation or with insulation provided. Therefore, if there are any UFHWSTs that cannot be shipped already insulated, or if there are concerns of damage of insulation in shipping, then the insulation shipped with the unit can be applied upon

installation. All UFHWSTs of all storage volumes must satisfy this requirement. Accordingly, in this final rule, DOE reiterates that all UFHWSTs must be shipped insulated or with insulation such that the installed UFHWST will meet the minimum standard.

E. Setting the Tank Thermostat for Storage and Storage-Type Instantaneous Water Heaters

DOE's test procedure for measuring the energy efficiency of CWH equipment currently requires that the thermostat be set to achieve specific conditions for the mean tank temperature before the test may begin. In particular, section g of Exhibit G.1 of ANSI Z21.10.3–2011 (which is currently incorporated by reference into the DOE test procedure) requires that before starting testing, the thermostat setting must be adjusted such that, when starting with the water in the system at 70 °F ± 2 °F, the maximum mean tank temperature would be 140 °F ± 5 °F after the thermostat reduces the gas supply to a minimum.

1. Gas-Fired and Oil-Fired Storage Water Heaters

DOE understands that some units may have difficulty achieving the current mean tank temperature requirement (*e.g.,* condensing water heaters), and in the May 2016 NOPR, DOE proposed to modify its requirements for setting the tank thermostat. 81 FR 28588, 28604 (May 9, 2016). Specifically, DOE proposed to modify the thermal efficiency and standby loss test procedures for gas-fired and oil-fired storage water heaters and storage-type instantaneous water heaters to require that before starting the required soak-in period, the thermostat setting be adjusted such that, when starting with the water in the system at 70 ± 2 °F, the maximum outlet water temperature will be 140 °F ± 5 °F after the thermostat reduces the gas supply to a minimum.

In response to the May 2016 NOPR, DOE received comments from several interested parties. Joint Advocates and Rheem agreed with changing from a mean tank temperature requirement to an outlet water temperature requirement for fossil fuel-fired storage water heaters. (Joint Advocates, No. 32 at p. 2; Rheem, No. 34 at p. 8) However, Rheem also stated that outlet water temperature is a poor indicator of standby loss, and that mean tank temperature should be used to determine heat loss. (Rheem, No. 34 at p. 8) AHRI stated that measurement of outlet water temperature will not work for setting the tank thermostat if measured more than 2 feet downstream of the water heater outlet because water is not flowing when setting the thermostat. Instead, AHRI suggested that the six tank temperature sensors be installed in the tank at the beginning of the test, as is currently required in ANSI Z21.10.3–2015, and that the tank thermostat be set based on the reading from the topmost tank temperature sensor used to calculate mean tank temperature. (AHRI, No. 26 at p. 8) A.O. Smith stated that, for the thermal efficiency test, setting the tank thermostat is irrelevant as long as the water heater is firing at full input rate and meeting the outlet water temperature requirement. A.O. Smith further suggested that, in order to measure the outlet water temperature for standby loss, the measurement location needs to be inside the tank within one inch of the tank outlet. (A.O. Smith, No. 27 at p. 5) Bradford White stated that the same thermostat setting should be used for both thermal efficiency and standby loss tests, and requested clarification on DOE's proposal, stating that the language in the NOPR preamble and the proposed appendix A in the NOPR regulatory text were not consistent. (Bradford White, No. 21 at p. 8)

DOE agrees with A.O. Smith that, for an outlet temperature requirement, as opposed to a mean tank temperature requirement, setting the tank thermostat for the thermal efficiency test is irrelevant as long as the water heater is firing continuously at full firing rate and all the specifications required for the steady-state verification period, including the outlet water temperature requirement, are met. However, because the thermostat setting does not affect the operation of the water heater during the thermal efficiency test as long as the burner is firing continuously at full firing rate, the thermostat setting used in the thermal efficiency test does not necessarily provide an outlet water temperature of 140 °F ± 5 °F when water is not flowing through the water heater. In order to ensure that this outlet water temperature requirement is met, DOE believes that the thermostat setting needs to be set such that the maximum outlet water temperature after cut-out is 140 °F ± 5 °F before beginning the standby loss test.

While the thermostat settings used during the thermal efficiency test do not affect the test results so long as the burner fires continuously at full firing rate, DOE understands that the standby loss test is often performed directly after the thermal efficiency test. In this final rule, DOE is adopting provisions such that a soak-in period is not required in between the thermal efficiency and standby loss tests, if no settings on the water heaters are changed and the water heater is not turned off. However, setting the tank thermostat between the thermal efficiency and standby loss tests would inherently require changing settings on the water heater, unless the thermostat was already set to achieve the required outlet water temperature after cut-out of 140 °F ± 5 °F. Therefore, DOE believes that the tank thermostat must be set to meet the outlet water temperature requirement before the thermal efficiency test. DOE notes that requiring the tank thermostat to be set prior to the thermal efficiency test is consistent with DOE's current test procedure, DOE's proposal in the May 2016 NOPR, and with AHRI's comment.

DOE agrees with AHRI and A.O. Smith that it would be difficult to set the tank thermostat without water flowing through the water heater such that the outlet water temperature after cut-out is 140 °F ± 5 °F, as measured downstream of a heat trap in the outlet water piping. Additionally, DOE believes that the tank thermostat must be set without water flowing through the water heater; otherwise, both the tank thermostat and water flow rate would affect the measured outlet water temperature, and the thermostat settings obtained might not ensure that the outlet water temperature requirement is met without water flowing. Therefore, DOE believes that the thermostat should be set based on the reading of a temperature sensor located inside the tank. However, commenters disagreed on the location of measurement, with AHRI suggesting using the temperature recorded at the topmost temperature sensor in the tank that is used for measurement of mean tank temperature, while A.O. Smith suggested the placement of a temperature sensor inside the tank within 1 inch of the water heater outlet. While a temperature sensor within one inch of the water heater outlet is closer to the temperature of the water delivered than is the topmost temperature sensor used for mean tank temperature calculation, the difference between these temperatures is likely insignificant, and therefore, the placement of an additional temperature sensor in the tank for the sole purpose of setting the tank thermostat would be an unnecessary burden to manufacturers. Consequently, DOE is adopting a requirement that the tank thermostat be set using the reading from the topmost tank temperature sensor used to calculate mean tank temperature. Based on the above, DOE concludes that there is evidence that setting the thermostat according to the mean tank temperature, as is done in

ANSI Z21.10.3–2015, does not provide an accurate reflection of the energy efficiency during a representative average use cycle for certain equipment. DOE further concludes that the method for setting the thermostat adopted in this final rule provides an accurate reflection of energy efficiency for all kinds of gas-fired and oil-fired storage water heaters on the market. Therefore, DOE concludes that the method adopted in this final rule is consistent with the industry standard, ANSI Z21.10.3–2015, but provides flexibility so that all designs of gas-fired and oil-fired storage water heaters can achieve the temperature requirement used for setting the tank thermostat. DOE also concludes that the method adopted in this final rule is not unduly burdensome to conduct. Therefore, the changes adopted are better aligned with the requirements of 42 U.S.C. 6314(a)(2).

In response to Rheem, while DOE proposed to use outlet water temperature for the purpose of setting the tank thermostat for the standby loss test, DOE still proposed to use mean tank temperature for determining heat loss during the standby loss test. 81 FR 28588, 28604 (May 9, 2016). In this final rule, DOE is adopting provisions for determining heat loss during the standby loss test using mean tank temperature, similar to those included in annex E.2 of ANSI Z21.10.3–2015.

For gas-fired and oil-fired storage water heaters and storage-type instantaneous water heaters, DOE is adopting a requirement that the tank thermostat be set prior to the steady-state verification period. The thermostat must be set starting with the tank full of water at the water supply temperature. The thermostat must be set such that the maximum water temperature measured at the topmost tank temperature sensor after cut-out (and while water is not flowing through the water heater) is 140 °F ± 5 °F. The thermostat also must be set such that with water flowing through the unit continuously, the outlet water temperature can be maintained at 70 °F ± 2 °F above the supply water temperature, as required during the thermal efficiency test. DOE's updated requirements for determining steady-state operation for the thermal efficiency test and the steady-state verification period are discussed in section III.F.1 of this final rule. If conducting a standby loss test after a thermal efficiency test, the thermostat setting established prior to the thermal efficiency test would be used for the standby loss test, and no separate procedure would be needed for setting the thermostat. However, if the standby loss test is run without a previously run thermal efficiency test, the thermostat would need to be set using the same procedure as required before the thermal efficiency test, such that the maximum top tank sensor water temperature after cut-out is 140 °F ± 5 °F. In this case, the tank thermostat must be set prior to the soak-in period.

2. Electric Storage Water Heaters

DOE proposed to maintain the mean tank temperature requirement for the standby loss test for electric storage water heaters, rather than adopt an outlet water temperature requirement, because of complications involved with setting multiple tank thermostats. 81 FR 28588, 28604 (May 9, 2016). Electric storage water heaters typically have multiple heating elements and thermostats, and each thermostat needs to be set prior to beginning the standby loss test. Therefore, DOE tentatively determined that electric storage water heaters are not well-suited to an outlet water temperature requirement because it is unclear how the lower thermostat(s) would be set to achieve a designated outlet water temperature. However, DOE proposed to clarify its language specifying the method for setting thermostats in an electric storage water heater with multiple thermostats. Specifically, DOE proposed to clarify that the thermostats are to be set in immediate succession, starting from the topmost thermostat. DOE also proposed to clarify that when setting each thermostat, the mean tank temperature is calculated using only temperature readings measured at locations higher in the tank than the heating element corresponding to the thermostat being set, with the exception of the bottommost thermostat. Finally, DOE proposed to clarify that all thermostats below the thermostat being tested must be turned off so that no elements below the thermostat being tested are in operation.

Several commenters agreed with DOE's proposal to maintain the existing mean tank temperature requirement for setting the tank thermostat for electric storage water heaters. (Bradford White, No. 21 at p. 8; AHRI, No. 26 at p. 13; A.O. Smith, No. 27 at p. 5; Joint Advocates, No. 32 at p. 2; Rheem, No. 34 at p. 9) A.O. Smith also agreed with DOE's proposed clarification regarding how to set thermostats for electric storage water heaters with multiple thermostats. (A.O. Smith, No. 27 at p. 5) However, AHRI, Rheem, and Bradford White disagreed with DOE's proposal on how to set thermostats for units with multiple thermostats. Specifically, AHRI and Rheem suggested that only the topmost and bottommost thermostats be set and used for the standby loss test. (AHRI, No. 26 at p. 10; Rheem, No. 24 at p. 9) AHRI stated that DOE's proposal is unnecessarily burdensome and complicated, and that it does not matter how many thermostats and associated heating elements are used to meet the mean tank temperature requirement for the standby loss test. (AHRI, No. 26 at p. 10) Rheem stated that using just the topmost and bottommost thermostats would simplify the test and improve consistency among units with different thermostat-to-element ratios. Additionally, Rheem commented that not all laboratories can supply power greater than 36 kW. (Rheem, No. 24 at p. 9) Bradford White recommended that the lowest thermostat be set first, and then the next highest, etc. Bradford White also did not support DOE's proposal to calculate mean tank temperature with only temperature readings measured higher than the heating element corresponding to the thermostat being set, with the exception of the bottom thermostat. (Bradford White, No. 21 at p. 8)

After review of stakeholder comments and consultation with several independent testing laboratories, DOE agrees with AHRI and Rheem that setting all thermostats for the standby loss test for commercial electric storage water heaters with multiple thermostats is unnecessary. DOE agrees with AHRI that setting fewer thermostats would reduce burden to manufacturers and would be unlikely to affect the results of the standby loss test, because it is unlikely that more than one heating element will experience a call for heat during the standby loss test. DOE also notes, based on its assessment of commercial electric storage water heaters on the market, most models have banks of heating elements grouped together such that a call for heat in the lowest thermostat will likely heat the water up to temperature at the nearby thermostats as well. Additionally, DOE agrees with Rheem that limiting the number of thermostats (and correspondingly the number of heating elements) used during the standby loss test may simplify the testing of higher input capacity units by limiting the total amperage draw to a level that most laboratories would be able to provide.

DOE believes that the topmost thermostat should be set using mean tank temperature calculated only with temperature readings measured at locations higher in the tank than the heating element corresponding to the thermostat being set. If the water lower in the tank is included in the mean tank temperature calculation and has not been previously heated by a lower element, as suggested by Bradford

White, the heating element(s) corresponding to the topmost thermostat would have to heat water at the top of the tank to a temperature much higher than the required mean tank temperature in order to achieve the mean tank temperature requirement.

In this final rule, DOE is maintaining a mean tank temperature requirement for the standby loss test for electric storage water heaters. DOE is adopting its proposed requirement that that the tank thermostat(s) be set prior to conducting the required soak-in period. DOE is also clarifying that the thermostat(s) for electric storage water heaters must be set while no water is flowing through the unit. DOE is also adopting requirements for setting tank thermostats for electric storage water heaters with multiple thermostats. Specifically, DOE is specifying that only the topmost and bottommost thermostats be set, and that all other thermostats and corresponding elements not operate while setting thermostats or during conduct of the standby loss test. DOE also specifies that when setting the topmost thermostat, only temperature readings measured at locations higher in the tank than the heating element corresponding to the topmost thermostat (the lowest heating element corresponding to the thermostat if the thermostat controls more than one element) should be used to calculate mean tank temperature. However, when setting the bottommost thermostat, DOE specifies that all temperature readings should be used to calculate mean tank temperature. These changes are consistent with the industry test method, ANSI Z21.10.3–2015, and simply provide additional detail regarding the method for setting the thermostat to improve consistency and repeatability.

F. Steady-State Requirements and Soak-In Period

1. Steady-State Verification

In the May 2016 NOPR, DOE noted that the required three-minute period for verifying steady-state operation prior to the thermal efficiency test, which is included in Exhibit G.1 of ANSI Z21.10.3–2011 (currently incorporated by reference in DOE's test procedure), may not be sufficiently long. 81 FR 28588, 28601 (May 9, 2016). Additionally, DOE noted that the current test procedure does not impose requirements for maximum variation in inlet water temperature or water flow rate during this period for verifying steady-state operation. Therefore, DOE requested information and data that might support a change to the provisions for establishing steady-state operation in its test procedure.

In response to the May 2016 NOPR, Bradford White stated that it is possible to meet the current criterion of no variation in outlet water temperature in excess of 2 °F over a 3-minute period before the water heater has reached steady-state conditions. (Bradford White, No. 19 at p. 4) Bradford White and AHRI both commented that verification of steady-state operation is an area in which the repeatability of the thermal efficiency test can be improved. (Bradford White, No. 19 at p. 4; AHRI, No. 26 at p. 9) Bradford White and AHRI also suggested that DOE adopt more stringent requirements for establishing steady-state operation prior to the thermal efficiency test, and included specific guidelines in their comments that they recommend DOE implement. Specifically, Bradford White and AHRI suggested establishing an hour-long period during which the requirements of DOE's current thermal efficiency test procedure would have to be met, along with additional requirements for maximum variation in: (1) Water flow rate (± 0.25 gallons per minute (gpm)); (2) gas higher heating value (± 5 percent, measured every 30 minutes); (3) inlet water temperature (± 0.50 °F, with respect to the initial reading); and (4) the difference between initial and final rise between inlet and outlet water temperatures (± 0.50 °F and ± 1 °F for units with input rates <500,000 Btu/h and ≥500,000 Btu/h, respectively). Bradford White and AHRI further suggested that the final 30 minutes of the hour-long period would be used to calculate the results of the thermal efficiency test. (Bradford White, No. 19 at p. 5; AHRI, No. 26 at pp. 9–10) AHRI also suggested that these measurements would be required at least every 60 seconds, except for gas higher heating value.

A.O. Smith commented that while an additional requirement for establishing steady-state operation could improve repeatability, it would be a new requirement that manufacturers would need to further analyze. (A.O. Smith, No. 27 at p. 3) However, A.O. Smith suggested revised guidelines for determining steady-state operation in case DOE proceeds with such modifications to its test procedure. Specifically, A.O. Smith suggested that steady-state be considered established once 30 minutes of consecutive readings confirm that: (1) Inlet water temperature is maintained at 70 °F ± 2 °F, (2) outlet water temperature is maintained at 70 °F ± 2 °F above supply water temperature, and (3) fuel input rate is within 2 percent of the rated input. A. O. Smith argued that the required measurement intervals should be one minute for storage-type water heaters but only 15 minutes for instantaneous water heaters because instantaneous water heaters do not experience a lasting effect from momentary variations in water temperature as do storage-type water heaters. (A.O. Smith, No. 27 at pp. 3–4)

Rheem commented that it typically monitors the outlet water temperature of storage-type water heaters for at least 20 minutes prior to testing but does not record this data. Rheem also stated that it typically runs three thermal efficiency tests after steady-state conditions are established prior to beginning the thermal efficiency test for which data are recorded. Additionally, Rheem asserted that instantaneous water heaters only require 5 minutes of operation before steady-state conditions are reached, and that different steady-state verification requirements may be warranted for different classes of CWH equipment. (Rheem, No. 34 at p. 7)

DOE agrees with the commenters that the guidelines for establishing steady-state operation that were suggested by Bradford White and AHRI would improve test repeatability. Specifically, DOE agrees with these commenters that extending the duration of the steady-state verification period from 3 minutes to 30 minutes prior to the start of the 30 minute period for the thermal efficiency test (for which steady-state conditions must also be maintained, equating to a total of one hour of continuous steady-state operation), and adding additional requirements for verification would improve the repeatability of the test. DOE notes these guidelines were suggested by a trade organization that represents manufacturers that produce over 90 percent of CWH equipment sold in the United States, indicating that the need for adopting these guidelines is widely understood across the industry. Additionally, Bradford White noted that its suggested guidelines for determining steady-state operation were developed by an industry working group, and that AHRI plans to adopt these test guidelines. (Bradford White, No. 21 at p. 5) Therefore, DOE concludes that the modifications to DOE's steady-state verification procedures adopted in this final rule do not require further analysis and comment from manufacturers, as suggested by A.O. Smith, because DOE's adopted requirements contain only minor deviations from the guidelines suggested by Bradford White and AHRI. However, DOE is open to stakeholder feedback regarding these procedural modifications related to establishment of steady-state operation, including

experiences prior to the compliance date, and the Department would consider addressing any potential issues in a future test procedure rulemaking or guidance, as necessary.

DOE agrees with all of the conditions specified in the steady-state requirements recommended by Bradford White and AHRI, except for the requirement that there be no variation in the higher heating value of greater than ± 5 percent. DOE notes that AHRI and Bradford White recommended requirements for steady-state verification that include a maximum variation on the fuel higher heating value, while the guidelines suggested by A.O. Smith instead include a requirement that the fuel input rate be maintained within 2 percent of the rated input. While DOE recognizes that restricting variation in fuel higher heating value ensures consistency in the composition of fuel consumed (*e.g.,* ensuring steady-state operation in the case that the fuel source is changed during the test), DOE believes that restricting variation on fuel input rate would be more effective in terms of ensuring that steady-state operation is reached. Variation in fuel higher heating value is reflected in measurement of fuel input rate, along with variation in gas consumption. Additionally, section 2.3.3 of ANSI Z21.10.3–2011, which is referenced in exhibit G.1 of ANSI Z21.10.3–2011 (referenced in DOE's current test procedure), specifies that the burner shall be adjusted to achieve a measured input within ± 2 percent of the manufacturer's rated input 15 minutes after being placed in operation from a room temperature start. Therefore, DOE believes that including a similar requirement for restricting variation in fuel input rate when verifying steady-state operation is consistent with DOE's current test procedure and the industry consensus test standard (ANSI Z21.10.3).

DOE does not expect a requirement to measure fuel input rate during the steady-state verification period and thermal efficiency test to impose any significant burden to manufacturers. As discussed in section III.F.2 of this final rule, no commenters suggested that DOE's proposed clarification that full firing rate must be maintained throughout the thermal efficiency test would be burdensome or difficult to achieve. Determination of fuel input rate for each 10-minute interval simply requires recording the fuel consumption every ten minutes.

Consequently, DOE is adopting the requirements for determining that steady-state operation has been achieved, as recommended by AHRI and Bradford White with one modification. Specifically, DOE is declining AHRI and Bradford White's suggestion of a requirement for maintaining the fuel higher heating value within ± 5 percent in favor of adopting A.O. Smith's suggestion of a requirement to maintain the fuel input rate within ± 2 percent. Under the test procedure adopted in this final rule, the thermal efficiency test will be complete when there is a continuous, one-hour-long period (comprising the 30-minute ''steady-state verification period'' and 30-minute ''thermal efficiency test'') meeting the following requirements: (1) Outlet water temperature is maintained at 70 °F ± 2 °F above supply water temperature, (2) water flow variation is no greater than ± 0.25 gpm from the initial value, (3) fuel input rate is maintained within 2 percent of the rated input certified by the manufacturer, (4) the supply water temperature (or inlet water temperature if a recirculating loop is used for instantaneous water heaters and hot water supply boilers) is within ± 0.5 °F of its initial reading, and (5) the rise between the supply water temperature (or inlet water temperature if a recirculating loop is used for instantaneous water heaters and hot water supply boilers) and outlet water temperatures is within ± 0.50 °F of its initial value for the duration of the one-hour-long period for units with rated input less than 500,000 Btu/h, and within ± 1 °F of its initial value for units with rated input greater than or equal to 500,000 Btu/h. The final 30 minutes will be used to calculate thermal efficiency. DOE concludes that the method for determining steady-state operation adopted in this final rule is consistent with the industry test standard, ANSI Z21.10.3–2015, but provides more stringent requirements to improve consistency. Based on the comments received from stakeholders and the foregoing discussion, DOE concludes that the adopted method will produce results which better reflect the energy efficiency of CWH equipment during a representative average use cycle and will not be unduly burdensome to conduct, as required by EPCA. (42 U.S.C. 6314(a)(2))

In response to A.O. Smith's suggestion that DOE increase the measurement interval for instantaneous type water heaters, DOE disagrees and is maintaining 1-minute measurement intervals for the thermal efficiency test as currently included in DOE's test procedure. This interval applies to the new requirements for determining steady-state operation (adopted from the guidelines suggested by Bradford White and AHRI), except for fuel input rate, which has a 10-minute measurement interval. While DOE acknowledges it is possible that burner fluctuations may not have as much of a lasting effect on instantaneous water heaters (other than storage-type instantaneous water heaters) as suggested by A.O. Smith, DOE is not adopting a longer measurement interval for instantaneous water heaters than for storage water heaters. DOE believes that the 1-minute measurement interval included in DOE's current test procedure is appropriate for both storage water heaters and instantaneous water heaters, and that it is appropriate and not significantly burdensome to manufacturers to extend this measurement interval to the measurements taken during the steady-state verification period prior to the thermal efficiency test. DOE notes that this one-minute interval was included in the suggestion for determining steady-state operation from both Bradford White and AHRI. Measurement intervals for both the thermal efficiency and standby loss tests are further discussed in section III.B.5 of this final rule.

DOE disagrees with Rheem's suggestion that separate requirements may be warranted for verifying steady-state operation for instantaneous water heaters and storage water heaters, and is adopting the same requirements for both kinds of CWH equipment. Many storage water heaters, particularly those with a low input-volume ratio, may require a significant amount of time before steady-state conditions are reached and measurements can begin constituting the steady-state verification period. In contrast, instantaneous water heaters, with a much higher input-volume ratio, may reach steady-state conditions very quickly, and it may only take a short time after beginning water heater operation before measurements can be included in the steady-state verification period. However, DOE is not adopting any provisions or requirements regarding the duration of the period during which CWH equipment warms up to reach steady-state conditions. Nonetheless, DOE continues to believe that a 30-minute period for verifying steady-state operation is appropriate for both storage water heaters and instantaneous water heaters, and that the duration of this period should not depend upon the time it takes for the water heater to warm up. Thus, DOE is not adopting different verification requirements for instantaneous water heaters, as suggested by Rheem.

2. Clarifying Statements

DOE's current thermal efficiency test procedure for gas-fired and oil-fired CWH equipment, which incorporates by reference Exhibit G.1 of ANSI Z21.10.3–2011, requires the water heater to achieve steady-state conditions prior to beginning measurements for the thermal efficiency test. Specifically, the test procedure requires the outlet water temperature to be maintained at 70 °F ± 2 °F above the supply water temperature, with no variation in excess of 2 °F over a 3 minute period. However, DOE's current test procedure does not specify that this outlet water temperature requirement must be maintained throughout the thermal efficiency test.

In the May 2016 NOPR, DOE proposed adding clarifying statements to its test procedure regarding steady-state operation. Specifically, DOE proposed to require that the test entity must maintain the outlet water temperature at 70 °F ± 2 °F above the supply water temperature and ensure the burner fires continuously at the full firing rate (*i.e.,* no modulation or cut-outs) for the entire duration of the thermal efficiency test. Further, DOE proposed to clarify that once steady-state operation is achieved, as determined by no variation of the outlet water temperature in excess of 2 °F over a 3-minute period, no settings on the water heating equipment may be changed until measurements for the thermal efficiency test are finished. DOE also proposed a similar clarification for the standby loss test for CWH equipment other than flow-activated instantaneous water heaters, requiring that after the first cut-out before beginning the standby loss test, no settings may be changed on the water heater until measurements for the standby loss test are finished. 81 FR 28588, 28604–28605 (May 9, 2016).

In response to the May 2016 NOPR, several commenters agreed with DOE's proposed clarifications. (Bock, No. 19 at p. 2; Bradford White, No. 21 at p. 8, A.O. Smith, No. 27 at p. 6; Rheem, No. 34 at p. 9) Bradford White further noted that it believes that the content of DOE's clarifying statements are already understood and common industry practice. However, Bradford White noted that it did not agree with the 3-minute period for determining steady-state operation. (Bradford White, No. 21 at p. 8)

The provisions for establishing steady-state operation prior to the thermal efficiency test that DOE is adopting in this final rule (as discussed in section III.F.1 of this final rule) include, among other requirements, that the following conditions be maintained throughout the test: (1) The specified outlet water temperature, and (2) the fuel input rate within ± 2 percent of the manufacturer's rated input. This is in contrast to the existing requirement that there be no variation in outlet water temperature in excess of 2 °F over a 3-minute period prior to beginning the test. Therefore, additional clarifying statements addressing these conditions during the thermal efficiency test are no longer necessary, as they now must be maintained throughout the duration of the test. However, DOE is adopting its proposed provisions requiring that no settings may be changed on the CWH equipment being tested: (1) Once the steady-state conditions are established during the steady-state verification test and until the thermal efficiency test is completed; and (2) after the first cut-out before beginning the standby loss test until the measurements of the standby loss test are completed (for all CWH equipment, except for flow-activated instantaneous water heaters and externally thermostatically-activated instantaneous water heaters). (For more information on the standby loss test procedure adopted for flow-activated and externally thermostatically-activated instantaneous water heaters, see section III.H.3 of this final rule.) As noted above by commenters, these requirements to leave the settings on CWH equipment unchanged during certain portions of testing are already generally understood and common industry practice. DOE is adding these requirements to clarify the industry test method, and, therefore, concludes that these changes are consistent with ANSI Z21.10.3–2015.

3. Soak-In Period

DOE's current thermal efficiency test procedure for gas-fired and oil-fired CWH equipment, which incorporates by reference Exhibit G.1 of ANSI Z21.10.3–2011, requires the water heater to achieve steady-state conditions prior to beginning measurements for the thermal efficiency test. Specifically, the test procedure requires the outlet water temperature to be maintained at 70 °F ± 2 °F above the supply water temperature, with no variation in excess of 2 °F over a 3-minute period. DOE's current standby loss test procedure for gas-fired and oil-fired CWH equipment, which incorporates by reference Exhibit G.2 of ANSI Z21.10.3–2011, requires the water heater to reach a mean tank temperature of 140 °F and remain in standby mode after the first cut-out until the next cut-out before measurements for the standby loss test begin. However, as discussed in the May 2016 NOPR, DOE thought it possible that these provisions for both tests might be insufficient for ensuring that the tank insulation is fully heated before beginning test measurements.

In the May 2016 NOPR, DOE proposed to require a soak-in period prior to beginning the thermal efficiency and standby loss tests, in which the water heater would remain idle (*i.e.,* no water draws) for at least 12 hours with thermostat(s) maintained at settings that would achieve the required water temperature. 81 FR 28588, 28598 (May 9, 2016). However, DOE proposed not requiring a soak-in period prior to the beginning of an efficiency test (*i.e.,* thermal efficiency or standby loss) if no settings on the water heater were changed and the water heater had not been turned off since the end of a previously run efficiency test.

In response to the May 2016 NOPR, A.O. Smith stated that all proposed requirements for soak-in periods are unnecessary and would not improve test accuracy or repeatability, given the requirements for establishing steady-state operation. (A.O. Smith, No. 27 at p. 17) Several commenters stated that a soak-in period is unnecessary before a thermal efficiency test because DOE's test procedure requires that steady-state operation be reached prior to beginning measurements. (Bradford White, No. 19 at p. 4; AHRI, No. 26 at pp. 9–10; Raypak, No. 28 at p. 6; Rheem, No. 34 at p. 6) However, Bradford White, AHRI, and Raypak indicated that the soak-in period would be useful prior to a thermal efficiency test if the water heater were not stored in a conditioned space (*i.e.,* maintained at 75 °F ± 10 °F according to Bradford White, maintained at temperature above freezing according to Raypak, and unspecified according to AHRI). (Bradford White, No. 19 at p. 4; AHRI, No. 26 at pp. 9–10; Raypak, No. 28 at p. 6) Bradford White and AHRI also argued that a soak-in period should only be required before a standby loss test if the test is not begun within 3 hours of the end of a thermal efficiency test. (Bradford White, No. 19 at p. 4; AHRI, No. 26 at pp. 9–10) Raypak indicated that a soak-in period should only be required before a standby loss test if the water heater is not stored in a conditioned space. (Raypak, No. 28 at p. 6) Rheem stated that a soak-in period of 12 hours is sufficiently long before conducting a standby loss test without a previously run thermal efficiency test. (Rheem, No. 34 at p. 6)

A.O. Smith argued that while not requiring human interaction, a soak-in period would be burdensome to

manufacturers because it would require lab space to be occupied and certain environmental conditions to be monitored and maintained. (A.O. Smith, No. 27 at p. 17) Rheem stated that the soak-in period would place an additional burden on manufacturers in terms of time, resources, and laboratory space, if required when a thermal efficiency test is performed in conjunction with a standby loss test. (Rheem, No. 34 at p. 6)

DOE acknowledges that a soak-in period would not be warranted before a thermal efficiency test if steady-state operation is assured prior to beginning the test. Given the more stringent provisions for determining steady-state operation that DOE is adopting in this final rule (discussed in section III.F.1), DOE agrees with commenters that a soak-in period is not needed before the thermal efficiency test, and is not adopting this requirement. While several commenters indicated that a soak-in period might be helpful if the water heater were not stored in a conditioned space, DOE believes that in this case, the water heater would simply take longer to reach the required steady-state conditions before beginning the thermal efficiency test, and that an additional soak-in period would not be necessary.

DOE believes that a soak-in period would improve test repeatability for the standby loss test if a thermal efficiency test were not previously conducted. In the May 2016 NOPR, DOE also proposed that a soak-in period be required if any settings on the water heater had been changed, or if the water heater had been turned off since the end of a previously run efficiency test. 81 FR 28588, 28598 (May 9, 2016). However, Bradford White and AHRI indicated that a soak-in period should only be required before the standby loss test if the standby loss test does not begin within three hours of the end of a previously run thermal efficiency test. (Bradford White, No. 19 at p. 4; AHRI, No. 26 at p. 9)

DOE disagrees with the suggestion that a soak-in period would not be necessary if a water heater were turned off after a thermal efficiency test but for three hours or less before beginning the standby loss test. DOE believes that the water heater should be turned on at all times between the end of the thermal efficiency test and the beginning of the standby loss test to ensure that the thermal equilibrium within the tank insulation, or ''soaking in,'' achieved during the thermal efficiency test is not lost before starting the standby loss test. DOE notes that water heaters likely vary significantly in the time required after ending the thermal efficiency test before the burner cuts in again. This variation includes factors such as storage volume, tank heat losses, and thermostat control algorithms. For certain water heaters, this time may even exceed three hours, in which case it would not matter if the water heater were turned on or off during this period. However, in other cases, the thermal equilibrium of the tank may be lost if the water heater is turned off between tests. A decrease in the insulation temperature between tests might require additional energy consumption to reheat the insulation during the standby loss test, which would result in higher calculated values of standby loss.

DOE also believes that a soak-in period requirement will improve the repeatability of the standby loss test for electric storage water heaters. Electric storage water heaters do not have a thermal efficiency test, so unless multiple standby loss tests are run consecutively, the soak-in period will ensure that the tank insulation has reached thermal equilibrium before measurements for the standby loss test begin. Therefore, to improve repeatability of the standby loss test for storage water heaters and storage-type instantaneous water heaters, DOE is adopting a requirement that a soak-in period of 12 hours be conducted before the standby loss test unless no settings on the water heater have been changed and the water heater has not been turned off since the end of a previously run efficiency test. DOE concludes that adding requirements for the soak-in period (when required) will improve the repeatability of the test result, but is consistent with ANSI Z21.10.3–2015.

The provisions DOE is adopting that specify when a 12-hour soak-in period is required prior to the standby loss test (*i.e.,* required unless no settings on the water heater have been changed and the water heater has not been turned off since the end of a previously run efficiency test) allow flexibility for the manufacturer or testing agency. After completion of the thermal efficiency test, as long as the water heater stays turned on and no settings are changed, the laboratory technician may choose to begin the standby loss test immediately, or allow the tank to soak in longer before beginning the standby loss test.

G. Definitions for Certain Consumer Water Heaters and Commercial Water Heating Equipment

1. Consumer Water Heaters

A statutory definition for consumer ''water heater'' was added to EPCA by the National Appliance Energy Conservation Act of 1987 (NAECA; Pub. L. 100–12, March 17, 1987), which specifies input ratings at or below which water heaters are to be classified as consumer water heaters (*e.g.,* 75,000 Btu/h for gas-fired storage water heaters; 12 kW for electric storage water heaters and electric instantaneous water heaters; 210,000 Btu/h for oil-fired instantaneous water heaters). (42 U.S.C. 6291(27)) NAECA also established standards for gas-fired consumer water heaters, oil-fired consumer water heaters, and electric consumer water heaters. (42 U.S.C. 6295(e)(1))

DOE restated the statutory definition of ''water heater'' in the appliance standards regulations applicable to consumer products at 10 CFR 430.2. In addition to adopting EPCA's definition of ''water heater'' for standards applicable to consumer products, DOE defined a variety of terms in the test procedure provisions applicable to consumer water heaters to help specify the test procedure provisions applicable to specific kinds of water heaters (*e.g.,* ''gas instantaneous water heater'' and ''electric storage water heater''). 55 FR 42162, 42169 (October 17, 1990). These test procedure definitions included provisions related to water temperature design characteristics and rated storage volume. The standards at 10 CFR 430.32 and the ''water heater'' definition at 10 CFR 430.2 did not include any such limitations.

In an effort to consolidate all relevant definitions in 10 CFR 430.2, DOE removed the definitions for specific kinds of consumer water heaters from its test method at appendix E to subpart B of part 430 (*i.e.,* ''electric heat pump water heater,'' ''electric storage water heater,'' ''gas-fired instantaneous water heater,'' ''gas-fired storage water heater,'' and ''oil-fired storage water heater'') and placed these definitions in the general definition section at 10 CFR 430.2, along with newly established definitions for ''gas-fired heat pump water heaters,'' ''oil-fired instantaneous water heater,'' and ''electric instantaneous water heater.'' 79 FR 40542, 40549, 40566–40567 (July 11, 2014). The reorganization of the existing definitions and the newly established definitions became effective on July 13, 2015, and these definitions excluded products with a rated storage capacity greater than 120 gallons and, in some cases, excluded products designed to heat and store water at a thermostatically controlled temperature greater than 180 °F. 79 FR 40542, 40566–40567 (July 11, 2014).

As noted previously, the standards and definition set forth in EPCA do not include any limitation related to the water temperature or storage capacity.

Therefore, prior to the effective date of the amendments in the July 2014 final rule, any product meeting the definition of a ''water heater'' as established under EPCA and restated in 10 CFR 430.2 would have been subject to the statutory standards applicable to consumer water heaters (*i.e.,* water heaters within the input limits established under EPCA would have been subject to the standards regardless of the water delivery temperature or storage capacity).

In the May 2016 NOPR, DOE proposed to amend the definitions for specific types of consumer water heaters included at 10 CFR 430.2 by removing from the definitions the specifications related to the water temperature and storage capacity. 81 FR 28588, 28605–28606 (May 9, 2016). Because a model that would otherwise meet the definition of a consumer water heater could not ''become'' commercial as the result of the unit's capability of producing water at temperatures above 180 °F or by having a rated capacity in excess of 120 gallons, the proposed definitions better reflect the statutory definitions and DOE's statutory authority. More generally, DOE clarified that a product that utilizes gas, oil, or electricity to heat potable water for use outside the heater upon demand that does not meet the statutory definition of ''water heater'' at 42 U.S.C. 6291(27) would be a commercial water heater, subject to the standards for such water heaters as set forth in 42 U.S.C. 6313(a)(5).

DOE received comments on the proposed removal of the temperature and the capacity criteria. A number of stakeholders disagreed with DOE's proposal to remove the 180 °F water delivery temperature from the consumer water heater definitions at 430.2. (HTP, No. 24 at p. 2; AHRI, No. 26 at pp. 4–5; Rinnai, No. 31 at p. 2; Bock, No. 19 at p. 2; Bradford White, No. 21 at pp. 8–9; Rheem, No. 34 at pp. 10–11) AHRI argued that by removing these criteria, specifically the 180 °F exclusion, from its consumer water heater definitions, DOE would be reversing a long-standing position that AHRI stated was determined valid in the July 2014 final rule. AHRI also stated that DOE did not provide sufficient explanation for reversing its long-standing position. (AHRI, No. 26 at pp. 4–5)

Contrary to AHRI's understanding, the relocation of definitions from the test procedure provisions to the general definitions section in the July 2014 final rule was not for the purpose of validating a long-standing position. As noted previously, ''water heater'' is defined by EPCA, and remains defined in 10 CFR 430.2, without restriction as to water temperature delivery or storage capacity. The addition of these exclusions to DOE's definitions at 10 CFR 430.2 was not intended to limit the applicability of the definition of ''water heater.'' As explained in the July 2014 final rule, definitions of ''gas-fired heat pump water heater,'' ''oil-fired instantaneous water heater,'' and ''electric instantaneous water heater'' were added in the context of the new test procedure. 79 FR 40542, 40549 (July 11, 2014). The notice also stated that all other definitions from the test procedure were being relocated. *Id.* The July 2014 final rule did not discuss restricting the statutory or regulatory definition of ''water heater.'' As opposed to validating a long-standing position, DOE recognizes that by relocating the definitions it furthered confusion regarding the applicability of the standards. As previously stated, prior to the effective date of the July 2014 final rule, any product meeting the definition of a ''water heater'' would have been subject to the statutory standards applicable to consumer water heaters, regardless of the water delivery temperature or storage capacity. The temperature and capacity restrictions were for the purpose of applying provisions of the test procedure, not the standard. Therefore, DOE considers removal of these exclusions as a correction to a recent change, and not as a reversal of a long-standing position. Additionally, as discussed in the following paragraphs, DOE has concluded use of such limitations would be inappropriate given, in part, the water heaters currently available on the market.

AHRI further argued that when interpreting the statutory definition applicable to consumer water heaters, DOE must first consider the definition of ''consumer product.'' When determining whether a product falls within the definition of ''water heater'' in the context of the consumer product standards, AHRI argued that DOE must first consider whether that product is a consumer product and that the temperature and capacity criteria inform that consideration. AHRI pointed to prior consideration by DOE of factors beyond those in the EPCA definition to distinguish between consumer and commercial products, citing the April 2010 final rule (75 FR 20112, 20127), in which DOE stated that pool heaters marketed as commercial equipment and that contain additional design modifications related to safety requirements for installation in commercial buildings would not be covered by DOE's consumer product standard for pool heaters. (AHRI, No. 26 at pp. 5–6) In the present case, AHRI essentially argued that water heaters that are designed to deliver water at temperatures greater than 180 °F or that have a rated volume in excess of 120 gallons are not to any significant extent marketed or sold for personal use by individuals, and therefore cannot be consumer products. Other commenters asserted that water delivery temperature provides a meaningful way to distinguish between consumer and commercial water heaters. (Bock, No. 19 at p. 2; Bradford White, No. 21 at p. 9; Rinnai, No. 31 at p. 2) HTP and AHRI stated that units that heat water above 180 °F are only used in commercial applications, and that water heated above 180 °F in a residential application presents a scald hazard. (HTP, No. 24 at p. 2; AHRI, No. 26 at p. 4) Bradford White stated that all of its commercial electric storage basic models would be mistakenly reclassified if DOE removed the 180 °F exclusion from its consumer water heater definitions, even though according to Bradford White, these models are not appropriate for residential applications. (Bradford White, No. 21 at p. 9) A.O. Smith stated that defining as consumer water heaters gas instantaneous water heaters with an input capacity less than or equal to 200,000 Btu/h and a water delivery temperature greater than 180 °F would make ratings inconsistent with other commercial water heaters. (A.O. Smith, No. 27 at p. 10)

Several manufacturers also disagreed with the removal of the storage capacity criterion. (Bradford White, No. 21 at p. 9; A.O. Smith, No. 27 at p. 6; Rheem, No. 34 at p. 11) Bradford White and A.O. Smith stated that models with storage volume greater than 120 gallons require American Society of Mechanical Engineers (ASME) pressure vessel certification in most jurisdictions and that these models would not be used in residential applications. Bradford White also commented that the cost of ASME certification is high enough to be cost-prohibitive for residential applications. (Bradford White, No. 21 at p. 9)

DOE reiterates that the relocation of definitions relevant to the test procedure to the general definition section at 10 CFR 430.2 was not intended to reflect a prior interpretation restricting the applicability of the standards for consumer water heaters. However, even if the removal of the water temperature delivery and volume capacity limitations were a change to a long standing practice of distinguishing between consumer and commercial water heaters, a recent survey of the

market leads DOE to determine that such criteria would not be appropriate to distinguish between water heaters that are consumer products and those that are commercial products. While DOE acknowledges that water heaters with a water delivery temperature greater than 180 °F or with a storage volume greater than 120 gallons may not be commonly used in residential applications, the question is whether a water heater is of the type distributed in commerce to any significant extent for personal use by an individual. (42 U.S.C. 6291(1)) Consideration of whether an article is of a type distributed in commerce to any significant extent for personal use by an individual is made without regard to whether a specific article is in in fact distributed in such a manner. *Id.*

In surveying the market, DOE has identified several water heaters that demonstrate that a reliance on a 180 °F threshold would be inappropriate for distinguishing between consumer and commercial water heaters. Rheem markets a water heater under its commercial line that has input ratings below the 12 kW threshold specified in the statutory definition for consumer water heaters and has thermostat controls that provide maximum water temperatures greater than 180 °F. (Docket No. EERE–2014–BT–TP–0008–0041) This water heater's installation instructions reference installation in the ''home,'' indicating that the model is distributed for consumer use. (Docket No. EERE–2014–BT–TP–0008–0040, pp. 15, 21) A water heater offered by A.O. Smith has two 4.5 kW heating elements arranged in a configuration typical for consumer water heaters and provides an input capacity below the statutory 12 kW threshold, but has a thermostat adjustable up to 181 °F, one degree above the 180 °F threshold in the regulatory definition of ''electric storage water heater.'' (Docket No. EERE–2014–BT–TP–0008–0038) The manual for the A.O. Smith product references installation in the home, again suggesting that the product is distributed, at least to an extent, for residential use. (Docket No. EERE–2014–BT–TP–0008–0037, pp. 8–9)

With regard to the 180 °F criterion, DOE's understanding is that exceeding the temperature threshold for a water heater can be achieved through replacement of a single part, the thermostat, which DOE believes can be very easily and inexpensively changed to allow for heating water to greater than 180 °F. As noted by A.O. Smith in its comment, the 180 °F operating limit is not necessarily a satisfactory criterion for separating consumer and commercial water heaters, because a thermostat designed to deliver water temperatures in excess of 180 °F can be installed at no additional cost on products that are consumer water heaters in all other respects. (A.O. Smith, No. 27 at pp. 6–7) A.O. Smith suggested that removing the 180 °F criterion for electric storage water heaters could dissuade manufacturers from trying to avoid DOE's standard for large residential electric storage water heaters.[13] (A.O. Smith, No. 27 at pp. 6–7) Additionally, Rheem suggested that the 180 °F criterion for distinguishing between residential-duty commercial water heaters and other commercial water heaters allows manufacturers to move units in and out of the residential-duty commercial water heater classes using a thermostat. (Docket No. EERE–2014–BT–STD–0042–0020 at p. 18) DOE believes that the same allowance to move between classes would apply to a 180 °F criterion that distinguished between consumer water heaters and commercial water heaters. Bradford White stated in its comments that the only feature to distinguish some if its models as commercial is the temperature requirement. (Bradford White, No. 21 at p. 9) The ease at which water temperature in excess of 180 °F can be achieved by a water heater that is in all regards a consumer water heater demonstrate that the 180 °F threshold would circumvent the statutory definition of a consumer water heater. DOE also notes that the concern raised by commenters regarding scalding is applicable to lower water temperatures as well. Manufacturer warnings regarding scalding identify the danger at temperatures as low as 125 °F, and with an exposure time of 1 second at 155 °F. (Docket No. EERE–2014–BT–TP–0008–0037) The range of the temperatures at which warnings are issued indicate that 180 °F would not be an adequate threshold to delineate the risk of scalding, further demonstrating that a threshold of 180 °F does not provide a meaningful distinction between consumer and commercial water heaters.

GE supported DOE's proposal to remove the 180 °F exclusion from DOE's consumer water heater definitions, suggesting that the change would end the shift in shipments from residential electric storage water heaters to commercial electric storage water heaters. GE also stated that a rulemaking should not be necessary for these changes, and that DOE should make these changes in a guidance document. If these changes are made in a rulemaking, GE suggested that the effective date should be immediate. (GE, No. 25 at pp. 1–2)

With regard to the 120 gallon threshold, DOE has determined that in the interest of avoiding future confusion, it is not adding this criterion to the definition of consumer water heater. DOE has determined that the simplest way to maintain the distinction as established by Congress between consumer and commercial water heaters is to rely solely on the definition set forth in EPCA.

As explained previously, the 180 °F and 120 gallon rated volume criteria were for the purpose of defining terms in the context of the test procedures for consumer water heaters. Such distinctions are unnecessary under DOE's current test procedures for consumer water heaters, as adopted in the July 2014 final rule, which also applies to residential-duty commercial water heaters. To correct the application of such thresholds to the definitions pertaining to consumer water heaters, DOE is removing them from the definitions. Additionally, based on a survey of the market and based on several of the comments received, DOE has determined that these criteria would be inappropriate for distinguishing between consumer and commercial water heaters. EPCA delineates between consumer and commercial water heaters in the statutory definition through specified rated inputs. As evidenced by the discussion of the products surveyed, the addition of further criteria does not provide a meaningful distinction between consumer and commercial water heaters. To add a temperature or volume criterion would potentially exclude some consumer water heaters from the regulatory definition of a consumer water heater, but not the statutory definition, and such a result would be an inappropriate restriction on the definition of consumer water heater provided in EPCA.

DOE has previously considered adding criteria to its codified definitions beyond the statutory criteria to distinguish between consumer and commercial products. In the case of pool heaters, a consumer product, commenters and DOE recognized that there were performance and design characteristics that further informed a determination of whether a pool heater was a consumer product or a commercial product. 75 FR 20112, 20127 (April 16, 2010). For pool heaters, DOE declined to add those criteria to

[13] A.O. Smith did support maintaining the 180 °F criterion for other water heaters, but did not provide an explanation for why its statements provided in regards to electric storage water heaters would not apply to other water heaters. (A.O. Smith, No. 27 at p. 7)

the definition of pool heater, finding that amendments to the statutory definition were unnecessary and that marketing and design differences related to safety requirements for installation in commercial buildings sufficiently informed the distinction between consumer and commercial products. *Id.* That is, the definition established by EPCA did not require further clarification.

However, the consideration for pool heaters is not wholly analogous to the present case. Unlike the present case and the consideration of a temperature threshold, the additional criteria discussed for pool heaters would not have limited the application of the defined term ''pool heater'' established in statute (*i.e.,* the criteria discussed for pool heaters would not have excluded pool heaters that are otherwise consumer products from standards). Here, the addition of a temperature threshold would exclude water heaters from consideration as consumer water heaters that under the statutory definition are consumer water heaters, and are of the type distributed in commerce for personal use by individuals.

EPCA does not exclude water heaters based on water temperature delivery or volume in its definition for consumer ''water heater.'' Rather, the definition in EPCA relies on input criteria to define which water heaters fall under the consumer ''water heater'' definition, and DOE believes that in order to maintain consistency with EPCA, the inclusion of these criteria is not appropriate.

Several commenters asserted that the removal of the exclusion from the consumer water heater definitions of models with a water delivery temperature of 180 °F or higher is inconsistent with the definition of a ''residential-duty commercial water heater'' that DOE established in the July 2014 final rule for test procedures for consumer water heaters and certain commercial water heaters. 79 FR 40542, 40586 (July 11, 2014). Specifically, commenters noted that in that rule, DOE included water delivery temperature of 180 °F or higher as an indicator of non-residential application for commercial water heaters, and stated that such units would generally only be used in commercial settings. (AHRI, No. 26 at pp. 4–5; Rinnai, No. 31 at p. 2; Bradford White, No. 21 at pp. 8–9) Rheem also suggested that removing the 180 °F and 120 gallon criteria from the consumer water heater definitions while maintaining water delivery temperature of greater than 180 °F and storage volume greater than 120 gallons as distinguishing criteria for commercial water heaters not used in residential applications (*i.e.,* not residential-duty commercial water heaters) would lead to confusion in the market place. (Rheem, No. 34 at p. 10)

In the July 2014 final rule, DOE established a new class of commercial water heaters, ''residential-duty commercial water heater.'' 79 FR 40542, 40586 (July 11, 2014). EPCA, as amended by AEMTCA, allowed DOE to exclude from a uniform energy descriptor water heaters that do not have residential applications and that can be clearly described. (42 U.S.C. 6295(e)(5)(F)) Under this authority, DOE established several criteria to separate commercial water heaters that have residential applications (*i.e.,* residential-duty commercial water heaters) from commercial water heaters generally. *Id.* at 40586. When determining how to distinguish a residential-duty commercial water heater from other commercial water heaters, DOE relied on an outlet water temperature of 180 °F or lower as one of several dividing criteria. 79 FR 40542, 40546 (July 11, 2014). DOE noted that although residential-duty commercial water heaters could have residential applications, the ''residential-duty commercial water heater'' definition represents a type of water heater that, to a significant extent, is distributed in commerce for industrial or commercial use. *Id.* In its explanation for this criterion, DOE stated that a 180 °F water delivery temperature is a valuable distinguishing feature between commercial water heaters intended for residential use and those that are not. However, water delivery temperature serves in conjunction with other criteria to distinguish residential-duty commercial water heaters from other commercial water heaters (*i.e.,* rated storage volume, rated input, and for models requiring electricity, and use of a single-phase external power supply are also considered). *See* 10 CFR 431.102.

EPCA provides a criterion for distinguishing between water heaters that are consumer products and water heaters that are commercial and industrial equipment: The rated input. (42 U.S.C. 691(27)) Although water delivery temperature and rated storage capacity are useful as part of the analysis to differentiate between commercial water heater applications, as explained above, water delivery temperature and rated storage capacity are inappropriate to distinguish between consumer water heaters and commercial water heaters.

A. O. Smith and Raypak both argued that it was inappropriate to address the definitions of consumer water heaters in this rulemaking since this rulemaking primarily addresses test procedures for water heaters as commercial products. (A. O. Smith, No. 27 at p. 7; Raypak, No. 28 at p. 7) As noted by Raypak, the water heaters excluded under the consumer water heater definition in EPCA and 10 CFR 430.2 are subject to the commercial water heater standards in 10 CFR part 431. By removing the outlet water temperature and capacity criteria, DOE is clarifying the distinction between consumer water heaters and commercial water heaters as prescribed by EPCA. DOE believes removing the water temperature and volume references will simplify its regulations. Those water heaters with a rated input in excess of the applicable maximum specified in EPCA (42 U.S.C. 6311(12)) are commercial water heaters and will be regulated under EPCA as industrial equipment under 42 U.S.C. 6311(1), meaning that those commercial water heaters cannot be a covered consumer product under 42 U.S.C. 6291(1).

Additionally, contrary to Bradford White's suggestion, not all electric storage water heater basic models will need to be reclassified under this final rule. (Bradford White, No. 27 at p. 9) Only electric storage models with an input rating less than or equal to 12 kW must be classified as consumer water heaters. All electric storage models with an input rating greater than 12 kW are classified as commercial water heaters.

For the reasons previously discussed, DOE is removing the 180 °F water delivery temperature and 120 gallon storage volume exclusions from its consumer water heater definitions, as proposed in the May 2016 NOPR. Because DOE is modifying the regulations, such changes cannot be addressed through a guidance document. The effective date of these definition changes is 30 days after publication of this final rule in the **Federal Register**.

In the May 2016 NOPR, DOE also proposed to remove the terms ''electric heat pump water heater'' and ''Gas-fired heat pump water heater'' from its definitions at 10 CFR 430.2. 81 FR 28588, 28606 (May 9, 2016). DOE reasoned that these terms were unnecessary because they are not used in the energy conservation standards for consumer water heaters at 10 CFR 430.32(d), nor are they used in the Uniform Test Method for Measuring the Energy Consumption of Water Heaters at appendix E to subpart B of part 430.

In response to this proposal, Rheem disagreed with the removal of the terms ''electric heat pump water heater'' and ''gas-fired heat pump water heater'' from

DOE's definitions at 10 CFR 430.2. Rheem stated that heat pump water heaters have different defining factors than other kinds of consumer water heaters, and that the threshold input rate only represents the power being supplied from the non-heat pump technology involved with heating the stored water. (Rheem, No. 34 at pp. 11–12)

As proposed in the May 2016 NOPR, DOE is removing the definitions for ''electric heat pump water heater'' and ''gas-fired heat pump water heater'' from its regulations. DOE acknowledges that heat pump water heaters can have different defining factors than other consumer water heaters, but DOE is removing these definitions because they are not used in DOE's test procedures or energy conservations standards for consumer waters. Therefore, removing these definitions will have no effect on the implementation of DOE's regulations.

As discussed in the previous paragraphs, DOE is revising the definitions for ''electric instantaneous water heater,'' ''electric storage water heater,'' ''gas-fired instantaneous water heater,'' ''gas-fired storage water heater,'' ''oil-fired instantaneous water heater,'' and ''oil-fired storage water heater'' in its regulations of consumer water heaters at 10 CFR 430.2, as set out in the regulatory text at the end of this document.

2. Commercial Water Heating Equipment

DOE currently includes several definitions in its regulations for CWH equipment at 10 CFR 431.102 that include the terms ''rated input'' or ''input rating.'' These definitions include ''hot water supply boiler,'' ''instantaneous water heater,'' ''residential-duty commercial water heater,'' and ''storage water heater.'' In the May 2016 NOPR, DOE proposed a new definition for ''fuel input rate,'' a value to be certified for all gas-fired and oil-fired CWH equipment. 81 FR 28588, 28637 (May 9, 2016). Therefore, DOE also proposed replacing the terms ''rated input'' and ''input rating'' with the term ''fuel input rate'' for gas-fired and oil-fired CWH equipment in the definitions for CWH equipment at 10 CFR 431.102. 81 FR 28588, 28606 (May 9, 2016).

As discussed in section III.L.1 of this final rule, based on feedback from stakeholders regarding the rated input determined from safety certification, DOE is not adopting its proposed requirements regarding certification of fuel input rate. Therefore, in this final rule, DOE is not modifying its definitions for CWH equipment at 10 CFR 431.102 as proposed in the May 2016 NOPR. Instead, DOE is adopting the term ''rated input'' in its definitions to refer to the input capacity certified to DOE by the manufacturer and included on the equipment nameplate. In contrast, DOE is adopting the term ''fuel input rate'' in its regulations only to refer to the capacity of a unit determined in a particular test.

DOE's current definitions for ''storage water heater'' and ''instantaneous water heater'' in its regulations for CWH equipment codified at 10 CFR 431.102 do not include any criteria that exclude units that meet DOE's current definitions for consumer water heaters, as codified at 10 CFR 430.2. In the May 2016 NOPR, DOE proposed to clarify these definitions for commercial water heaters by adding the input capacity criteria that distinguish between consumer and commercial water heaters for each energy source, as specified in EPCA's definition for consumer water heater (42 U.S.C. 6291(27)). 81 FR 28588, 28637 (May 9, 2016). These changes are consistent with DOE's changes to its definitions for consumer water heaters, as discussed in section III.G.1.

In response to the May 2016 NOPR, Bradford White agreed with DOE's proposal to add the input criteria separating consumer and commercial water heaters to the definitions for commercial water heaters. (Bradford White, No. 21 at pp. 9, 12) Raypak commented that DOE should establish an upper limit of 5 million Btu/h in its definitions for commercial water heating equipment because of laboratory testing issues for larger equipment. Raypak also noted that while hot water supply boilers are restricted to under 12.5 million Btu/h, no similar restriction exists for commercial water heaters. (Raypak, No. 28 at p. 7)

As proposed in the May 2016 NOPR and for the reasons previously stated, in this final rule, DOE is clarifying its definitions for commercial water heaters by adding the input capacity criteria that distinguish between consumer and commercial water heaters for each energy source, as specified in EPCA's definition of consumer water heater. (42 U.S.C. 6291(27))

In response to Raypak's suggestion that DOE should establish an upper input capacity limit in its CWH equipment definitions, DOE notes that the statutory definitions of ''storage water heater'' and ''instantaneous water heater'' at 42 U.S.C. 6311(12)(A) do not set an upper-end input capacity limit in terms of coverage of commercial water heaters, so any large-scale models are already covered under DOE's existing energy conservation standards. Even so, DOE was unable to identify any models of CWH equipment currently on the market with an input capacity greater than 5 million Btu/h. In fact, Raypak noted that the largest input capacity of any CWH equipment that it manufactures is only 4 million Btu/h. (Raypak, No. 28 at p. 6) DOE would only consider modifying its regulations for large CWH equipment if there were such units on the market and if manufacturers demonstrated that DOE's existing test procedures could not be used for these units. If a manufacturer does produce a CWH equipment model with an input capacity greater than 5 million Btu/h that cannot be tested using DOE's test procedure, then the manufacturer should notify DOE and request a waiver from DOE's test procedures using the procedure at 10 CFR 431.401. If a waiver were granted, DOE would update its test procedure in the next test procedure rulemaking for CWH equipment.

DOE currently includes a definition for ''instantaneous water heater'' in its regulations for CWH equipment at 10 CFR 431.102. An instantaneous water heater is a water heater that has an input rating not less than 4,000 Btu/h per gallon of stored water, and that is industrial equipment, including products meeting this description that are designed to heat water to temperatures of 180 °F or higher.

DOE believes that the last clause of the definition for ''instantaneous water heater,'' which includes units capable of heating water to temperature at or above 180 °F, does not serve a purpose in the definition. Without this clause, it would be assumed that units with this capability would be included in the definition because there is no restriction indicating otherwise. Therefore, to simplify the definition, DOE is removing this clause from the definition for ''instantaneous water heater.'' Additionally, with DOE's addition of input criteria that distinguish between consumer and commercial water heaters previously discussed in this section, DOE believes that the clause ''that is industrial equipment'' does not serve to further clarify the scope of units covered by this definition. Therefore, in the May 2016 NOPR, DOE proposed to remove this clause from its definitions for ''instantaneous water heater'' and ''storage water heater.'' 81 FR 28588, 28606 (May 9, 2016). In response to the May 2016 NOPR, Bradford White agreed with removing the phrase ''that is industrial equipment.'' (Bradford White, No. 21 at p. 9) Bradley Corporation requested clarification from DOE on the removal of the phrase ''that is industrial

equipment'' from the definition of instantaneous water heaters, and whether this phrase is actually in reference to the statutory definition for ''industrial equipment.'' (Bradley, NOPR Public Meeting Transcript, No. 20 at p. 23)

The term ''industrial equipment'' used in the definitions for ''instantaneous water heater'' and ''storage water heater'' at 10 CFR 431.102 does refer to the statutory definition for ''industrial equipment.'' (42 U.S.C. 6311(2)(A)) The phrase ''that is industrial equipment'' was included in DOE's codified definitions for ''instantaneous water heater'' and ''storage water heater'' to clarify that water heaters that are covered by EPCA's definition of ''water heater'' under ''consumer products'' (*see* U.S.C. 6291(27)) are not covered by DOE's definitions for ''instantaneous water heater'' and ''storage water heater'' in 10 CFR part 431. DOE believes that the phrase ''that is industrial equipment'' is no longer needed in DOE's definitions for ''instantaneous water heater'' and ''storage water heater'' to clarify that products regulated as consumer products are not covered under these definitions, because DOE is modifying these definitions to include the specific input capacity criteria that separate consumer water heaters and commercial water heaters, as previously discussed in this section. The statutory definition for ''industrial equipment'' also includes that equipment be of a type that is distributed, to any significant extent, in commerce for commercial or industrial applications. (42 U.S.C. 6311(2)(A)(ii)) However, EPCA also defines ''covered equipment'' to include any of several types of industrial equipment, including storage water heaters, instantaneous water heaters, and unfired hot water storage tanks. (42 U.S.C. 6311(1)) Therefore, covered commercial water heating equipment is, by statutory definition, industrial equipment. Consequently, DOE believes that the phrase ''that is industrial equipment'' is not needed in DOE's codified definitions for ''instantaneous water heater'' and ''storage water heater.'' Therefore, in this final rule, DOE is removing this clause from its definitions for ''instantaneous water heater'' and ''storage water heater.''

In its regulations for CWH equipment at 10 CFR 431.102, DOE currently includes a definition for ''packaged boiler'' that is identical to that included for commercial packaged boilers at 10 CFR 431.82. DOE includes this definition for ''packaged boiler'' at 10 CFR 431.102 because the regulations for CWH equipment also include a definition for ''hot water supply boiler,'' and this definition specifies that a hot water supply boiler is a kind of packaged boiler. To simplify its regulations and reduce repetition, in the May 2016 NOPR, DOE proposed to remove the definition for ''packaged boiler'' from its regulations for CWH equipment at 10 CFR 431.102, to be replaced with a reference to the definition for ''packaged boiler'' included at 10 CFR 431.82. 81 FR 28588, 28606 (May 9, 2016). In response to the May 2016 NOPR, Bradford White agreed with removing the definition of ''packaged boiler,'' as long as this change is consistent with the commercial packaged boiler rulemakings. (Bradford White, No. 21 at p. 9) DOE notes that replacement of a duplicated definition with a reference to the regulations for commercial packaged boilers inherently aligns DOE's regulations for commercial packaged boilers and CWH equipment, such that there is no potential for differences between two versions of the ''packaged boiler'' definition. Therefore, DOE is removing the definition of ''packaged boiler'' from its regulations for CWH equipment at 10 CFR 431.102. Correspondingly, in its definition of ''hot water supply boiler'' at 10 CFR 431.102, DOE is replacing the term ''packaged boiler'' with the term ''packaged boiler (as defined in § 431.82).''

In section III.H of this final rule, DOE establishes a separate test procedure for water heaters and hot water supply boilers that require flow of water to activate the burner or heating element, and establishes a definition for ''flow-activated water heater,'' along with separate standby loss test provisions for flow-activated water heaters as set out in the regulatory text at the end of this document.

In section III.J of this final rule, DOE establishes a definition for ''commercial heat pump water heater,'' as well as a test procedure for commercial heat pump water heaters as set out in the regulatory text at the end of this document.

3. Residential-Duty Commercial Water Heaters

As required by AEMTCA, DOE established a uniform efficiency descriptor and accompanying test method for consumer water heaters and certain commercial water heaters in the July 2014 final rule. 79 FR 40542 (July 11, 2014). Specifically, AEMTCA required that the uniform efficiency descriptor and test method apply to all covered water heaters, including both consumer and commercial water heaters, except for certain commercial water heaters that do not have a residential use, and can be clearly described and are effectively rated using the thermal efficiency and standby loss descriptors. (42 U.S.C. 6295(e)(5)(F)) In the July 2014 final rule, DOE established input and volume criteria to distinguish commercial water heaters that do not have residential applications, based on comments from stakeholders. 79 FR 40542, 40586 (July 11, 2014). However, for four classes of residential-duty commercial water heaters—electric storage water heaters, heat pump water heaters, gas-fired instantaneous water heaters, and oil-fired instantaneous water heaters—the input criteria established to separate residential-duty commercial water heaters from commercial water heaters are identical to those codified at 10 CFR 430.2, which separate consumer water heaters from commercial water heaters. The criteria for these classes are shown in Table III–1. Because these input criteria are identical, by definition, no models can be classified under these four residential-duty equipment classes. Therefore, to eliminate potential confusion, in the May 2016 NOPR, DOE proposed to remove these classes from the definition of ''residential-duty commercial water heater'' codified at 10 CFR 431.102. 81 FR 28588, 28607 (May 9, 2016).

TABLE III—1 INDICATOR OF NON-RESIDENTIAL APPLICATION FOR CERTAIN CLASSES OF CWH EQUIPMENT

Water heater class	Indicator of non-residential application
Electric storage	Rated input >12 kW; Rated storage volume >120 gallons.
Heat pump with storage	Rated input >12 kW; Rated current >24A at a rated voltage of not greater than 250 V; Rated storage volume >120 gallons.
Gas-fired instantaneous	Rated input >200 kBtu/h; Rated storage volume >2 gallons.
Oil-fired instantaneous	Rated input >210 kBtu/h; Rated storage volume >2 gallons.

In response to the May 2016 NOPR, several commenters agreed with DOE's proposal to revise the definition of ''residential-duty commercial water heater.'' (Bradford White, No. 21 at p. 9; CA IOUs, No. 23 at p. 2; AHRI, No. 26 at p. 13; A.O. Smith, No. 27 at p. 10) Rheem, however, disagreed, asserting that there should be a residential-duty commercial class corresponding to each equipment class of commercial water heaters. Rheem argued that only having residential-duty commercial classes for certain kinds of water heaters is arbitrary, and that all classes of commercial water heaters have units that are installed in residential applications. Further, Rheem stated that it would be extremely costly and burdensome to implement a heat pump water heater standard for commercial water heaters, and that a class for residential-duty commercial electric storage water heaters is necessary to maintain the ability to install electric storage water heaters using electric resistance heating elements in certain commercial applications. Rheem suggested that the class of residential-duty commercial electric storage water heaters should include units with an input capacity less than or equal to 13 kW and a storage volume no greater than 120 gallons. (Rheem, No. 34 at pp. 13–14)

In response to Rheem, DOE notes that it did not propose to change any of the criteria for classifying residential-duty commercial water heaters in the May 2016 NOPR, only to remove classes for which no units could be classified given the existing criteria. Further, the existing capacity criteria for defining non-residential application for commercial water heaters were established in the July 2014 final rule based on feedback from stakeholders, including Rheem. 79 FR 40542, 40545–40549 (July 11, 2014). Having classes of residential-duty commercial water heaters for only certain classes of commercial water heaters is not inherently arbitrary, as suggested by Rheem. Rather, it reflects that for certain equipment classes of commercial water heaters (as defined by the statutory criteria separating consumer water heaters and commercial water heaters), commenters in the prior rulemaking generally agreed that there is no capacity range in which units are distributed to residential applications to a significant extent.

On May 31, 2016, DOE published a NOPR for amended energy conservation standards for certain classes of CWH equipment. 81 FR 34440. For commercial electric storage water heaters, DOE only proposed to amend the standby loss standard in that NOPR. Therefore, DOE does not have any current or proposed energy conservation standards that would require commercial electric storage water heaters to use heat pump technology instead of electric resistance heating elements. Consequently, DOE disagrees with Rheem's statement that a class of residential-duty commercial electric storage water heaters is warranted for the purpose of excluding a certain group of commercial water heaters from coverage under a standard that requires heat pump technology. Additionally, DOE notes that Rheem's suggested input capacity limit for residential-duty electric storage water heaters of 13 kW differs only slightly from the statutory input capacity criterion separating consumer water heaters from commercial water heaters—12 kW. DOE was only able to identify one electric storage water heater on the market with an input capacity both greater than 12 kW and less than or equal to 13 kW. (Docket No. EERE–2014–BT–TP–0008–0039) Because this unit, sold by Rheem, is marketed as a commercial water heater and included in the same model line as units with input capacities of 18 kW and 24 kW, DOE believes that this 12.4 kW unit is appropriately classified as a commercial electric storage water heater under the statute and DOE is not at liberty to modify those definitions. Since all three of these water heaters are marketed by the manufacturer in the product literature as commercial electric storage water heaters, DOE does not see the basis for differential treatment as Rheem is suggesting.

Accordingly, in this final rule, as proposed in the May 2016 NOPR, DOE is removing four classes of residential-duty commercial water heaters—electric storage water heaters, heat pump water heaters, gas-fired instantaneous water heaters, and oil-fired instantaneous water heaters—from the definition of ''residential-duty commercial water heater'' codified at 10 CFR 431.102.

4. Storage-Type Instantaneous Water Heaters

The definitions of ''instantaneous water heater'' and ''hot water supply boiler'' set forth in 10 CFR 431.102 include CWH equipment with an input rating of at least 4,000 Btu/h per gallon of stored water. These definitions, therefore, include both instantaneous water heaters and hot water supply boilers without integral storage tanks, as well as instantaneous water heaters with integral storage tanks (but with at least 4,000 Btu/h of input per gallon of stored water). DOE believes these two groups of equipment—water heaters with and without integral storage tanks—are fundamentally different in their construction and application, and have different energy losses that need to be accounted for during efficiency testing. Consequently, DOE believes that instantaneous water heaters with an integral storage tank (''storage-type instantaneous water heaters'') should be tested in a manner similar to commercial storage water heaters. Therefore, in the May 2016 NOPR, DOE proposed to define ''storage-type instantaneous water heater,'' and to require that storage-type instantaneous water heaters be tested using the same test procedure as used for commercial storage water heaters. 81 FR 28588, 28607 (May 9, 2016). Specifically, DOE proposed to define ''storage-type instantaneous water heater'' as an instantaneous water heater that includes a storage tank with a submerged heat exchanger(s) or heating element(s).

In response to the May 2016 NOPR, NEEA and Joint Advocates agreed that storage-type instantaneous water heaters should be tested in a similar manner to storage water heaters. (NEEA, No. 30 at p. 1; Joint Advocates, No. 32 at p. 2) NEEA also agreed with DOE's proposed definition for ''storage-type instantaneous water heater.'' (NEEA, No. 30 at p. 1) Bradford White and A.O. Smith stated that a definition and equipment class for storage-type instantaneous water heaters are unnecessary. (Bradford White, No. 21 at p. 9; A.O. Smith, NOPR Public Meeting Transcript, No. 20 at p. 17) A.O. Smith also stated that storage-type instantaneous water heaters have always been tested like storage water heaters. (A. O. Smith, NOPR Public Meeting Transcript, No. 20 at p. 17) Several commenters stated that the definition of ''storage-type instantaneous water heater'' should not include a submerged heat exchanger or heating element because there are models on the market without a submerged heat exchanger that should be included in this class. (Bradford White, No. 21 at p. 12; AHRI, No. 26 at p. 13; A.O. Smith, No. 27 at p. 11; Raypak, No. 28 at p. 7; Rheem, No. 34 at p. 14)

While DOE's existing test procedures do not distinguish between storage water heaters and instantaneous water heaters, in this final rule, DOE is separating its test procedures for storage water heaters and instantaneous water heaters. Therefore, DOE disagrees with Bradford White and A.O. Smith, and believes a clarification of which test procedure to use for testing storage-type instantaneous water heaters and a definition for classifying storage-type instantaneous water heaters are

warranted so as to eliminate any ambiguity.

After further assessment of tank-type water heaters currently on the market, DOE agrees with commenters that its proposed definition of ''storage-type instantaneous water heater'' excludes certain kinds of water heaters that should be included in this class. Specifically, the proposed requirement that a storage-type instantaneous water heater contain a submerged heat exchanger or heating element excludes units such as those with a water-tube heat exchanger located outside the tank, or models comprising a storage tank and a tankless water heater mounted to the side of the tank. Therefore, DOE is not including this specification for a submerged heat exchanger or heating element in the definition for ''storage-type instantaneous water heater'' established in this final rule.

In the absence of a specification for a submerged heat exchanger or heating element, DOE believes that the definition of ''storage-type instantaneous water heater'' needs an alternative specification to distinguish between tank-type water heaters and instantaneous-type water heaters that include a small holding tank (*e.g.,* 1–2 gallons). Both of these categories of water heaters would meet a definition that specifies only that a storage-type instantaneous water heater includes a tank. DOE believes that a storage volume of ten gallons effectively separates these two categories of water heaters, and this criterion aligns with DOE's current energy conservation standards, which include a standby loss standard for instantaneous water heaters with a storage volume greater than or equal to ten gallons.

Accordingly, in this final rule, DOE is adopting test procedures in the regulatory text at the end of this document that require testing of storage water heaters and storage-type instantaneous water heaters using the same procedures. DOE is also defining ''storage-type instantaneous water heater'' as an instantaneous water heater including a storage tank with a storage volume of ten gallons or greater.

H. Standby Loss Test for Instantaneous Water Heaters and Hot Water Supply Boilers

The current Federal standby loss test method for CWH equipment incorporates by reference Exhibit G.2 of ANSI Z21.10.3–2011 for determining the standby loss of instantaneous water heaters and hot water supply boilers with greater than 10 gallons of storage volume. 10 CFR 431.110. This test method assumes that the water heater would automatically initiate the next firing cycle when the internal water temperature (measured using the internal tank thermostat) falls below its allowable minimum value. This control system operation applies to some CWH equipment, but is not applicable to certain instantaneous water heaters and hot water supply boilers that require continuous water flow through the heat exchanger in order to activate the next firing cycle. Accordingly, in the May 2016 NOPR, DOE proposed a separate test method for ''flow-activated instantaneous water heaters,'' which DOE proposed to define as an instantaneous water heater or hot water supply boiler that does not activate the burner or heating element if no heated water is drawn from the unit. 81 FR 28588, 28607–28613 (May 9, 2016). DOE's proposed test method and the method adopted in this final rule are discussed in further detail in section III.H.3.

In addition to the proposed test procedure for flow-activated instantaneous water heaters, DOE also proposed in the May 2016 NOPR to update the standby loss test procedure for instantaneous water heaters and hot water supply boilers (other than flow-activated instantaneous water heaters and storage-type instantaneous water heaters). The existing Federal standby loss test procedure requires the measurement of the mean tank temperature to calculate the standby loss. Instantaneous water heaters and hot water supply boilers (other than storage-type instantaneous water heaters) are not equipped with an integral storage tank, and instead, most of the stored water is within the heat exchanger. Therefore, obtaining a measurement for the mean tank temperature would not be possible for such units, because heat exchanger geometry generally prevents an accurate internal stored water measurement that would be comparable to a mean tank temperature in tank-type models. DOE notes that the mean tank temperature for storage and storage-type instantaneous water heaters represents the hot water stored in the heat exchanger and that is subject to heat loss during the standby loss test. However, unlike storage water heaters and storage-type instantaneous water heaters, instantaneous water heaters and hot water supply boilers generally have water-tube heat exchangers [14] and do not store water at a uniform temperature inside the heat exchanger. Consequently, DOE proposed in the May 2016 NOPR to use the outlet water temperature as an approximation for the stored water temperature (instead of the mean tank temperature as required by Annex E.2 of ANSI Z21.10.3–2015, the latest industry test method). 81 FR 28588, 28615–28617 (May 9, 2016). In the May 2016 NOPR, DOE also proposed a storage volume determination test for all instantaneous water heaters and hot water supply boilers (including flow-activated instantaneous water heaters), similar to the method specified in section 5.27 of ANSI Z21.10.3–2015. 81 FR 28588, 28612 (May 9, 2016).

The following sections discuss the comments received in response to each of these proposals.

1. Definition of Flow-Activated Instantaneous Water Heater

As noted previously, in the May 2016 NOPR, DOE proposed to define ''flow-activated instantaneous water heater'' as an instantaneous water heater or hot water supply boiler that does not activate the burner or heating element if no heated water is drawn from the unit. 81 FR 28588, 28608 (May 9, 2016).

In response, NEEA and Bradley supported DOE's proposed definition for ''flow-activated instantaneous water heater.'' NEEA stated that the definition would allow such equipment to have a better delineation of efficiency. Bradley agreed that the proposed definition captures the types of water heaters that exist on the market. (NEEA, No. 30 at p. 1; Bradley, No. 33 at p. 1) A.O. Smith suggested that the proposed definition for flow-activated instantaneous water heater is not necessary and may cause confusion. (A.O. Smith, No. 27 at p. 11) Rheem suggested amending the definition of flow-activated instantaneous water heaters such that it does not include double-negative wording, and recommended defining ''flow-activated instantaneous water heater'' as a unit that activate the burner or heating element when water is drawn from the unit. Rheem also stated that, provided that the proposed definition is simplified, it encompasses all designs and models for which a separate standby loss test is warranted and would not inadvertently include models that do not need a separate standby loss test procedure from other CWH equipment. (Rheem, No. 34 at p. 15)

DOE disagrees with A.O. Smith's assertion that the definition could be unnecessary and cause confusion. On the contrary, DOE believes that adopting a definition for flow-activated water heaters will clarify the models for which the test procedure for flow-activated

[14] By water-tube heat exchangers, DOE refers to a heat exchanger where water flows inside heat exchanger tubes and is heated by a source of energy external to the tubes.

instantaneous water heaters is applicable. DOE considered the comments submitted by Rheem with regard to the language used in the proposed definition for ''flow-activated instantaneous water heater.'' DOE notes that the purpose of the proposed definition is to carve out water heaters that will activate the burner or heating elements only if hot water is drawn from the unit. Rheem's recommended wording would include any models that activate the burner or heating element when water is drawn from the unit, which could include some water heaters that are both flow-activated and thermostatically-activated. DOE notes that Rheem's suggestion changes the meaning of the proposed text; to achieve the same meaning as DOE's proposal would require the addition of ''only'' (*i.e.,* those water heaters where the burner or heating element activates *only* when water is drawn from the unit). Therefore, DOE adopts Rheem's suggestion to remove the double negative from the definition, and defines flow-activated water heaters as those that will only activate the burner or heating element if water is drawn from the unit.

2. Storage Volume Determination for Instantaneous Water Heaters and Hot Water Supply Boilers (Excluding Storage-Type Instantaneous Water Heaters)

The existing Federal standby loss test procedure for CWH equipment references Exhibit G.2 of ANSI Z21.10.3–2011, which in turn references section 2.26 of that standard to measure the storage volume of the water heater. The test method in 2.26 of ANSI Z21.10.3–2011 (renumbered to 5.27 of ANSI Z21.10.3–2015, the most recent version of the standard) is a weight-based method that requires the water heater to be weighed empty and then completely filled with water and weighed again. The total storage volume in the water heater is calculated using the difference in the weight of the water heater when full and empty. The 2015 version of ANSI Z21.10.3 includes a test method for measuring storage volume for tube-type water heaters in section 5.28. DOE reviewed this section and noticed that it does not provide a specific method to conduct the test and instead only states that the ''volume of water contained within the water heater shall be determined.'' In the May 2016 NOPR, DOE declined to propose adoption of section 5.28, noting that it would leave the decision of the appropriate method (*e.g.,* direct measurement, calculation) to individual manufacturers or testing agencies, who may choose different methods for determining the storage volume, which could produce inconsistent results. Rather, DOE proposed to continue using a weight-based test method to measure the storage volume of all instantaneous water heaters and hot water supply boilers excluding storage-type instantaneous water heaters. 81 FR 28588, 28607–28613 (May 9, 2016)

In response to this issue, AHRI, A.O. Smith, Bradley, Bradford White, and Rheem opposed DOE's proposal to require use of a test method similar to section 5.27 of ANSI Z21.10.3–2015 (*i.e.,* a weight-based method), to measure the storage volume of instantaneous water heaters and hot water supply boilers (other than storage-type instantaneous water heaters). Specifically, AHRI and Bradley commented that they do not agree with the proposed test method because it is limited to the weight-based test method to determine the volume. Both commenters also stated that the determination of volume is critical only to determine whether the unit is subject to standby loss standards, and that many models currently have their stored water volume determined using calculations based on physical dimensions of water-containing parts. Both commenters argued that the alternative method of calculating the stored water volume based on physical dimensions eliminates the concern of residual water encountered in the weight-based test. Furthermore, the commenters stated that this method is useful in all cases except those with a calculated result that is approximately 10 gallons. (AHRI, No. 26 at p. 14; Bradley, No. 33 at pp. 3–4) A.O. Smith commented that DOE should accept the rated volume for appliances and allow volume determination other than through a weight-based method for small water heaters, and recommended using section 5.28 of ANSI Z21.10.3–2015 to measure the storage volume. A.O. Smith and Bradford White argued that many manufacturers purchase heat exchangers which will have residual water left over from hydrostatic testing. A.O. Smith stated that many water heaters have water passageways that do not allow the removal of water, and that such water heaters are filled for leak and operational testing before shipment. Therefore, manufacturers will never be able to test a completely dry water heater, thereby leading to inaccuracies in the measurement of the storage volume and standby loss. (A.O. Smith, No. 27 at p. 12; Bradford White, No. 21 at p. 10) A.O. Smith further argued that allowing the use of section 5.28 of ANSI Z21.10.3–2015 would not prohibit independent test laboratories from using a weight-based test method when no suitable alternative is available, and that manufacturers would be able to use more accurate test methods such as solid modeling and calculation-based methods. (A.O. Smith, No. 27 at p. 12) Bradford White suggested that DOE could include a weight-based test procedure for determining storage volume, but that it must include steps that include supplying pressurized air and tipping the product in different directions to assist the removal of residual water. However, Bradford White added that even with these measures, not all the water would be removed. (Bradford White, No. 21 at p. 10) Similarly, Rheem stated that due to hydrostatic testing, the water heater can never be emptied completely, so the dry weight can never be achieved. Rheem added that there are different methods of measuring volume of CWH equipment allowed by ANSI that include mathematical calculations and software modeling. Rheem recommended that DOE allow theoretical methods to determine water volume or that DOE set tolerances to account for residual water. (Rheem, No. 34 at p. 15)

DOE generally agrees with the concerns raised by the manufacturers. In particular, DOE is concerned that the weight-based test method specified in section 5.27 of ANSI Z21.10.3–2015 could lead to inaccurate representation of the storage volume due to the presence of residual water in the heat exchanger. Therefore, in this final rule, DOE is adopting provisions to allow for the determination of stored water volume based on calculations of the physical dimensions or design drawings (including computer-aided design (CAD) drawings) of the water-containing parts for instantaneous water heaters and hot water supply boilers. Despite the concerns with establishing a specific test method to determine the storage volume of instantaneous water heaters and hot water supply boilers, DOE notes that it must specify a test method that can be used to classify a basic model in the appropriate equipment class and to determine the applicable standard. DOE does not agree with AHRI's comment that the determination of storage volume is only necessary to determine whether the water heater is subject to standby loss standards (*i.e.,* whether it has a storage volume greater than or equal to 10 gallons). DOE notes that the measured storage volume is also required in the equations used to calculate the standby loss of CWH

equipment. Therefore, DOE cannot leave the storage volume determination to the discretion of the manufacturer or testing/certifying agency. To address this issue, DOE has decided to adopt two test methods, either of which may be used to determine the storage volume of instantaneous water heaters and hot water supply boilers. Specifically, DOE has decided to allow for use of the weight-based test method (similar to section 5.27 of ANSI Z21.10.3–2015) as proposed in the May 2016 NOPR as one option, and to also permit the use of calculations for determining the stored water volume based on the physical dimensions or design drawings (including CAD drawings) of water-containing parts. DOE believes that these changes are generally consistent with the approaches used in ANSI Z21.10.3–2015, as discussed immediately above.

Along with changes in the test method, DOE is also making a corresponding amendment to its certification requirements for CWH equipment at 10 CFR 429.44, to require the certification of the method used to determine the storage volume of an instantaneous water heater or hot water supply boiler. DOE is also updating 10 CFR 429.72 with provisions to permit the use of physical dimensions (including design drawing and/or CAD models) to determine the storage volume based on calculations. In addition, DOE is requiring the retention of supplemental documents, including any design drawings and/or computer models, as well as documentation of the calculations performed to determine the water-carrying parts inside the water heater for any water heater models where the storage volume is determined based on calculations.

3. Standby Loss Test Procedures for Instantaneous Water Heaters and Hot Water Supply Boilers (Other Than Storage-Type Instantaneous Water Heaters)

DOE proposed two separate standby loss test procedures in the May 2016 NOPR—one for flow-activated instantaneous water heaters, and one for instantaneous water heaters and hot water supply boilers (other than flow-activated instantaneous water heaters and storage-type instantaneous water heaters). 81 FR 28588, 28607–28615 (May 9, 2016). The following sections describe the comments received in response to the proposed standby loss test methods, along with DOE's response.

DOE's proposed test method in the May 2016 NOPR would include the electricity consumed by the pump in the recirculating loop, if applicable, consistent with ANSI Z21.10.3–2015. In response to this proposal, Bradford White disagreed with including the electricity consumed by the pump in the recirculating loop (if used) in calculating the thermal efficiency of CWH equipment, stating that the recirculating loop would not be used in the field, and, thus, the pump energy should not be considered. (Bradford White, No. 21 at p. 11) DOE notes, however, that paragraph h.2 of Exhibit G.1 of ANSI Z21.10.3–2011 (currently incorporated by reference into DOE's test procedures) and Annex E.1 of ANSI Z21.10.3–2015 (the most recent update of the industry standard) require the measurement of the quantity of electricity consumed by the water heater components and the recirculating pump for conducting the thermal efficiency test. In this final rule, DOE is not promulgating a different set of requirements, instead DOE is only retaining the provisions that already exist in the current test procedure for electricity consumed by the recirculating loop. Therefore, DOE does not agree with Bradford White's suggestion that the energy used by the recirculating pump should not be measured for any type of water heater because this is part of the industry recognized test procedure in ANSI Z21.10.3.

a. Applicability of the Test Method

AHRI, A.O. Smith, and Rheem commented that the proposed test procedure for instantaneous water heaters and hot water supply boilers other than flow-activated instantaneous water heaters will not work for models that the test procedure intends to cover. (AHRI, No. 26 at p. 11; A.O. Smith, No. 27 at p. 14; Rheem, No. 34 at p. 17) AHRI and Rheem stated that many models, although not flow-activated, will act like a flow-activated instantaneous water heater during the standby loss test for which there will be no cut-in and subsequent cut-out. AHRI and Rheem recommended that the test procedure proposed for flow-activated instantaneous water heaters apply to all instantaneous water heaters and hot water supply boilers (other than storage-type instantaneous water heaters). (AHRI, No. 26 at p. 11; Rheem, No. 34 at p. 17) A.O. Smith stated that circulating instantaneous water heaters are primarily operated based on a remote temperature sensor, which is not mentioned in DOE's test method and is presumed to be left in a state that would require the burner to fire continuously. (A.O. Smith, No. 27 at p. 14) Raypak commented that the equation presented in the NOPR for the standby loss test procedure for instantaneous water heaters and hot water supply boilers can result in negative standby loss values if the unit does not fire at any point during the standby loss test. (Raypak, No. 28 at p. 3) Lochinvar sought feedback on how the test method would work for instantaneous water heaters that do not have an internal call for heating. Specifically, Lochinvar stated that instantaneous water heaters that do not have a call for heating internally require an outside thermostat or aquastat to provide a call for heating, and that for such water heaters, there will be no second call for heating to end the test based on the proposal in the May 2016 NOPR. (Lochinvar, Public Meeting Transcript, No. 20 at p. 97)

DOE also received several comments that related only to the proposed test procedure for flow-activated instantaneous water heaters. A.O. Smith commented that the proposed test procedure for flow-activated instantaneous water heaters is not necessary and may cause confusion. A.O. Smith suggested that the test methods for all instantaneous water heaters and hot water supply boilers must be consistent, adding that demand-based controls and lack of a storage tank makes the traditional standby loss test impossible to use. To address this issue, A.O. Smith suggested a standby loss test that incorporates demand-based operation and measures inlet and outlet temperature, and stated that, if DOE does not accept the test procedure in ANSI Z21.10.3–2015, then the test procedure proposed for flow-activated instantaneous water heaters should be applied to all instantaneous water heaters and hot water supply boilers. A.O. Smith added that a common thermal efficiency and standby loss test should be used for both the flow-activated instantaneous water heaters and temperature-activated instantaneous water heaters to ensure a level playing field, and that no special arrangements are required for flow-activated instantaneous water heaters. (A.O. Smith, No. 27 at pp. 11–12 and 15) Rheem supported the proposal to base the test procedure for flow-activated instantaneous water heaters on the second part of the 2016 AHRI-recommended test method with some modifications. (Rheem, No. 34 at p. 16) Conversely, Bradley commented that it does not support basing the flow-activated instantaneous water heater standby loss test method on the second part of the 2016 AHRI-recommended test method; instead, it recommended using an alternative test method

described in its comments. (Bradley, No. 33 at p. 4)

Based on the comments, it appears that instantaneous water heaters and hot water supply boilers can be categorized into three major categories based on the kind of feedback-control operation used: (1) Thermostatically-activated based on an internal call for heating (internally-activated instantaneous water heaters); (2) thermostatically-activated based on an external call for heating; and (3) flow-activated based on an external call for heating. As discussed previously, in the May 2016 NOPR, DOE proposed separate standby loss test procedures for flow-activated instantaneous water heaters (81 FR 28588, 28607–28613 (May 9, 2016)) and for instantaneous water heaters (excluding storage-type instantaneous water heaters) that are not flow-activated (81 FR 28588, 28615–28617 (May 9, 2016)). The standby loss test procedure proposed for instantaneous water heaters and hot water supply boilers that are not flow-activated only addressed units that are thermostatically-activated by an *internal* call for heating (or demand) and did not address units that are thermostatically-activated by an *external* call for heating. DOE agrees that the test procedure proposed for instantaneous water heaters and hot water supply boilers (other than storage-type instantaneous water heaters) that are not flow-activated, as proposed in the May 2016 NOPR, would not work for units that are thermostatically-activated based on an *external* call for heating. DOE understands that, for field applications of units that are activated by an *external* demand, the thermostat is typically placed in a remote location, such as in an unfired hot water storage tank, and is activated when the water in the tank cools down below the set point. In the context of the proposed standby loss test, unless the external control provides a call for heating (such a call for heating is not specified in either the existing or proposed standby loss test), the unit under test would not activate the burner or heating element during the standby loss test. Thus, the standby loss test proposed for instantaneous water heaters and hot water supply boilers (other than flow-activated instantaneous water heaters) would not be applicable to instantaneous water heaters that are thermostatically-activated by an external demand, because these units would not experience a call for heating, and therefore the burner or heating element(s) would not activate during the test. The test method for determining the standby loss of flow-activated instantaneous water heaters was designed to address units where the burner or heating element(s) may not activate during the test. Considering the comments received from the stakeholders, DOE agrees that the standby loss test procedure proposed for flow-activated instantaneous water heaters in the May 2016 NOPR can be used for externally thermostatically-activated instantaneous water heaters, as neither of these types of water heater would cut-in (*i.e.,* have the heating element or burner turn on) during the standby loss test. Therefore, DOE is making the test method adopted in this final rule for flow-activated instantaneous water heaters apply to externally thermostatically-activated instantaneous water heaters as well.

To address operational characteristics of externally thermostatically-activated instantaneous water heaters, the proposed standby loss test procedure in the May 2016 NOPR for flow-activated instantaneous water heaters must be modified slightly. These amendments include: (1) Adding provisions that require either removing the external call for heating, or turning off the fuel supply to the burners or electricity supply to the heating element (as applicable) after the steady-state conditions as specified in section III.F.1 are achieved prior to initiating the standby loss test; and (2) removing the fuel consumption terms from the equation to calculate the standby loss. Adopting the provisions to remove the external call for heating or turn off the fuel and electricity will ensure that there will be no fuel consumption (or electricity consumption for the purpose of heating water) during the course of the standby loss test. Therefore, the equations would not require the fuel consumption terms in the calculation for standby loss.

To simplify the regulatory text, DOE has decided to include all test procedures related to gas-fired and oil-fired instantaneous water heaters and hot water supply boilers under one appendix (*i.e.,* appendix C to subpart G of part 431). This differs from the approach proposed in the May 2016 NOPR, which would have provided a separate appendix for gas-fired and oil-fired instantaneous water heaters and hot water supply boilers other than flow-activated instantaneous water heaters (proposed appendix C) and flow-activated instantaneous water heaters (proposed appendix E). Within appendix C adopted in this final rule, the thermal efficiency test and the steps prior to starting the standby loss test (*e.g.,* for verifying steady-state conditions) are common to all gas-fired and oil-fired instantaneous water heaters and hot water supply boilers. The standby loss tests for (1) thermostatically-activated instantaneous water heaters with internal thermostat; and (2) thermostatically-activated instantaneous water heaters with external thermostat and flow-activated instantaneous water heaters are described separately in the regulatory text.

In the May 2016 NOPR, DOE also proposed standby loss test procedures for electric instantaneous water heaters (contained in proposed appendix D) and electric flow-activated instantaneous water heaters (contained in proposed appendix E). 81 FR 28588, 28649–28650 (May 9, 2016). In this final rule, DOE has decided to include the standby loss test procedures for all electric instantaneous water heaters in appendix D to subpart G of part 431. Similar to the structure in appendix C, the steps in the standby loss test procedure prior to initiating the measurements for the standby loss test are the same for all electric instantaneous water heaters. The steps describing the conduct of the standby loss test are different for internally thermostatically-activated electric instantaneous water heaters and those that are either externally thermostatically-activated or flow-activated.

b. Applicability to Models With Less Than 10 Gallons of Stored Water Volume

In the May 2016 NOPR, DOE proposed standby loss test procedures for all gas-fired, oil-fired, and electric instantaneous water heaters and did not limit the use of the test procedure to less than 10 gallons of rated storage volume. 81 FR 28588, 28607, 28615 (May 9, 2016).

In response, Bradford White stated that it agrees with adopting a standby loss test applicable to units with rated storage volume less than 10 gallons, only if compliance with maximum standby loss standards is not required for such units. (Bradford White, No. 21 at p. 11) Bradley stated that flow-activated instantaneous water heaters having capacity less than 10 gallons contain little thermal energy, and that developing a test procedure for such units is unnecessary. According to Bradley, the thermal energy loss of their electric-instantaneous flow-activated models with less than 10 gallons of storage capacity is less than 600 Btu/h (157 Watts). Bradley stated that these units will not function effectively unless water in the unit is minimized and that typically these units contain small volumes—often less than two gallons of water. Bradley argued that, due to low

volumes, the units have a very limited amount of stored energy, and suggested that DOE should simplify the test method based on an assumption that the temperature of the water stored in the unit will drop to the ambient temperature within a one-hour time period. Bradley further stated that due to the nature of its water heaters, the burden to test them for standby loss would be high, while not resulting in any meaningful energy savings, but that its suggested clarifications and simplifications to the test procedure would help in reducing the burden. (Bradley, No. 33 at pp. 1–3)

In response to these comments, DOE notes that the current maximum standby loss standards for instantaneous water heaters are only applicable to gas-fired and oil-fired instantaneous water heater models with rated storage volume greater than or equal to 10 gallons. 10 CFR 431.110. Therefore, manufacturers are currently not required to test and certify their instantaneous water heaters and hot water supply boilers for standby loss, if the model has a rated storage volume less than 10 gallons. DOE further notes that in the NOPR for energy conservation standards for CWH equipment that was published in the **Federal Register** on May 31, 2016, DOE did not propose to prescribe standby loss standards for electric instantaneous water heaters and gas-fired and oil-fired instantaneous water heaters with rated storage volume less than 10 gallons. 81 FR 34440. Although in this test procedure final rule, DOE is prescribing a test procedure that could be used to test all instantaneous water heaters for standby loss, manufacturers are not required to test and certify units that are not subject to energy conservation standards. However, if a manufacturer chooses to make representations for standby loss for an instantaneous water heater or hot water supply boiler with a rated storage volume less than 10 gallons, then it must do so using DOE's test procedures specified in Appendix C or Appendix D to subpart G of part 431 (as applicable). In this final rule, DOE is adopting standby loss test procedures for all gas-fired, oil-fired, and electric instantaneous water heaters without limiting its applicability based on rated storage volume.

DOE also considered the simplified test method suggested by Bradley in its comments. The test procedure suggested by Bradley restricts the time period of the standby loss test to one hour and removes the electricity consumption terms from the standby loss equation. DOE addressed similar issues related to the test duration in the May 2016 TP NOPR, in which it discussed the disadvantages of having a set time duration to conduct the standby loss test. 81 FR 28588, 28611 (May 9, 2016) As discussed in the May 2016 NOPR, the standby mode operation of flow-activated instantaneous water heaters resembles a complete cool-down test where the main burner or heating element does not activate at any point during the test. Simply assuming that the water heater loses all stored thermal energy over a one-hour period ignores the fact that the rate of heat loss is dependent on the insulation and design of the water heater itself, and models with different insulation thicknesses and heat exchanger designs will lose heat at different rates. 81 FR 28588, 28611 (May 9, 2016). Accordingly, if the duration of the test were set to one hour, this could lead to an inaccurate comparison of the standby loss between two water heaters that lose heat at different rates because some water heaters may reach ambient temperature much more quickly than that and others much more slowly. For example, a water heater that cools to ambient temperature in 5 minutes would have the same standby loss rating as a water heater that reaches ambient in a period of 50 minutes. In addition to yielding the same standby loss for two models that would otherwise have significantly different standby loss ratings, the assumption would likely understate the standby loss by assuming the loss occurs over the full duration of an hour, rather than the actual amount of time it takes for the thermal energy to be lost, which according to Bradley is generally less than an hour. The suggested simplified test method also does not account for electrical consumption during the course of the test. The electrical consumption during the standby loss test is mainly due to electricity provided to keep the controls and non-water-heating functions running during the standby loss test. This electricity consumption is also accounted for in the current standby loss equations in the test procedures in Exhibit G.2 of ANSI Z21.10.3–2011, incorporated by reference as DOE's standby loss test procedure for storage and instantaneous water heaters and set forth in 10 CFR 431.106. Therefore, in this final rule, DOE has decided not to make changes to its proposed standby loss equations based on the comments provided by Bradley.

c. Turning Off Supply and Outlet Water Valves Simultaneously

The standby loss test procedures for flow-activated instantaneous water heaters and all other instantaneous water heaters and hot water supply boilers (except storage-type instantaneous water heaters) proposed in the May 2016 NOPR required the water pump and supply and outlet water valves to be shut off simultaneously to start the standby loss test. 81 FR 28588, 28607, 28615 (May 9, 2016) This proposal was related to DOE's tentative decision in the May 2016 NOPR to install the supply water valve at a distance of 5 inches away from the water heater in the supply water connection and the outlet water valve at a distance of 10 inches away from the water heater in the outlet water connection in order to reduce the effect of heat loss due to mixing with water in the piping during the standby loss test. 81 FR 28588, 28613–28615 (May 9, 2016). DOE received several comments on the placement of the supply and outlet water valves that are discussed and addressed in section III.I.3 of this final rule. The following paragraphs discuss the comments received with regard to turning off the supply and outlet water valves simultaneously at the start of the standby loss test.

AHRI, A.O. Smith, Bradford White, and Raypak opposed the proposed requirement that the supply water valve and outlet water valve (and water pump) be turned off simultaneously when initiating the standby loss test for instantaneous water heaters and hot water supply boilers. The commenters stated that the proposed test method may lead to unsafe operating conditions and/or may trigger the relief valve to open if the water heater burner or elements activate to satisfy a call for heating during the standby loss test. AHRI, A.O. Smith, Bradford White, Raypak, and Rheem recommended that only the outlet water valve be closed at the start of the standby loss test and the supply valve be kept open at all times. (AHRI, No. 26 at p. 11; A.O. Smith, No. 27 at p. 13; Bradford White, No. 21 at p. 11; Raypak, No. 28 at p. 3; Rheem, No. 34 at p. 16) AHRI and Rheem stated that the outlet valve is sufficient to stop the flow while allowing thermal expansion to occur during the test. (AHRI, No. 26 at p. 11; Rheem, No. 34 at p. 16) Similarly, A.O. Smith commented that, if there is heat added to the heat exchanger after the flow is stopped, there must be an allowance for thermal expansion of the water. A.O. Smith added that in the proposed test procedure, the closing of the supply and outlet water valves isolates the water heater, and if the control is set to a call for heating at all times, the water heater may continue to fire until the water temperature reaches the high safety limit. This could result in the formation

of superheated steam and blow off the pressure relief valve. (A.O. Smith, No. 27 at pp. 14–15)

DOE agrees with the comments received from the stakeholders citing safety concerns while conducting the standby loss test as proposed in the May 2016 NOPR. To address this issue, DOE has decided to remove the requirement to turn off the supply water valve during the conduct of the standby loss test. Instead, the standby loss test procedures adopted for instantaneous water heaters and hot water supply boilers only require turning off the outlet water valve and the water pump at the start of the test. DOE has also made several amendments to its test set-up proposed in the May 2016 NOPR, including ones related to the standby loss test procedure. These amendments and the related comments are discussed in section III.I of this final rule.

d. Approximation of Stored Water Temperature Based on Water Temperature at the Outlet

As discussed previously, in the May 2016 NOPR DOE tentatively decided to use the outlet water temperature as an approximation for the mean tank temperature to conduct the standby loss test for flow-activated instantaneous water heaters and other instantaneous water heaters (except for storage-type instantaneous water heaters). 81 FR 28588, 28607, 28615 (May 9, 2016).

In response to this proposal, Raypak stated that because DOE proposed not to adopt the test procedures in ANSI Z21.10.3–2015 for flow-activated instantaneous water heaters and instantaneous water heaters and hot water supply boilers (other than flow-activated instantaneous water heaters and storage-type instantaneous water heaters), it does not support the use of outlet water temperature as a conservative estimate for the mean tank temperature. Instead, Raypak recommended using the average of the supply and outlet water temperature (Raypak, No. 28 at p. 4) Raypak also stated that it supported DOE's decision to not use an external tank to measure the mean tank temperature. (Raypak, No. 28 at p. 7) Rheem also recommended that instead of using the outlet water temperature as an approximation for the stored water temperature, DOE use an average of the inlet and outlet water temperature. Rheem added that DOE's proposal is better suited for gas-fired flow-activated instantaneous water heaters than for electric flow-activated instantaneous water heaters. (Rheem, No. 34, at pp. 16–17) Bradley supported using the outlet water temperature as an approximation for the stored water temperature, but also reiterated that the calculation of standby loss for water heaters with very low volume is wasteful, burdensome, and unnecessary (see section III.H.3.b for further discussion of Bradley's comment on standby loss for water heaters with very low volumes). (Bradley, No. 33 at p. 4) The Joint Advocates supported DOE's determination that outlet water temperature is an appropriate reference for the standby loss test (rather than the mean tank temperature). (Joint Advocates, No. 32 at p. 2)

A.O. Smith stated that the assumption that stored water temperature is the key to standby loss for instantaneous water heaters does not take into consideration that: (1) More heat may be stored in the heat exchanger than the water itself; (2) there is a non-uniform water temperature in the heat exchanger which increases from inlet to outlet; and (3) gravity circulation may lead to a decrease in the outlet water temperature that is not due to the heat loss to the atmosphere. A.O. Smith suggested using the average of the inlet and outlet water temperature to approximate the stored water temperature. (A.O. Smith, No. 27 at p. 13)

DOE also received several comments on this issue at the NOPR public meeting. Bradley stated that for electric instantaneous water heaters with a 70 °F inlet and 140 °F outlet, assuming the outlet water temperature as an approximation for stored water temperature would be a large penalty. However, Bradley also agreed that inserting temperature probes in the heat exchanger would be difficult. (Bradley, Public Meeting Transcript, No. 20 at p. 103) AHRI stated that inserting a temperature probe inside the heat exchanger is difficult and suggested that the outlet water temperature probe be used as point of reference for the standby loss test since a temperature probe is already required for measurement of the water close to the outlet of the water heater in the thermal efficiency test. (AHRI, Public Meeting Transcript, No. 20 at pp. 104–105)

In the May 2016 NOPR, DOE considered several options for estimating the stored water temperature inside the water heater for developing the proposed standby loss test procedure for instantaneous water heaters and hot water supply boilers. 81 FR 28588, 28616 (May 9, 2016). Among the options, DOE considered using an average of the supply and outlet water temperature as an estimation of the stored water temperature inside the heat exchanger. DOE weighed this option against the option of using the outlet water temperature as an approximation for the stored water temperature inside the heat exchanger. Ultimately, DOE proposed to use the outlet water temperature as an approximation, because it was included in the industry-adopted test method for flow-activated instantaneous water heaters, specifically in Annex E.3 of ANSI Z21.10.3–2015. DOE notes that using the average of the supply and outlet water temperature as an estimate for the stored water temperature is only valid if the water temperature inside the heat exchanger has a linear increase in temperature as it moves from the inlet to the outlet. Considering the kinds of heat exchangers that are typically used in instantaneous water heaters and hot water supply boilers (*e.g.,* fin-tube, helical condensing heat exchangers), DOE does not believe this assumption to be valid. Instead, DOE expects that the mass-weighted average temperature of the water inside the heat exchanger is likely to be higher than the simple average of the water temperature between the supply and the outlet, because the rate of heat transfer from the burner to the water decreases as the water temperature rises in the heat exchanger. Therefore, as the water moves through the heat exchanger and approaches the required outlet water temperature, it takes longer for its temperature to rise further, and thus, the mass-weighted average of the water in the heat exchanger is higher than the simple average between supply and outlet water temperature.

DOE agrees that using the average between the supply and outlet water temperature is a simple approach; however, this method is not sufficiently accurate to represent the temperature of water stored in the heat exchanger. Further, inserting probes deep inside the heat exchanger to accurately capture the stored water temperature would result in a more accurate reading of the water temperature within the heat exchanger, but would be significantly burdensome to achieve and difficult to ensure consistency in the placement of the temperature sensor, thereby decreasing repeatability. Using the outlet water temperature as an approximation for the stored water temperature should be more representative of the stored water temperature than using a simple average between the supply and outlet water temperature and less burdensome than inserting probes deep inside the heat exchanger. After careful consideration and based on the discussion above, DOE is not adopting the simple average of the supply and outlet water temperature as

an approximation for the stored water temperature. Instead, the outlet water temperature serves as an approximation for the stored water temperature. This is consistent with the industry test method specified in Annex E.3 of ANSI Z21.10.3–2015 and provides for a conservative test result where a large amount of uncertainty exists in estimating the stored water temperature in the heat exchanger.

e. Pump Purge

The proposed standby loss test procedure for instantaneous water heaters and hot water supply boilers (including the proposed test procedure for flow-activated instantaneous water heaters) in the May 2016 NOPR would require the test to be initiated immediately after turning off the supply and outlet water valves and water pump. 81 FR 28588, 28613 (May 9 2016).

DOE received several comments from stakeholders opposing a requirement to start the test immediately following the close of the supply and outlet water valves and the water pump. Specifically, Raypak argued that the proposed test procedure for instantaneous water heaters and hot water supply boilers does not take into consideration pump purge functionality,[15] and there are several models on the market that include such functionality. Raypak recommended that the standby loss test be started only after the pump purge period has ended. (Raypak, No. 28 at pp. 3,4,7; Raypak, Public Meeting Transcript, No. 20 at p. 90) Rheem stated that post-purge operation of the water heater needs to be addressed in the test procedure because the functionality is used to reduce standby loss by removing residual heat from the water heater. (Rheem, No. 34 at p. 16) AHRI stated that some models use pump purge to remove heat from a water heater that is used to service the hot water system, so the standby loss test should not start until the pump purge operation is complete. (AHRI, No. 26 at p. 12) A. O. Smith stated that many instantaneous water heaters have an integral pump with a delay that continues to circulate water through the heat exchanger for a limited time (30 seconds to 3 minutes) to move residual hot water from the heat exchanger to the storage tank. A. O. Smith recommended that the outlet water valve and water pump be turned off after the pump delay is complete. (A. O. Smith, No. 27 at p. 13)

DOE agrees with commenters that pump purge functionality is useful in removing the hot water stored in the water heater for use in the system. Thus, DOE also agrees with the recommendations from the stakeholders that the unit should be tested after the pump purge has ended. To accommodate pump purge operation, DOE will require the outlet water valve to remain open after the burner has cutout until the water pump has turned off. Further, DOE will require the loss in thermal energy recorded during the standby loss test and represented by the temperature difference term ΔT_1, to be measured after the pump purge operation ends. Specifically, DOE modifies the definition of the term 'ΔT_1' to refer to the heat exchanger outlet water temperature measured at the end of pump purge minus the heat exchanger outlet water temperature measured at the end of the test.

Therefore, in this final rule DOE adopts the following updates to the standby loss test for instantaneous water heaters and hot water supply boilers that are equipped with pump purge functionality: (1) Require the outlet valve to remain open until the pump purge operation is complete and then close the outlet water valve after the pump shuts down; (2) measure the thermal energy loss after the pump purge operation is complete and (3) end the standby loss test after the pump purge operation is completed and when the heat exchanger outlet water temperature has decreased by 35 °F from its value measured at the start of the test (*i.e., starting from the point* when the main burner(s) or heating element(s) cut-out). If, after a pump purge operation, the outlet water temperature has dropped by 35 °F or more, from its value after the burner(s) or heating element(s) cuts-out, then the test must be stopped after the pump purge is complete. All the required parameters must be recorded for the entire standby loss test, including the pump purge operation.

Considering the comments received, DOE revises the standby loss test procedure proposed in the May 2016 NOPR for flow-activated instantaneous water heaters to include additional provisions that account for pump purge functionality. DOE adds a requirement to measure the heat exchanger outlet water temperature immediately after the main burner(s) or heating element(s) cut out and clarifies that the outlet water valve must be kept open until the water pump shuts down. After the water pump shuts down, the outlet water valve must be closed and the recording of all required parameters for the standby loss test is started. The test is stopped once the heat exchanger outlet water temperature decreases by 35 °F from the temperature measured when the burner(s) or heating element(s) cut-out before the pump purge operation. DOE has included these modifications to the test procedure in Appendix C (for gas-fired and oil-fired equipment) and Appendix D (for electric equipment) to subpart G of part 431.

DOE also adopts provisions at 10 CFR 429.44 to require certifying whether the unit has pump purge functionality. These amendments are discussed further in section III.N of this final rule.

f. Temperature Rise Requirement and End of Test Criteria for Instantaneous Water Heaters

The proposed standby loss test procedures for instantaneous water heaters and hot water supply boilers (including flow-activated and externally thermostatically-activated instantaneous water heaters) would require water to be supplied at a temperature of 70 °F ± 2 °F; the fuel supply to be at the unit's full firing rate; and the water flow rate to be adjusted to achieve and maintain 70 °F ± 2 °F above the supply water temperature before achieving steady-state condition prior to the standby loss test. 81 FR 28588, 28613 (May 9, 2016). The proposed standby loss test for flow-activated and externally thermostatically activated instantaneous water heaters would be stopped once the outlet water temperature decreases by 35 °F ± 2 °F Id. at 28612–28613. DOE received several comments on the criteria for determining the end of the test and the requirement to achieve steady state with a temperature rise of 70 °F ± 2 °F.

With regard to the criteria for determining the end of the standby loss test, A. O. Smith stated that the 35 °F ± 2 °F decrease in outlet water temperature is inappropriate because a greater proportion of heat is stored in the mass of the heat exchanger rather than the water stored in the heat exchanger, which according to A. O. Smith is not equal to the outlet water temperature. A. O. Smith further stated that internal circulation within the water heater equalizes the temperature in the heat exchanger without actually losing heat to the ambient air. (A. O. Smith, No. 27 at pp. 12–13). Bradley supported the 35 °F drop in outlet water temperature as the criterion for ending the test, but noted that for water heaters with small volumes, the decrease in outlet water temperature will be due to

[15] Pump purge functionality allows the water pump to remain on for a short period after the main burner cuts out, which purges heated water from the unit, thereby reducing standby losses.

internal mixing and not losses to the ambient air. (Bradley, No. 33 at p. 1–3)

In the May 2016 NOPR, DOE considered the merits of establishing a specific temperature decrease criterion to stop the standby loss test as compared to a specific time duration. 81 FR 28588, 28611–28612 (May 9, 2016). In the May 2016 NOPR DOE noted that setting a specific time criterion ignores the fact that different water heaters could lose heat to the ambient air at different rates. Although DOE recognizes A. O. Smith's concerns regarding heat contained in the heat exchanger and possible mixing, DOE notes that the commenter did not suggest an alternative stopping criterion. Furthermore, DOE maintains its conclusion and rationale from the NOPR that setting a specific time criterion is not appropriate, and agrees with Bradley that a 35 °F drop in outlet water temperature as the criterion for ending the test is appropriate. Therefore, in this final rule, DOE has decided to adopt the proposed stopping criteria: That the standby loss test for all externally thermostatically-activated and flow-activated instantaneous water heaters be stopped when the outlet water temperature decreases by 35 °F ± 2 °F (as was proposed in the May 2016 NOPR for flow-activated instantaneous water heaters).

On the issue of achieving an outlet water temperature of 70 °F ± 2 °F above the supply water temperature, Bradley stated that certain of its water heater models have physical and tertiary temperature limit safety devices that cannot be safely overridden and will not be able to meet the proposed 140 °F outlet temperature condition. (Bradley, No. 33 at p. 4) Rheem and AHRI commented that certain water heating technologies cannot achieve the 70 °F temperature rise to reach the 140 °F outlet water temperature condition, and suggested the use of 70 °F temperature rise or the maximum designed outlet water temperature, whichever is greater. (Rheem, No. 34 at p. 16; AHRI, No. 26 at p. 11)

In response, DOE acknowledges the concerns raised and adopts the changes suggested by AHRI and Rheem with regards to instantaneous water heaters that are unable to achieve the required outlet water temperature due to in-built safety mechanisms. In this final rule, DOE adopts provisions that would allow such units to be tested using the maximum outlet water temperature that the unit is capable of achieving.

I. Test Set-Up for Commercial Instantaneous Water Heaters and Hot Water Supply Boilers

In the May 2016 NOPR, DOE proposed several amendments to the current test set-up for commercial instantaneous water heaters and hot water supply boilers (including flow-activated instantaneous water heaters). These proposed amendments include: (1) Specifying the location for measuring the outlet water temperature; (2) specifying the location for placing the supply and outlet water valves; (3) adding provisions for commercial equipment with multiple outlet water connections; and (4) adding conditions for using a recirculating loop. 81 FR 28588, 28613–28615 (May 9, 2016). DOE received several comments from manufacturers and industry representatives in response to each proposed amendment in the test set-up, which are discussed in detail in the sections immediately below.

1. Location of Outlet Water Temperature Measurement

The existing thermal efficiency and standby loss test methods as described in ANSI Z21.10.3–2011 and incorporated by reference into DOE's test procedures at 10 CFR 431.107 require commercial instantaneous water heaters and hot water supply boilers to be set up in accordance with Figure 2 of ANSI Z21.10.3–2011. Neither Figure 2 nor the text of DOE's test method, provide an exact location for measuring the outlet water temperature. If the outlet water temperature is measured at a significant distance away from the water heater, it could lead to an inaccurate representation of the outlet water temperature due to heat loss in the piping, particularly during the standby loss test. Thus, to ensure consistency and repeatability of the test, in the May 2016 NOPR, DOE proposed to specify a requirement for the distance of the outlet temperature sensor from the water heater jacket. Further, in the May 2016 NOPR, DOE proposed to use the outlet water temperature as an approximation for the temperature of stored water contained in the heat exchanger. Therefore, it was important in the context of the May 2016 NOPR proposal that the outlet water temperature be measured as close as possible to the water heater to minimize the effect of piping heat losses and to obtain a more accurate approximation of the stored water temperature inside the heat exchanger, while conducting the standby loss test. Specifically, in the May 2016 NOPR, DOE proposed that the tip or junction of the temperature sensor be placed at a distance of less than or equal to 5 inches from the water heater jacket, at the central axis of the water pipe, and with a radiation protection shield. The proposal left the type and number of temperature-sensing instruments to the discretion of the testing operator. 81 FR 28588, 28614 (May 9, 2016).

Bradford White, AHRI, A. O. Smith, Raypak, Rheem, and Lochinvar disagreed with DOE's proposed location for measuring the outlet water temperature for both the thermal efficiency and standby loss tests. The commenters argued against moving the outlet water temperature sensor from its current location, because the current location includes two elbows in the outlet water piping connection, before the outlet water temperature measurement, which induces turbulent flow and improves mixing of water in the pipes, leading to a better representation of the outlet water temperature. (Bradford White, No. 21 at p. 10; AHRI, No. 26 at p. 10–11; A. O. Smith, No. 27 at p. 14; Raypak, No. 28 at p. 3; Rheem, No. 34 at p. 17; Lochinvar, Public Meeting Transcript, No. 20 at p. 87) Bradford White stated that measuring the outlet water temperature a significant distance away from the water heater would not lead to an inaccurate representation unless the pipes are poorly insulated. (Bradford White, No. 21 at p. 10) Raypak commented that requiring the outlet water temperature sensor to be within 5 inches of the water heater during the thermal efficiency test would make the measurement extremely difficult or physically impossible, especially for larger fuel input rates. However, Raypak suggested that, for the standby loss test, the outlet water temperature could be measured at the outlet or possibly inside the water heater jacket, and recommended adopting separate test set-up figures for conducting the thermal efficiency and standby loss tests. (Raypak, No. 28 at pp. 3–4) Bradford White suggested requiring additional thermocouples to be inserted into the outlet of the water heater for the standby loss test. (Bradford White, No. 21 at p. 10) AHRI also suggested adding another temperature-sensing means, and suggested that it be installed one-inch inside the water heater's outlet to measure the maximum temperature of the water in the unit. (AHRI, No. 26 at p. 11) Raypak stated that as a unit size increases, it may become increasingly difficult to add temperature-sensing means and water valves at the distances proposed in the May 2016 NOPR, and recommended that DOE consider

specifying the locations in terms of pipe diameters rather than exact distances. (Public Meeting Transcript, No. 20 at pp. 86–87)

AHRI recommended that DOE require an instantaneous water heater to be tested using the test set up in figures 1, 2 and 3 proposed for storage water heaters in the May 2016 NOPR (*see* 81 FR 28588, 28599–28600). (AHRI, No. 26 at p. 10)

Bradley Corporation suggested that the requirements for test set-up should include the phrase ''water heater jacket or enclosure,'' to specify the location for measuring ambient room temperature, test air temperature, ambient relative humidity, and air draft, because there are no jackets for instantaneous water heaters. (Bradley, NOPR Public Meeting Transcript, No. 20 at p. 33) After considering these comments, DOE has decided to retain the two elbow fittings in the outlet water piping before the outlet water temperature measurement for the thermal efficiency test, as DOE agrees with the suggestions from the commenters that the elbows will improve the water mixing and allow for a more accurate measurement of the outlet water temperature during the thermal efficiency test. Nevertheless, DOE continues to believe that specifying the distance of the measurement from the water heater will improve repeatability without adding burden to the test, as it will ensure consistent placement of the outlet water temperature sensor. As a result, DOE has modified Figure III.4 as proposed in the May 2016 NOPR to require the outlet water temperature sensor be installed at the second elbow in the outlet water piping for the thermal efficiency test. DOE is also adopting AHRI's recommendation to permit the use of the test set-ups specified in Figure III.1, Figure III.2, and Figure III.3 of the May 2016 NOPR (and shown as figures 2.1, 2.2, and 2.3 in Appendix A to subpart G in the regulatory text of this document) to test instantaneous water heaters that do not require a recirculating loop for testing (see section III.I.5). As a result, DOE has also modified the piping configuration in Figure III.4 of the May 2016 NOPR to match the total piping lengths specified for the test set-up for water heaters with horizontal opening water connections (as shown in Figure III.3 of this final rule). Specifically, DOE is specifying a measurement location for the outlet water temperature sensor, similar to storage water heaters at a horizontal piping length of 6 inches and vertical piping length of 24 inches from the outlet port of the water heater. These distances are comparable to the distances specified for storage water heaters and address Rheem's concern about equitable distances for both storage and instantaneous water heaters. DOE concludes that these changes are consistent with the industry test method, ANSI Z21.10.3–2015, and simply provide additional detail and clarification to improve the repeatability of the test. The amended test set-up for instantaneous water heaters and hot water supply boilers to be tested with a recirculating loop is shown in Figure III.4 of this final rule.

Further, in response to Raypak's comment regarding specifying the pipe length in terms of multiples of pipe diameter, DOE believes that given the increase in distance of the outlet water temperature sensor from the outlet water port adopted in this final rule, specifying distance in terms of pipe diameters is not necessary. In addition, DOE is not aware of any units for which it would not be possible to measure the outlet water temperature at the distance adopted in this final rule. Therefore, DOE has decided to maintain the required distance for installing the outlet water temperature sensor in terms of total piping length rather than pipe diameter.

For the standby loss test, DOE believes and as noted in the comments, there is merit to installing the outlet water temperature measurement probe as close as possible to the water heater to accurately represent the temperature of water stored inside the heat exchanger during the standby loss test. Thus, DOE has decided to adopt separate locations for measuring outlet water temperature for the thermal efficiency test and standby loss test for instantaneous water heaters and hot water supply boilers. Specifically, for the standby loss test, based on the recommendations of commenters, the outlet water temperature sensors must be installed in the outlet water piping within one inch (either inside or outside) of the outlet water port. To avoid confusion with the outlet water temperature measured in the thermal efficiency test, DOE designates this temperature measurement ''heat exchanger outlet water temperature,'' denoted as ''T_{OHX}.'' As a result, DOE has modified Figure III.1, Figure III.2, Figure III.3, and Figure III.4 proposed in the May 2016 NOPR by adding an extra temperature sensor, T_{OHX}, at a distance of one-inch from the outlet port of the water heater (either inside or outside).

With regard to Bradley's comment on including the term ''enclosure'' with the term ''water heater jacket,'' DOE agrees that the suggested phrase better encompasses the range of instantaneous water heater designs and is adding the term to the ambient condition measurement location requirements adopted in this final rule for instantaneous water heaters.

Figure III.1, Figure III.2, Figure III.3, and Figure III.4 (for units tested with a recirculating loop) of this final rule show the required location of the outlet water temperature measurement and the heat exchanger outlet water temperature measurement that DOE adopts in this final rule for the thermal efficiency test and standby loss test, respectively, for instantaneous water heaters and hot water supply boilers.

2. Multiple Outlet Water Connections

In the May 2016 NOPR, DOE proposed that for instantaneous water heaters with multiple outlet water connections, the outlet water temperature be maintained at 70 °F ± 2 °F at each outlet connection, and the average outlet temperature for use in the subsequent calculations be determined as the average of the values measured at each connection leaving the water heater jacket. 81 FR 28588, 28614 (May 9, 2016). In response, Bradford White disagreed with DOE's proposal to require measurement of the outlet temperature at each outlet connection, arguing that the proposed changes are overly burdensome due to the addition of more thermocouples and complex piping configurations that the proposed changes may result in. Bradford White stated that multiple outlets are sometimes included on products to accommodate different field piping configurations that may be encountered in replacement installations, and that not all connections are intended to be used in the field. (Bradford White, No. 21 at p. 11)

DOE clarifies that the provisions proposed for multiple outlet water connections were intended to apply to equipment that is designed to use both (or multiple) outlet water connections simultaneously during field operation, such as models that contain two individual units assembled or stacked together and are sold as a single, larger unit. Such units typically employ external piping to combine the multiple supply and outlet water connections (respectively) to form a single supply and single outlet water connection for the entire water heater. To achieve the fuel input rate for which the model is designed and rated, both sub-units need to be supplied with water and fired at their respective full firing capacities. If a model consists of redundant outlet water connections that can be used optionally to accommodate various field piping configurations, and the outlet

water connection does not need to be operated to achieve the rated input for the model, then the outlet water provisions are not required to be applied to such outlet water connections. Therefore, in this final rule, DOE retains the provisions for placement of temperature sensors for measuring outlet water temperatures for the thermal efficiency and standby loss tests for instantaneous water heaters and hot water supply boilers equipped with multiple outlet water connections, and DOE clarifies in the regulatory text that these requirements are only applicable if the simultaneous use of those outlet connections is necessary to achieve the rated input during testing.

DOE also adopts changes for water heaters with multiple outlet water connections to reflect the changes discussed in section III.I.1 with regard to the placement of the outlet water temperature sensors for the thermal efficiency and standby loss test. The outlet water temperature sensor placement provisions discussed in section III.I.1 (as applicable) must be applied to all outlet water connections leaving the water heater that are required to be used to achieve the designed fuel input rate for the thermal efficiency and standby loss test.

3. Supply and Outlet Water Valves

The current test procedure for instantaneous water heaters and hot water supply boilers does not clearly indicate the location and installation of the supply and outlet water valves. In the May 2016 NOPR, DOE proposed to require supply and outlet water valves to be installed within a specified distance of the water heater. Specifically, for instantaneous water heaters and hot water supply boilers shipped without external piping installed at the point of manufacture, DOE proposed to require that the supply water valve be installed within 5 inches of the jacket, and the outlet water valve be installed within 10 inches of the jacket. For instantaneous water heaters and hot water supply boilers with external piping assembled at the manufacturer's premises prior to shipment, DOE proposed to require that the supply and outlet water valves be installed within 5 inches of the end of the piping shipped with the unit. 81 FR 28588, 28614 (May 9, 2016).

Bradford White disagreed with DOE's proposed changes, stating that moving the inlet and outlet water valves closer to the unit being tested would not provide more accurate test results. Bradford White also expressed concern with the depiction of the pressure relief valve outside the outlet water valve in DOE's proposal. (Bradford White, No. 21 at p. 11)

As discussed in section III.H.3, DOE received several comments from stakeholders on its proposal to require that testers turn off both the supply and outlet water valves while conducting the standby loss test for instantaneous water heaters and hot water supply boilers (including flow-activated instantaneous water heaters). In summary, after considering those comments DOE has decided to not adopt the proposed requirement to turn off the supply water valve during the standby loss test to address concerns expressed by stakeholders about safety and thermal expansion of the water inside the water heater. As a result of this decision, DOE will not require the supply water valve to be placed at a distance of 5 inches away from the water heater jacket. With regards to the outlet water valve, DOE believes there is merit in placing the valve close to the unit and turning it off during the standby loss test. Locating the outlet water valve close to the unit would prevent the outlet water from mixing with water in the downstream water piping and thereby reduce heat lost from mixing with water contained in the piping, which DOE believes will result in a more repeatable test since the distance of piping before the valve (and therefore the volume of water in the piping) would be consistent across tests. DOE also believes that installing the outlet water valve close to the unit and turning it off during test will more accurately account for the standby loss of the unit, as it would reduce the effect of piping losses during the test. Therefore, while DOE agrees with not requiring the supply water valve to be placed close to the unit, DOE has decided to adopt provisions for placing the outlet water valve close to the water heater. In section III.I.1of this final rule, based on the comments received, DOE decided to permit instantaneous water heaters and hot water supply boilers to be set up as per Figure III.1, Figure III.2, and Figure III.3 (as applicable) for conducting the thermal efficiency and standby loss test (see section 2.2 of Appendix C to Subpart G and section 2.2 of Appendix D to Subpart G). As a result of this amendment, the water heaters would be required to be installed with heat traps in the inlet and outlet water piping connected to the water heater. Due to the inclusion of heat traps in the outlet water piping, installing a valve at a distance of 10 inches from the outlet water connection would not be required, as the heat trap would restrict the convective movement of hot water from the water heater. As a result, DOE is requiring the installation of the outlet water valve downstream of the outlet water heat trap, within a distance of 10 inches downstream from the outlet water temperature sensor placed at the second elbow from the water heater in the outlet water piping. These amendments to the location of the outlet water valve are depicted in the test set ups in Figure III.1, Figure III.2, Figure III.3, and Figure III.4 of this final rule.

To address Bradford White's concern regarding the pressure relief valve being installed downstream from the outlet water valve, DOE is adding provisions in the test procedure that the pressure relief valve must be installed between the outlet water valve and the water heater. Figure III.4 of this final rule that shows the set-up for testing instantaneous water heaters and hot water supply boilers depicts the pressure relief valve between the outlet water valve and the water heater being tested.

4. Additional Comments

In addition to comments related to the test set-up, DOE also received comments about measuring the gas line temperature as indicated by temperature probe T_4 in Figure III.4 of the May 2016 NOPR for instantaneous water heaters and hot water supply boilers. DOE received comments from Raypak and Rheem stating that the T_4 is generally part of the gas meter or otherwise must be measured at the gas meter and not elsewhere in the gas line. (Raypak, No. 28 at p. 3; Rheem, No. 34 at p. 17) Raypak commented that most of the thermocouples used to measure the temperature in the gas line are actually mounted in the gas meter and recommended indicating the location of the temperature sensor in the gas meter itself, located in the gas connection in Figure III.4 in the May 2016 NOPR. (Public Meeting Transcript, No. 20 at p. 88)

DOE agrees with the comments on the gas temperature measurement and has modified the test set-up to have the gas temperature measured at the gas meter. DOE concludes that this clarification is consistent with ANSI Z21.10.3–2015.

Rheem sought clarification on using a radiation shield for temperature probes. (Rheem, No. 34 at p. 17) A radiation shield is generally applied on a temperature probe to prevent potential radiative heat transfer from the hot surfaces that are close to or in direct contact with the burner flame to the temperature probe. If a probe is located in the vicinity of a surface at a very high temperature, then there could be some

heat transferred from the hot surface to the temperature probe in the form of radiation. This would lead to an inaccurate representation of the temperature that the probe is intended to measure. Therefore, in experimental tests, it is typical to use a radiation shield to protect against unwanted radiation and to provide a more accurate measurement of the temperature that is intended to be measured. DOE's current test procedure requires using a radiation shield for temperature sensors used to measure the ambient temperature. In this final rule, DOE is also adopting the use of radiation shield(s) to measure the test air temperature. DOE concludes that these changes are consistent with ANSI Z21.10.3–2015.

5. Test Set-Up for Instantaneous Water Heaters and Hot Water Supply Boilers

As initially discussed in section III.I.1, AHRI recommended that DOE require an instantaneous water heater to be tested using the test set-up in Figures 1, 2, and 3 proposed for storage water heaters in the May 2016 NOPR (*see* 81 FR 28588, 28599–28600). (AHRI, No. 26 at p. 10)

After considering this and all of the other comments related to the test set-up for instantaneous water heaters and hot water supply boilers, DOE has decided to allow the use of the same piping configuration adopted for storage water heaters to be used for testing instantaneous water heaters and hot water supply boilers that do not require a recirculating loop. As a result, the piping arrangements in Figure III.1, Figure III.2, and Figure III.3 adopted in this final rule (see section III.C) are also applicable to instantaneous water heaters and hot water supply boilers that do not require a recirculating loop for testing. Although the same piping arrangements are being adopted for instantaneous water heaters and hot water supply boilers, there are some variations in the setup needed to accommodate testing of instantaneous water heaters and hot water supply boilers. Specifically, instantaneous water heaters and hot water supply boilers require the addition of an outlet water valve and the inclusion of an additional temperature sensor to measure the heat exchanger outlet water temperature. Figure III.1, Figure III.2, and Figure III.3 show the test setup for gas-fired and oil-fired storage water heaters and storage-type instantaneous water heaters, and are generally applicable to electric storage and storage-type instantaneous water heaters and to instantaneous water heaters and hot water supply boilers (that are not tested with a recirculating loop), with the exceptions that an outlet water valve and heat exchanger outlet temperature sensor are present. In this final rule, for clarity, DOE is adopting separate figures within each appendix, with the slight variations to outlet valve and temperature sensors discussed herein.

In addition, for instantaneous water heaters and hot water supply boilers, DOE is adopting Figure III.4, which must be used for the installation of the recirculating loop to conduct the thermal efficiency and standby loss test (as applicable).

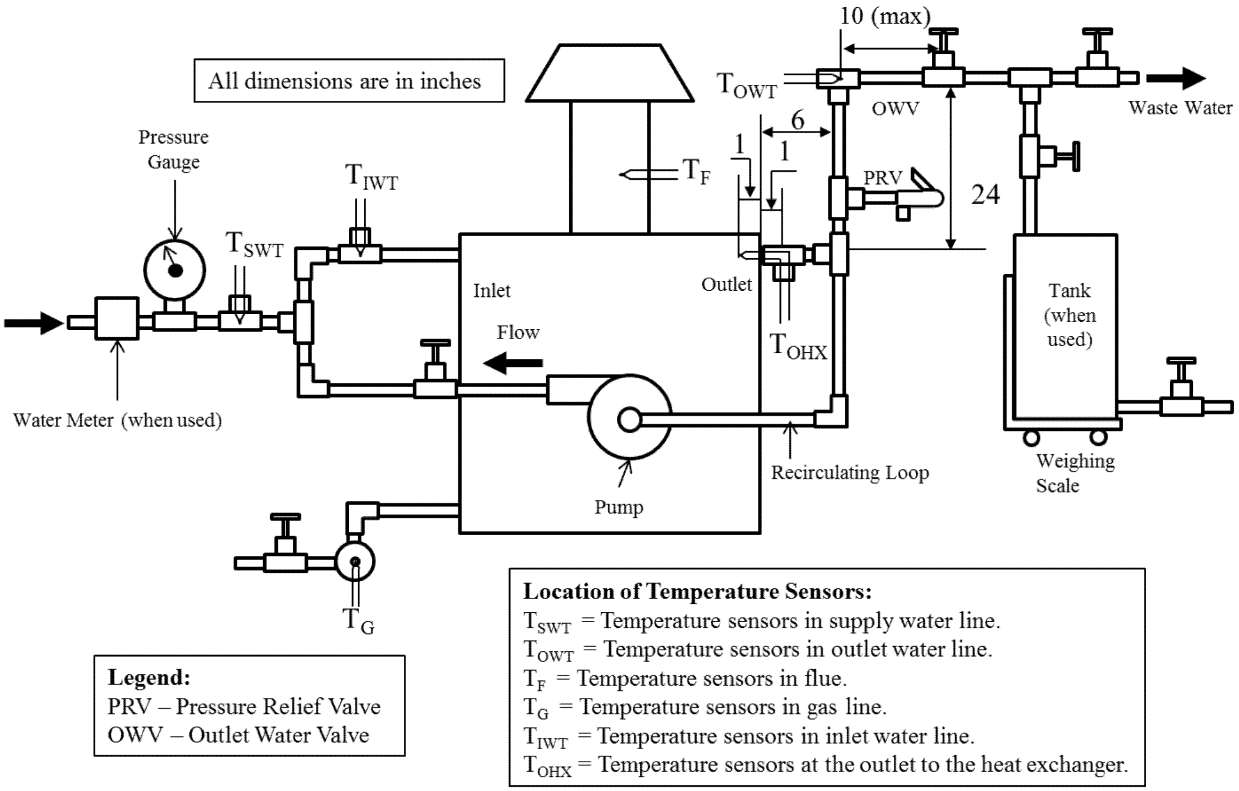

Figure III.4. Test Set-up for Instantaneous Water Heaters and Hot Water Supply Boilers (Other Than Storage-Type Instantaneous Water Heaters) When Tested With a Recirculating Loop

J. Test Procedure for Rating Commercial Heat Pump Water Heaters

In the May 2016 NOPR, DOE proposed definitions and test procedures for CHPWHs. 81 FR 28588, 28617–28622 (May 9, 2016). The comments received on DOE's proposals for CHPWH are discussed in the following sections.

1. Definitions of CHPWH

In the May 2016 NOPR, DOE proposed a definition for ''commercial heat pump water heater'' and associated definitions for ''air-source commercial heat pump water heater,'' ''direct geo-exchange commercial heat pump water heater,'' ''ground water-source commercial heat pump water heater,'' and ''indoor water-source commercial heat pump water heater.'' 81 FR 28588, 28617–28619 (May 9, 2016).

In response, CA IOUs, Bradford White, NEEA, and EEI expressed support for the proposed definition of CHPWH. (CA IOUs, No. 23 at p. 2; Bradford White, No. 21 at p. 11; NEEA, No. 30 at p. 1; and EEI, No. 29 at p. 3) CA IOUs added that the proposed definition of CHPWH accurately categorizes the equipment and is similar to the definition used by AHRI in AHRI Standard 1300, ''*2013 Standard for Performance Rating of Commercial Heat Pump Water Heaters*'' *(AHRI 1300–2013),* and that the definitions for proposed categories for CHPWH add more clarity. (CA IOUs, No. 23 at p. 2)

DOE also received comments recommending several modifications to the definitions related to CHPWH. AHRI stated that the proposed definitions for CHPWH, air-source CHPWH, direct geo-exchange CHPWH, and water-source CHPWH are inconsistent with the definitions in AHRI 1300–2013 and ASHRAE 118.1, because the proposed definition for CHPWH does not include ancillary equipment and the proposed 12 kW threshold excludes CHPWH units that are intended to deliver hot water above 180 °F, but have lower inputs. Further, AHRI argued that DOE has: (1) Added language for defining direct geo-exchange CHPWH; (2) split the water-source CHPWH definition into two parts (*i.e.,* ground water and indoor water); and (3) changed ''indoor or outdoor air'' to ''surrounding air'' for air-source CHPWH. Finally, AHRI stated that the definitions in AHRI 1300 and ASHRAE 118.1 were developed through consultations with industry experts and stakeholders; AHRI recommended maintaining consistency with the industry test standards. (AHRI, No. 26 at p. 14) Rheem commented that 12 kW threshold for commercial classification of heat pump water heaters does not adequately identify the source of the power input and does not account for total power consumption for hybrid heating technology used exclusively or in conjunction with electric resistive heating elements. Rheem stated that the 12 kW threshold is a good indicator for power consumption by electric resistance water heaters but is not applicable to models that use only heat pump technology and argued that the physical size of a compressor to with 12 kW of input power to heat the water would be too large and physically impossible to fit in the current CHPWH systems. Rheem recommended that a water heater with heat pump technology be classified as commercial equipment if the compressor uses between 7 and 10 amps of electric current or more than 12 kW of input power for electric resistance heating. Rheem also commented on the proposed definition of air-source CHPWH, suggesting that it does not differentiate between the sources of surrounding air and does not account for ducted air flow. (Rheem, No. 34 at p. 18) The Joint Advocates stated that the definition of ground-water source CHPWH is potentially confusing and inconsistent with the nomenclature used in the ground-source heat pump industry. According to the Joint Advocates, the definition of ground-source CHPWHs is commonly understood to include both direct geo-exchange and ground water-source CHPWHs. The Joint Advocates recommended that DOE either adopt definitions listed in ASHRAE's *Geothermal Heating and Cooling: Design of Ground-Source Heat Pump Systems (GSHP)* [16], or divide ground-source CHPWH into three sub-categories: (1) Closed-loop systems that extract heat from the ground by circulating water or anti-freeze; (2) open-loop systems that extract heat from water pumped from a well or surface pond; and (3) direct expansion systems that circulate refrigerant in closed-loops to extract heat directly from the ground. (Joint Advocates, No. 32, at p. 3) Earthlinked Technologies also questioned why ground-source closed-loop CHPWHs (which use the test procedure for water-source CHPWH, but are rated to a different evaporator entering water temperature in ASHRAE 118.1–2012) are not included in DOE's categorizations of CHPWH. (Earthlinked, No. 37 at p. 3) Earthlinked Technologies also suggested modifying the proposed definition for CHPWH to include additional provisions for the type of power supplied to the unit. Specifically, the commenters suggest that proposed definition must encompass all units with minimum 12 kW power supply (which is included in the proposed definition) and a minimum rated current condition of >24 A with single phase power supply; a maximum voltage condition of not greater than 250V; and all units with three phase power supply as rated input. (Earthlinked, No. 37 at pp. 1–2)

DOE's proposed definition for CHPWH includes the term ''low temperature heat source,'' and EEI suggested modifying the word ''low'' to ''lower'' and further recommended that, when DOE decides to prescribe energy conservation standards for CHPWHs, the standards should be different from those prescribed for commercial electric resistance storage water heaters and commercial electric resistance instantaneous water heaters. (EEI, No. 29 at p. 3) NEEA recommended expanding the definition of CHPWH to include gas absorption heat pump water heaters. (NEEA, No. 20 at p. 2)

DOE reviewed all comments received in response to this issue and, after careful consideration, is adopting the definitions for direct geo-exchange CHPWH, ground water-source CHPWH, and indoor water-source CHPWH as proposed in the May 2016 NOPR. For the definition for CHPWH, DOE is incorporating additional language regarding ''ancillary equipment'' as suggested by AHRI, so as to make the definition consistent with the definition of that term in ASHRAE 118.1–2012. For similar reasons, for air-source CHPWH, DOE replaces ''surrounding air'' with ''indoor or outdoor air.'' DOE believes that the definitions of CHPWH and its categories sufficiently represent the kinds of CHPWH available on the market. DOE considered NEEA's suggestion to expand the definitions to include those CHPWH with gas absorption technology, but has not identified any equipment commercially available on the market that utilizes gas-fired absorption technology for heating potable water. Therefore, in this final rule, the definitions are limited to include electrically operated heat pump technology.

With regard to the threshold for commercial equipment, DOE notes that EPCA classifies electric water heaters with less than 12 kW rated electrical input as consumer water heaters (42 U.S.C. 6291(27)), and that a heat pump water heater with a rated input of less than 12 kW would, therefore, be a

[16] ASHRAE's *Geothermal Heating and Cooling: Design of Ground-Source Heat Pump Systems,* can be purchased from: *https://www.ashrae.org/resources--publications/bookstore/geothermal-heating-and-cooling-design-of-ground-source-heat-pump-systems.*

consumer water heater. The 12 kW limitation refers to the total electrical power input to the heat pump water heater which could either be only the input to the heat pump if no backup electric resistance elements are present, or a combination of heat pump technology and electric resistance elements. DOE does not agree with Rheem and Earthlinked Technologies' comments on adopting additional power supply specifications (such as electrical current range for the compressor or voltage and phase requirements) to differentiate commercial heat pump water heaters from residential heat pump water heaters. The suggested range of 7 to 10 amps in Rheem's comments could result in a heat pump water heater with less than 12 kW being classified as commercial equipment, which would be contrary to EPCA's definitions. Thus, the most appropriate parameter that accounts for both the electric current and voltage in a single term is the electrical power input.

Regarding comments from the Joint Advocates and Earthlinked Technologies on ground-source closed-loop CHPWH, DOE agrees that such systems are a category of water-source CHPWH that are different from ground water-source CHPWH in the manner that they extract heat from the earth. As the name indicates, a ground-source closed-loop CHPWH uses a closed water loop to extract heat from the earth and transfer it to the CHPWH unit. This is different from a ground water-source CHPWH that uses an open water loop system, where the unit pulls in water from a lake or a pond and uses it as a heat source. Considering the differences between the CHPWH systems, DOE agrees that ground-source closed-loop CHPWH must be rated at conditions different from both, ground and indoor water-source CHPWHs.[17] Therefore, in this final rule, DOE adopts separate rating conditions and definitions for ground-source closed-loop CHPWHs as sub-categories of water-source CHPWHs. DOE disagrees with comments from Joint Advocates of combining the ground-source closed-loop CHPWH, ground water-source CHPWH and direct geo-exchange CHPWH into a single category. DOE notes that ground-source closed-loop CHPWH and ground water-source CHPWH, both use water as a medium to extract heat from the ground or a water body. Direct-geo-exchange CHPWHs, extract heat directly from the earth from refrigerant tubing, which is embedded inside the ground. Therefore, ground water-source CHPWH and ground-source closed-loop CHPWH must be grouped together under water-source CHPWH, while direct-geo-exchange CHPWH must be under a separate category. These definitions and categories are same as those in ASHRAE 118.1–2012, align with DOE's categorization of test procedures adopted in this final rule, and are consistent with the industry test standards. Combining the ground water-source CHPWH and direct geo-exchange into one category, as suggested by the Joint Advocates, may result in confusion as to the applicable rating conditions and corresponding test procedure. Therefore, DOE is retaining this aspect of the proposed definitions.

In response to AHRI's comment that DOE has added language for defining direct geo-exchange CHPWH, DOE notes that AHRI 1300–2013 defines a direct geo-exchange commercial heat pump water heater as a commercial heat pump water heater ''that utilizes the earth as the heat source,'' while DOE's proposed definition in the May 2016 NOPR defines the term as a commercial heat pump water heater ''that utilizes the earth as a heat source and allows for direct exchange of heat between the earth and the refrigerant in the evaporator coils.'' DOE believes that the additional language further clarifies the types of models that qualify as direct geo-exchange commercial heat pump water heaters. The definition adopted for CHPWH and associated definitions for the kinds of CHPWH are contained in the regulatory text at the end of this final rule.

2. Test Procedure for CHPWH

In the May 2016 NOPR, DOE proposed a test method for CHPWH that would incorporate by reference an industry test method, ASHRAE 118.1–2012, but with modifications to adopt rating conditions in another industry test method, AHRI 1300–2013. (Note, that AHRI 1300–2013 references ASHRAE 118.1–2012 for specifying the actual conduct of the test, but specifies different rating conditions than those specified by ASHRAE 118.1–2012.) 81 FR 28588, 28617–28622 (May 9, 2016). In this final rule DOE is incorporating by reference certain sections, figures, and tables from ASHRAE 118.1–2012 in its test procedure for CHPWHs, as discussed in the following sections.

ASHRAE 118.1–2012 classifies CHPWHs into two types, with a separate test method for each: (1) ''Type IV''—equipment that can be operated without requiring a connection to a storage tank; and (2) ''Type V''—equipment that includes an integral storage tank or requires connection to a storage tank for operation. The test procedure in ASHRAE 118.1–2012 for Type V equipment requires units to be connected to a tank that is either supplied by the manufacturer along with the unit or is specified by the manufacturer, while the test procedure in ASHRAE 118.1–2012 for Type IV equipment does not require connection to a tank. After reviewing product literature, DOE noted that most of CHPWH available on the market are Type V equipment in that they require connection to a storage tank for operation. However, manufacturers of such CHPWH typically neither supply nor specify a storage tank appropriate for that equipment. ASHRAE 118.1–2012 does not include a test method for Type V units for which an appropriate tank is neither supplied nor specified by the manufacturer. After considering several options, DOE ultimately proposed in the May 2016 NOPR to utilize a method similar to the test method for Type IV equipment for all CHPWH. 81 FR 28617–28622 (May 9, 2016). As noted above, DOE also proposed to use the rating conditions specified by AHRI 1300–2013. AHRI 1300–2013 contains multiple rating conditions, so DOE selected those it believed to be most representative of conditions encountered in the field during actual use. In addition, DOE also received comments from AHRI recommending a specific set of rating conditions that are also listed in AHRI 1300–2013. In reviewing the market, DOE noted that some CHPWH are capable of achieving various temperature rises based on the intended application. As a result, DOE proposed that air-source CHPWH be tested with a supply water temperature of 70 °F and, if the tested model is unable to achieve the required outlet water temperature condition, that the supply water temperature be changed to 110 °F.

Rheem commented that ASHRAE 118.1–2012 is sufficient as a testing standard to represent the performance of CHPWH and recommended adopting the testing standard in full. Rheem also stated that DOE's proposed deviations and additions to ASHRAE 118.1–2012 are too burdensome to implement, and that the only exception to the ASHRAE 118.1–2012 testing standard that it supports is to specify the requirements in AHRI 1300–2013 for CHPWH that can operate with multiple voltages. AHRI 1300–2013 requires such units to be tested at the lowest voltage specified on the nameplate and specifies that, at the manufacturer's option, the test may be

[17] For more information on ground-source closed-loop CHPWH and ground water-source CHPWH, see *http://energy.gov/energysaver/geothermal-heat-pumps.*

repeated at a higher voltage. (Rheem, No. 34 at pp. 18–19)

AHRI recommended that the entering water temperature for air-source CHPWH be maintained at 110 °F to remain consistent with all other categories of CHPWH and allow a basis for comparison of different categories of CHPWH. AHRI argued that the NOPR acknowledges that a test conducted with an inlet water temperature of 70 °F and 110 °F will provide the same results. (AHRI, No. 26 at p. 12) CA IOUs also argued against adopting two inlet water temperatures for air-source CHPWHs, stating that having two temperatures would result in some equipment with a lower efficiency being tested to a less stringent rating condition. (CA IOUs, No. 23 at p. 4) Earthlinked Technologies also commented on this issue stating that rating certain air-source CHPWHs with an entering water temperature of 70 °F while testing all other CHPWHs (including CHPWHs that are not air-source) with an entering water temperature of 110 °F would not provide a fair comparison between products and prevent contractors from helping customers make informed decisions. The commenters suggest using 110 °F as the single entering water temperature rating condition for all CHPWH equipment, which is also in line with the AHRI-recommended rating conditions. (Earthlinked, No. 37 at p. 2)

The Joint Advocates questioned whether requiring testing without a specified storage tank would create an inherent disadvantage for self-contained units with integrated tanks. The Joint Advocates recommended that instead, DOE should require the CHPWH to be paired with a storage tank with a volume proportional to the steady-state heating output of the CHPWH. The Joint Advocates stated that this would ensure consistency between CHPWH with integrated and non-integrated storage tanks. (Joint Advocates, No. 32 at p. 3) NEEA commented that DOE proposed separate test procedures for air, water, and direct geo-exchange CHPWH but did not specify a test procedure or test conditions for self-contained versus remote air condensers. (NEEA, No. 30 at p. 2) EEI agreed with the use of ASHRAE 118.1–2012, which was developed through ASHRAE's standards development processes which uses a consensus based approach. (EEI, No. 29 at p. 3) CA IOUs commented in support of establishing separate test procedures for different categories of CHPWH based on ASHRAE 118.1–2012 and AHRI 1300–2013. With regard to the rating conditions for air-source CHPWH, CA IOUs stated that the rating condition of 80.6 °F dry-bulb temperature and 71.2 °F wet-bulb temperature may be too warm for CHPWH, and recommended using a temperature that is higher than 50 °F dry-bulb temperature and 44.3 °F wet-bulb temperature, but lower than the proposed rating condition. CA IOUs also recommended reviewing the study titled, *West Village Community: Quality Management Processes and Preliminary Heat Pump Water Heater Performance,* completed by Davis Energy Group for NREL as a starting point to establish rating conditions.[18] (CA IOUs, No. 23 at p. 3)

In response to these comments, DOE notes that the test procedure proposed for air-source CHPWH is based on investigative testing that was carried out as part of the preparation of the May 2016 NOPR, the results of which are discussed in extensive detail in that document. Based on the test results, DOE noticed that several CHPWH models may be designed to achieve a lower temperature rise (from 110 °F supply water temperature to 120 °F outlet water temperature), while some models may be able to achieve a higher temperature rise (from 70 °F supply water temperature to 120 °F outlet water temperature), depending on the intended application. If DOE were to adopt a supply water temperature of 110 °F for all air-source CHPWH, then there would be some air-source CHPWH units on the market that would not be able to achieve the required outlet water temperature condition (120 °F ± 5 °F), as DOE observed during its investigative testing. By allowing different supply water temperature conditions based on the capabilities of a CHPWH, the test procedure will be capable of testing all kinds of air-source CHPWH units currently available on the market. Therefore, in this final rule, DOE retains the additional proposed provisions for air-source CHPWH, *i.e.,* to require units to be tested with a supply water temperature of 70 °F, and use supply water at 110 °F only if the unit is unable to meet the required outlet water temperature conditions at 70 °F.

In response to the comments on the evaporator entering air rating conditions being too high for CHPWH, DOE notes that these conditions are included in the industry-accepted test standard AHRI 1300–2013, and are also similar to the rating conditions specified in another industry-accepted testing standard, ASHRAE 118.1–2012 (80 °F dry-bulb temperature and 67 °F wet-bulb temperature). In addition, DOE conducted tests using the proposed evaporator entering air rating conditions and found that all the tested air-source CHPWH units were able to operate under these ambient conditions. DOE explored lower entering air temperatures and discovered that certain CHPWH models do not operate at low ambient temperatures, and would not operate at lower entering air temperatures. Therefore, in order to have a test method that is both representative and that can be used for all types of CHPWH currently on the market, DOE is adopting the rating conditions for evaporator entering air temperature that were proposed in the May 2016 NOPR.

DOE also considered comments received from the Joint Advocates about the comparison of CHPWH models with and without an integral storage tank, and whether requiring testing without requiring a storage tank would be a disadvantage for CHPWH units that are equipped with an integral storage tank. As discussed in the May 2016 NOPR, DOE proposed that CHPWHs that are intended to be operated in-field with a separately attached storage tank must be tested using a test procedure similar to that prescribed for Type IV equipment in ASHRAE 118.1–2012, which does not require a storage tank. DOE generally agrees that COP_h ratings of two CHPWH units, one equipped with an integral storage tank and the other not equipped with an integral storage tank, both tested using DOE's proposed test procedure, may be different from each other. DOE does not see this difference as an advantage of one unit over the other because of the test procedure, but rather as a fundamental difference between the designs and operational characteristics of different CHPWH units. Further, DOE noted in the May 2016 NOPR that adding a separate storage tank to test a Type IV CHPWH would be an incorrect representation of the efficiency ratings of the unit itself and would include the losses in the external tank. For CHPWHs equipped with a storage tank, the tank is an integral component of the CHPWH as packaged and shipped by the manufacturer. Therefore, any losses in performance due to the inclusion of the tank must be included as part of the efficiency ratings of such CHPWHs. DOE is not aware of any commercial heat pump water heaters with an integrated storage tank currently available on the market. In addition, DOE still has concerns regarding specifying the characteristics of the storage tank with which the CHPWH would be tested. The Joint Advocates suggest pairing CHPWH with a storage tank with a volume proportional to the

[18] *http://apps1.eere.energy.gov/buildings/publications/pdfs/building_america/west_village_hpwh.pdf.*

steady-state heating output of the CHPWH, but this does not address the other characteristics of the tank that can affect efficiency and operation, such as the insulation thickness, number of ports, and tank aspect ratio. Based on the foregoing, DOE has decided to continue to require testing without attaching an external tank for CHPWHs that are not integrated with a storage tank. For CHPWH models equipped with an integral storage tank, DOE adds clarifying provisions to the test procedure for CHPWHs proposed in the May 2016 NOPR, which is based on the test procedure in ASHRAE 118.1–2012 for Type IV equipment. These added provisions incorporate by reference certain sections applicable to the test procedure for Type V equipment in ASHRAE 118.1–2012. DOE is adding these provisions to better represent the field energy use and installation requirements for CHPWHs equipped with an integral storage tank. Specifically, in addition to the sections included in DOE's proposed test procedure, DOE has decided to incorporate by reference sections 7.3.1 (pertaining to setting up of temperature sensors inside the tank), 7.7.8 (pertaining to input requirements of water-heating mode test), and 8.7.1 (pertaining to setting the storage tank thermostats) of ASHRAE 118.1–2012, with the exception that the provisions will only apply to Type V equipment that is equipped with an integral storage tank. Further, DOE has also decided to incorporate by reference Figures 6, 7, and 8, which pertain to the test set-up of Type V equipment in ASHRAE 118.1–2012.

As suggested by Rheem, DOE considered adopting the provision in AHRI 1300–2013 for CHPWHs that are capable of operating at multiple voltages, which is not included in ASHRAE 118.1–2012. DOE agrees with the comment and has decided to include provisions that require CHPWHs that can operate at multiple voltages to be tested and rated at the lowest rated voltage. The test procedure adopted for CHPWH in this final rule is included in appendix E to subpart G of part 431 in the regulatory text.

Finally, in response to Rheem's assertion that the deviations and additions to ASHRAE 118.1–2012 proposed in the May 2016 NOPR are too burdensome to implement, DOE notes that the procedures adopted by this final rule incorporate by reference various sections of ASHRAE 118.1–2012 and are largely based on that procedure. Thus, DOE does not believe that the test method adopted in this final rule is significantly more burdensome than ASHRAE 118.1–2012, which Rheem recommended that DOE adopt.

As discussed in section III.J.1, DOE is adopting separate definitions for ground-source closed-loop CHPWHs. In light of these changes, DOE also adds separate rating conditions for ground-source closed-loop CHPWH, which are the same as those specified in Table B–3 of ASHRAE 118.1–2012 and require an evaporator entering water temperature of 32 °F. To achieve sub-freezing temperatures required for such units, DOE also adds requirements that the evaporator entering water be mixed with 15-percent methanol by-weight. The test procedure used to rate such units is the same test procedure adopted in this final rule for water-source CHPWHs. The rating condition for condenser water supply temperature in maintained 110 °F, which is the same for all other water-source CHPWH units.

K. Gas Pressure

In the May 2016 NOPR, DOE included proposed requirements for gas pressure in its proposed test procedures for gas-fired and oil-fired CWH equipment. 81 FR 28588, 28641, 28646, 28651 (May 9, 2016). In its proposal, DOE included requirements that the outlet pressure of the gas appliance regulator be within the range specified by the manufacturer. In response to the May 2016 NOPR, Bradford White and AHRI commented that the proposed term ''outlet pressure'' should be changed to ''gas supply pressure'' because manufacturers specify a range for gas supply pressure, but only a single value for gas outlet pressure. (Bradford White, No. 21 at p. 21; AHRI, No. 26 at p. 6)

DOE acknowledges that manufacturers specify a range for gas supply pressure and a single value for gas outlet pressure, as required for certification to ANSI Z21.10.3–2015. Therefore, in this final rule, DOE is adopting requirements regarding both gas supply pressure and gas outlet pressure for gas-fired CWH equipment. First, DOE is requiring that gas supply pressure must be within the range specified by the manufacturer. This requirement was suggested by Bradford White and AHRI, and is consistent with the requirements for nameplate ratings included in ANSI Z21.10.3–2015. Regarding gas outlet pressure, after an assessment of manufacturer literature for models currently on the market, DOE notes that the gas outlet pressure specified by the manufacturer is often a very low value (*e.g.,* 0.0 inches water column (in. w.c.) or 0.05 in. w.c.) for models that include a premix burner. DOE believes that achieving and measuring a gas pressure value within ± 10 percent of such a low value would be difficult given the typical accuracy of gas pressure measurement devices (*i.e.,* the accuracy for gas pressure measurement included in ASHRAE 118.1–2012 is ± 0.1 in. w.c.). Therefore, DOE will also require that the difference between the outlet pressure of the gas appliance pressure regulator and the value specified by the manufacturer on the nameplate of the unit being tested must not exceed the greater of: ± 10 percent of the nameplate value or ± 0.2 in. w.c.

DOE is adopting a gas outlet pressure requirement to maintain consistency with ANSI Z21.10.3 (both the 2011 version that is currently incorporated by reference and the 2015 version that is being incorporated by reference by this final rule), and, therefore, DOE's existing test procedure. While a provision for an absolute tolerance (*i.e.,* ± 0.2 in. w.c.) is not included in ANSI Z21.10.3–2015, DOE believes that this tolerance is warranted given that many units on the market have low rated gas outlet pressure values. DOE notes that the addition of this absolute tolerance renders this gas outlet pressure requirement more lenient than the requirement included in both DOE's current test procedure and ANSI Z21.10.3–2015; therefore, this adopted requirement for gas outlet pressure will not result in any additional test burden for manufacturers.

L. Fuel Input Rate

In DOE's existing regulations, equipment classes and the standards that apply to them are determined, in part, by the input capacity of the CWH equipment. However, several terms are used in the existing DOE test procedures and energy conservation standards to describe the input capacity of the CWH equipment, each of which is derived from the maximum rated fuel input rate of the CWH equipment. To standardize terminology throughout its regulations for CWH equipment, in the May 2016 NOPR, DOE proposed to define the term ''fuel input rate'' as the maximum rate at which gas-fired or oil-fired CWH equipment consumes energy during a given test, and to use the term ''fuel input rate'' in its test procedures for CWH equipment. 81 FR 28588, 28622 (May 9, 2016).

1. Certification Provisions

DOE proposed using the term ''fuel input rate'' in the division of equipment classes and proposed applicable testing provisions to determine the fuel input rate. DOE's proposal would have required manufacturers to measure the fuel input rate during certification

testing and use the mean of the measured values, after applying the applicable rounding provisions, in certification reports pursuant to 10 CFR 429.44(c)(2).

DOE also proposed including equations for determining the fuel input rate in its test procedures for gas-fired and oil-fired CWH equipment. DOE proposed including Equations C2 and C3 from section C7.2.3 of AHRI 1500–2015 in its test procedures for calculation of fuel input rate for gas-fired and oil-fired CWH equipment, respectively. DOE also proposed that the fuel input rate be determined by measuring fuel consumption at 3 consecutive 10-minute intervals during the 30-minute thermal efficiency test. The overall fuel input rate for the thermal efficiency test would be calculated using the fuel consumption over the entire 30-minute test. DOE proposed that during the thermal efficiency test, the measured fuel input rate must not vary by more than ± 2 percent between 10-minute interval readings.

CA IOUs agreed with DOE's proposed definitions and provisions regarding fuel input rate. (CA IOUs, No. 23 at p. 2) However, several commenters disagreed with DOE's proposal that the certified fuel input rate be based on the mean of measured values obtained during efficiency testing. (Bock, No. 19 at p. 2; Bradford White, No. 21 at p. 12; AHRI, No. 26 at pp. 1–3; A. O. Smith, No. 27 at pp. 9–10; Raypak, No. 28 at pp. 4–5; Rinnai, No. 31 at p. 2; Rheem, No. 34 at pp. 12–13) Instead, these commenters suggested that the certified input rate should be a fixed value rather than a value that could vary from test to test and that the input rate is determined as part of the model's safety certification testing. Bradford White, AHRI, and A. O. Smith further stated that there is no confusion in the industry regarding fuel input rate terminology and that DOE's proposed fuel input rate regulations would harm the industry. (Bradford White, No. 21 at p. 9; AHRI, No. 26 at p. 2; A. O. Smith, No. 27 at p. 10) AHRI stated that DOE's proposal would mean that every unit of a model would have a unique input rating, and that a model would no longer have a single input rating. (AHRI, No. 26 at p. 2) AHRI and Rheem further argued that DOE's proposal would create a distinction without a difference—comparable models capable of meeting the same design load would be rated with slightly different input rates. (AHRI, No. 26 at p. 3; Rheem, No. 34 at pp. 12–13)

AHRI and A. O. Smith stated that the maximum input rate is determined as part of the safety certification process, that this process occurs before efficiency testing, and that the safety certification agency requires that the maximum input capacity be certified as the rated input on the nameplate. AHRI and A. O. Smith stated that a manufacturer's first requirement is to design a model that will comply with all the safety standards and codes applicable to that model, and that part of this design phase is establishing the maximum input rate of the water heater. AHRI and A. O. Smith further argued that manufacturers do not conduct efficiency tests until they are certain of the model's compliance with the applicable safety requirements and, therefore, cannot wait until efficiency tests are conducted to determine the rated input. AHRI and A. O. Smith also commented that DOE's proposal would create an illogical situation where the manufacturer does not know what test to conduct based on its equipment class until after the test is conducted. (AHRI, No. 26 at pp. 1–3; A. O. Smith, No. 27 at p. 10)

Bradford White, AHRI, and A. O. Smith noted that there are several factors that affect the firing rate of a unit during a test, including the fuel higher heating value. (Bradford White, No. 21 at p. 12; AHRI, No. 26 at p. 2; A. O. Smith, No. 27 at p. 9) AHRI and A. O. Smith added that the actual higher heating value of gas delivered during testing may vary by ± 7 percent around the nominal value for natural gas, and that manufacturers must design products that have flexibility to safely use fuels with various energy densities. (AHRI, No. 26 at p. 2; A. O. Smith, No. 27 at p. 9) Bradford White further noted that barometric pressure, gas meter temperature, and gas meter pressure can also affect the measured fuel input rate during a given test. (Bradford White, No. 21 at p. 12)

AHRI commented that determination of fuel input rate during the thermal efficiency test is unnecessary. (AHRI, No. 26 at p. 10) AHRI and A. O. Smith stated that the rate at which fuel is consumed does not matter, and that measurement of fuel consumed and amount of energy delivered as heated water would reflect any variation in input rate during the test. (AHRI, No. 26 at p. 10; A. O. Smith, No. 27 at p. 9)

In light of comments received, DOE is not adopting its proposed certification provisions for the fuel input rate. DOE believes the safety certification process during the design and development of CWH equipment models is sufficient for determining the rated input for CWH equipment. Safety certification through industry test standards, such as ANSI Z21.10.3–2015, typically requires that manufacturers use the rated input for the basic model as determined through the safety certification process, which results in the maximum rated input listed on the nameplate and in manufacturer literature for the basic model. DOE is adopting the term ''rated input'' to mean the maximum rate CWH equipment is rated to use energy as specified on the nameplate, and is adopting the term ''fuel input rate'' to mean the rate at which any particular unit of CWH equipment consumes energy during testing.

However, DOE disagrees with AHRI and A. O. Smith that variation in fuel input rate during the test does not affect results. The thermal efficiency test is a steady-state test, and, consequently, all parameters that affect efficiency should be held constant throughout the test. Therefore, DOE is adopting its proposed requirement that the fuel input rate be determined by measuring fuel consumption at consecutive 10-minute intervals during the 30-minute steady-state verification period and the 30-minute thermal efficiency test. DOE's adopted provisions regarding the steady-state verification period and associated requirements for establishing steady-state operation are discussed in section III.F.1 of this final rule. The overall fuel input rate for the thermal efficiency test will be calculated using the fuel consumption over the entire 30-minute test, and must be within ± 2 percent of the rated input certified by the manufacturer. During the thermal efficiency test and the 30-minute steady-state verification period, the measured fuel input rates for these 10-minute periods must not vary by more than ± 2 percent between any two readings. As discussed in section III.F.1 of this final rule, DOE does not expect its requirements for measuring fuel input rate during the steady-state verification period and thermal efficiency test to impose a significant burden on manufacturers.

DOE is adopting the equations for calculation of fuel input rate that were proposed in the May 2016 NOPR and are based on equations included in AHRI 1500–2015 for testing of commercial packaged boilers. DOE notes that the equations in AHRI 1500–2015 calculate input rate using the same variables as the calculation of gas consumption in the denominator of the equation for calculating thermal efficiency in ANSI Z21.10.3–2015, with the addition of a time term to yield an input rate rather than a gas consumption value. In the May 2016 NOPR, DOE proposed adding a requirement to the DOE test procedure that values of fuel

input rate for each unit tested be rounded to the nearest 1,000 Btu/h. 81 FR 28588, 28622–28623 (May 9, 2016).

Bradford White, Raypak, and Rheem stated that the fuel input rate should not be rounded to the nearest 1,000 Btu/h. (Bradford White, No. 21 at p. 12; Raypak, No. 28 at pp. 4–5; Rheem, No. 34 at p. 13) Raypak and Rheem argued that if rounding to the nearest 1,000 Btu/h were of value to the end user for distinguishing amongst models of CWH equipment, then there would already be units rated with such precision on the market. (Raypak, No. 28 at pp. 4–5; Rheem, No. 34 at p. 13) Because DOE is not adopting its proposed regulations regarding certification of fuel input rate, DOE is also not adopting the proposed requirement that the certified fuel input rate be rounded to the nearest 1,000 Btu/h.

2. Enforcement Provisions

In the May 2016 NOPR, DOE also proposed provisions regarding fuel input rate during DOE enforcement testing. 81 FR 28588, 28623 (May 9, 2016). Specifically, DOE proposed that the overall fuel input rate for the thermal efficiency test would be measured and compared against the fuel input rate certified by the manufacturer. DOE proposed that if the measured fuel input rate determined during an enforcement test is within ± 2 percent of the certified value, then DOE would use the certified value when determining the applicable equipment class for a model. If the measured fuel input rate is not within ± 2 percent of the certified value, then DOE would attempt to bring the fuel input rate to within ± 2 percent of the certified value. To do so, DOE would first adjust the gas pressure within the range allowed by the test procedure in an attempt to increase or decrease the fuel input rate to achieve ± 2 percent of the rated input certified by the manufacturer. If the fuel input rate is still not within ± 2 percent of the rated input, DOE would then attempt to modify the gas inlet orifice (*e.g.,* drill) accordingly. Finally, if these measures do not bring the fuel input rate to within ± 2 percent of the rated input, DOE would use the measured fuel input rate when determining the equipment class. DOE proposed these provisions to provide manufacturers with additional information about how DOE will evaluate compliance with its energy conservation standards for CWH equipment.

Several commenters disagreed with DOE's proposed provisions related to fuel input rate in enforcement testing, and argued that DOE should contact the manufacturer if unable to reach the certified input rate during enforcement testing. (Bock, No. 19 at p. 2; Bradford White, No. 21 at p. 12; AHRI, No. 26 at p. 3; Rheem, No. 34 at p. 13) Bock further stated that by running an efficiency test at an input rate varying by more than ± 2 percent from the certified value, DOE would essentially be testing a new model. (Bock, No. 19 at p. 2) AHRI further argued that the enforcement provisions are unnecessary, and that AHRI has never had any issues achieving the manufacturer-specified input rating during testing. AHRI also asserted that a unit that cannot be put ''on-rate'' is not representative of the model, assuming there are no issues with the fuel supply. (AHRI, No. 26 at p. 3) Rheem further stated that a model should not be penalized if the fuel used in DOE's enforcement testing has a higher heating value such that the input rating could not be achieved within ± 2 percent of the rated input. (Rheem, No. 34 at p. 13) Bradford White also stated that if the rated input cannot be achieved, there must be an underlying reason, and that the model cannot be fairly evaluated. (Bradford White, No. 21 at p. 12) Joint Advocates commented that DOE should use the measured fuel input rate for all enforcement testing, while allowing for adjustment of gas pressure. (Joint Advocates, No. 32 at p. 2)

DOE's proposed enforcement provisions regarding fuel input rate were intended to avoid invalid tests, such that even if DOE could not achieve a fuel input rate within ± 2 percent of the certified value, a unit could still be tested and compliance with the corresponding energy conservation standard(s) could still be determined. DOE disagrees with AHRI's point that the enforcement provisions for fuel input rate are unnecessary because AHRI has never had an issue achieving the rated input. DOE attempts to ensure that it is able to obtain a valid test result in all cases, and these provisions provide manufacturers of notice how DOE will proceed in the event that the test cannot achieve the rated input. DOE notes that, if units are always shipped by manufacturers such that the rated input ± 2 percent can be achieved during enforcement testing, then DOE will have no cause to apply these provisions. DOE also disagrees with Rheem's assertion that DOE would be penalizing a model because of the higher heating value of fuel used in DOE's enforcement testing. As noted by A. O. Smith and AHRI, manufacturers must design products that have flexibility to safely use fuels with various energy densities. When issues arise during enforcement testing, such as being unable to achieve the certified input rating, DOE evaluates the decision of whether to proceed with testing or whether to involve the manufacturer on a case-by-case basis. If DOE carries out a test on a unit despite not achieving the manufacturer's rated input as part of enforcement testing or as part of an assessment test on a model for which DOE subsequently chooses to pursue an enforcement case, DOE would provide the manufacturer with the test results, including the fuel input rate and higher heating value during the test, and the manufacturer will have an opportunity to discuss the test with the Department. DOE disagrees that testing a unit at a fuel input rate other than the rated input necessarily would not be representative of the model.

DOE disagrees with Joint Advocates that DOE should use the measured fuel input rate for all enforcement testing. DOE believes that, given unit-to-unit variation and variability in the higher heating value of fuels as pointed out by other commenters, a ± 2 percent tolerance for fuel input rate is reasonable and that, within that tolerance, any slight deviation should not affect a CWH equipment model's classification under DOE's equipment class structure (and as a result affect the stringency of the applicable energy conservation standards). Additionally, using rated input in enforcement testing if the measured fuel input rate is within ± 2 percent of the rated input allows manufacturers some flexibility in the fuel input rate at which the individual unit may operate. This allowance may be beneficial because, as indicated by stakeholders, the higher heating value of gas varies based on geographic location.

Bradford White recommended that the following steps be taken in order to adjust a model's input rate: adjust the manifold pressure, change the gas pressure, if necessary, and modify the gas orifice(s). (Bradford White, No. 21 at p. 12) DOE agrees with Bradford White that adjusting the manifold pressure (*i.e.,* gas outlet pressure) of CWH equipment could affect the fuel input rate during testing to allow it to be adjusted within ± 2 percent of the rated input, and, therefore, DOE is adopting this step in its regulations. (DOE's approach already encompasses Bradford White's latter suggestions.)

Raypak disagreed with DOE's proposal to modify the gas orifice when attempting to achieve the certified fuel input rate during enforcement testing. Specifically, Raypak argued that several of its products use an engineered nozzle with a built-in venturi instead of a

simple orifice. Raypak also stated that DOE should follow manufacturer's instructions and input regarding making adjustments to achieve the manufacturer's rated input. (Raypak, No. 28 at p. 5)

In response to Raypak's comments, DOE notes that its proposed language states that DOE would attempt each modification; therefore, DOE would use its expertise and discretion as well as that of the third-party test laboratory in attempting each modification as may be required to achieve within ± 2 percent of the rated input. Should a model use a nozzle rather than an orifice, DOE would not attempt to drill the nozzle, as the provision clearly states that only a gas inlet orifice would be drilled (if the unit is equipped with one).

Therefore, DOE is adopting its proposed enforcement regulations for fuel input rate, with the additions discussed in this section. DOE also clarifies that the steps it is adopting that may be attempted to achieve a fuel input rate that is ± 2 percent of the rated input (*e.g.,* varying gas pressure, modifying the gas inlet orifice) apply only to gas-fired CWH equipment, and that DOE would not attempt such steps for oil-fired CWH equipment.

M. Default Values for Certain Test Parameters for Commercial Water Heating Equipment

DOE currently incorporates by reference Exhibits G.1 and G.2 of ANSI Z21.10.3–2011 (which correspond to Annexes E.1 and E.2 of ANSI Z21.10.3–2015) in its current test procedure for thermal efficiency and standby loss for CWH equipment. Some of the equipment settings for performing the test procedures as per Annex E.1 of ANSI Z21.10.3–2015 (*e.g.,* water supply pressure, venting requirements) are required to be specified by manufacturers. In the May 2016 NOPR, DOE proposed to include default values for these parameters in its test procedures, to be used if values are not specified in manufacturer literature shipped with the unit [19] or supplemental test information. 81 FR 28588, 28623 (May 9, 2016). Specifically, DOE proposed: (1) A default value for maximum water supply pressure for all CWH equipment, (2) default ranges of allowable gas supply pressure for CWH equipment powered with natural gas and propane, (3) a default value for fuel pump pressure for oil-fired CWH equipment, and (4) a default range for CO_2 reading for oil-fired CWH equipment. DOE determined these values from examination of values reported for models currently on the market.

In response to the May 2016 NOPR, Bradford White, AHRI, A. O. Smith, and Rheem disagreed with DOE's proposal and stated that default values are unnecessary. (Bradford White, No. 21 at p. 8; AHRI, No. 26 at p. 15; A. O. Smith, No. 27 at p. 15, Rheem, No. 34 at p. 19) AHRI indicated that these values are always provided by the manufacturer. (AHRI, No. 26 at p. 15) Bradford White, A. O. Smith, and Rheem stated that these values would always be included on the nameplate as required by ANSI certification. (Bradford White, No. 21 at p. 8; A. O. Smith, No. 27 at p. 15, Rheem, No. 34 at p. 19) Rheem further argued that establishing a default value for maximum water supply pressure that differs from the maximum water supply pressure certified by some manufacturers is invalidating the design and construction of the water heater, and that the water supply pressure default value should be more reflective of the particular kind of CWH equipment being tested. (Rheem, No. 34 at p. 19)

DOE recognizes that such safety certification requires certain parameters to be included on the nameplate of every model. ANSI Z21.10.3–2015 requires that the maximum water supply pressure and allowable range of gas supply pressure be included on the model nameplate. Therefore, DOE is not adopting default values for these parameters, because DOE believes that the nameplate for every model of CWH equipment includes these parameters. However, ANSI Z21.10.3–2015 does not require the inclusion of oil pump pressure or CO_2 reading for oil-fired CWH equipment. Additionally, the nameplates of several models of oil-fired CWH equipment that DOE purchased for testing did not include these parameters. Therefore, DOE believes default values for these parameters are warranted. In this final rule, for oil-fired CWH equipment, DOE is adopting a default value of 100 psig fuel pump pressure and a default allowable range of 9–12 percent for CO_2 reading. DOE notes that these default values were chosen based on an assessment of values reported for models on the market, and that DOE did not receive any specific feedback on these values in response to the May 2016 NOPR. Additionally, these default values would only be used if values for these parameters are not included in any of the following: (1) Product nameplate, (2) manufacturer literature shipped with the unit, or (3) supplemental testing instructions, if submitted to DOE with the certification report. These default values apply to oil-fired commercial water heating equipment other than residential-duty commercial water heaters.

N. Certification Requirements

In the May 2016 NOPR, DOE proposed several changes to its certification requirements for commercial water heating equipment [20] at 10 CFR part 429. 81 FR 28588, 28635–28636 (May 9, 2016). Specifically, DOE proposed to add two requirements to 10 CFR 429.44 for certification of instantaneous water heaters and hot water supply boilers. First, DOE proposed to add that manufacturers must certify whether instantaneous water heaters or hot water supply boilers contain submerged heat exchangers or heating elements, in order to allow for proper classification of units under DOE's proposed definition for ''storage-type instantaneous water heater.'' Second, DOE proposed to add that manufacturers must certify whether instantaneous water heaters or hot water supply boilers require flow of water through the water heater to initiate burner ignition.

AHRI argued that DOE's proposed certification requirements are unnecessary given AHRI's comments on DOE's other proposals in the May 2016 NOPR. Specifically, AHRI argued that when all of AHRI's comments are considered, six separate appendices might not be needed in the test procedures for CWH equipment, and some of the proposed certification requirements might not be needed for determining which test procedure to use. (AHRI, No. 26 at p. 15) Regarding the proposed certification requirement for classifying storage-type instantaneous water heaters, A. O. Smith and Rheem objected to the term ''submerged heat exchanger'' being used to define storage-type instantaneous water heaters, and Bradford White argued that the storage-type instantaneous water heater class is unnecessary. (Bradford White, No. 19 at pp. 12–13; A. O. Smith, No. 27 at p. 16; Rheem, No. 34 at p. 20) A. O. Smith further commented that manufacturers should also certify whether a water heater is activated by a remote control or sensor, and if present, the default

[19] Manufacturer literature includes any information on settings, installation, and operation that is shipped with the equipment. This information can be in the form of installation and operation manuals, settings provided on a name plate, or product-specific literature.

[20] DOE is also making an editorial change to the certification report provisions in 10 CFR 429.44(c) for commercial water heating equipment by replacing of the term ''water heater'' and abbreviations of water heater (*i.e.,* WH) with the term ''water heating.''

duration of the off delay for any integral pump off delay switch. (A. O. Smith, No. 27 at p. 16) Raypak commented that it generally supported DOE's proposed changes to the certification requirements, but that DOE should also consider: (1) Other kinds of water heaters that require flow-through to initiate burner ignition, and (2) water heaters that are activated by a remotely-located thermostat. (Raypak, No. 28 at p. 4)

Given the test procedure amendments DOE is adopting in this final rule, DOE disagrees with AHRI and continues to believe that additional certification requirements for instantaneous water heaters are warranted. DOE's definition for ''storage-type instantaneous water heater'' adopted in this final rule does not include the term ''submerged heat exchanger,'' to which commenters objected, and instead includes a provision that the water heater includes a storage tank with a storage volume greater than or equal to 10 gallons. DOE's definition of ''storage-type instantaneous water heater'' is further discussed in section III.G.4 of this final rule. Therefore, for the equipment class of instantaneous water heaters with a storage volume of greater than or equal to 10 gallons, DOE is adopting a certification requirement of whether the water heater includes a storage tank with a storage volume greater than or equal to 10 gallons. DOE's adopted definition for ''storage-type instantaneous water heater'' is discussed in section III.G.4 of this final rule.

DOE agrees with the comments on flow-activated instantaneous water heaters, specifically that the certification requirements should identify water heaters activated by a remote temperature sensor and if present, the default duration of the off delay for any integral pump off delay switch. Section III.I of this final rule explains that DOE has decided to adopt separate standby loss test procedures for internally-activated instantaneous water heaters than for flow-activated instantaneous water heaters and remote-sensor-based thermostatically activated (or externally-thermostatically activated) instantaneous water heaters. To ensure that the appropriate standby loss test procedure was used to rate instantaneous water heaters and hot water supply boilers, DOE is adding certification requirements to differentiate between the two kinds of CWH equipment. In addition, DOE is also adopting two modifications to the standby loss test procedure for instantaneous water heaters and hot water supply boilers that include: (1) Allowing two options for the methodology to determine the storage volume (either a weight-based method or a calculation-based method; see section III.H.2 for additional details); and (2) allowing a delay in the starting of the standby loss test to account for pump purge (see section III.H.3.e). Therefore, in this final rule, DOE requires certification of which methodology was used to determine the certified value for storage volume, and whether the water heater is equipped with an integral pump purge functionality, and if so, the default duration of the pump off delay. The certification for pump purge functionality is only required for instantaneous water heaters that are either flow-activated or externally-thermostatically activated and that have a storage capacity greater than or equal to ten gallons.

O. Other Issues

Several stakeholders expressed legal, procedural, and practical concerns regarding the amendments proposed in the May 2016 NOPR. These comments are discussed in detail in the subsections below.

1. Timing of the Test Procedure and Energy Conservation Standards Rulemakings

Several commenters expressed concerns regarding the timing of the test procedure and energy conservation standards revisions for CWH equipment, and requested that DOE delay (or suspend) its energy conservation standards rulemaking until after the finalization of the test procedure. (AHRI, No. 26 at p. 15; EEI, No. 29 at p. 2; Gas Associations, No. 22 at p. 2; Raypak, No. 28 at p. 1; Bradford White, No. 21 at p. 1) The commenters also opined that DOE has violated the procedures established in 10 CFR part 430, subpart C, Appendix A, Section 7(c) (which commenters referred to as the ''Process Rule''), which states that a final test procedure will be issued prior to the NOPR for proposed standards. (EEI, No. 29 at p. 2; Gas Associations, No. 22 at p. 2; Raypak, No. 28 at p. 1; Bradford White, No. 21 at p. 1) Bradford White also disagreed with DOE's assertion in the May 2016 NOPR that it is not aware of any rules or regulations that duplicate, overlap, or conflict with the proposed test procedure rule.

Rheem stated that it believes that the proposed definitional changes to CWH equipment and applicable test procedure changes will alter the efficiency ratings of CWH equipment and noted that DOE must determine if the minimally-compliant models will continue to meet the current energy conservation standards if the proposed test procedure changes are finalized. Further, Rheem argued that in the May 2016 NOPR, DOE concluded that the proposed changes would not ''significantly alter'' the current ratings, but that the statute does not require a ''significant'' standard. (Rheem, No. 34 at pp. 3–4)

In response, DOE does not believe that the timing of the test procedure and standards rulemakings has negatively impacted stakeholders' ability to provide meaningful comment on this test procedure rulemaking. The May 2016 NOPR proposed amendments to incorporate provisions of the latest industry standard (*i.e.,* ANSI Z21 10.3–2015), which was developed by a consensus-based ANSI process, and was released in November 2015. The test procedures proposed in the May 2016 NOPR and adopted in this final rule either reference ANSI Z21.10.3–2015 directly or are largely based on ANSI Z21.10.3–2015. In the May 2016 NOPR, DOE also addressed several issues raised by stakeholders in response to the February 2014 RFI. For example, the standby loss test procedure for flow-activated instantaneous water heaters adopted in this final rule was identified as an issue by AHRI in response to the February 2014 RFI. In response to the May 2016 NOPR, stakeholders provided detailed, insightful comments on all aspects of the proposal, including those proposals which are not included in ANSI Z21.10.3–2015, which shows that industry was able to carefully consider the proposed method and how it compared to the current Federal method of test. Further, DOE has also incorporated several recommendations received from stakeholders in response to the May 2016 NOPR (*e.g.,* adopting a calculation-based test to determine storage volume, adding steady-state requirements instead of soak-in period for thermal efficiency test of storage water heaters, and using AHRI-recommended rating conditions for the CHWPH test procedure). Furthermore, DOE granted a 30-day extension of the comment period (Docket EERE–2014–BT–STD–0042) to ensure stakeholders had sufficient time to consider the proposed test procedure changes in relation to the proposed standards. 81 FR 51812 (August 5, 2016). Therefore, DOE concluded that stakeholders have had adequate time to provide meaningful comments on DOE's analysis and results in this test procedure rule.

Regarding the commenters' assertions that DOE has violated the provisions of 10 CFR 430, subpart C, appendix A,

DOE notes that Appendix A established procedures, interpretations, and policies to guide DOE in the consideration and promulgation of new or revised appliance efficiency standards under EPCA. (*See* section 1 of 10 CFR 430 subpart C, appendix A) These procedures are a general guide to the steps DOE typically follows in promulgating energy conservation standards. The guidance recognizes that DOE can and will, on occasion, deviate from the typical process. (*See* 10 CFR part 430, subpart C, appendix A, section 14(a)) In this particular instance, DOE deviated from its typical process due to statutorily prescribed deadlines for both the test procedure and standards rulemaking. As discussed previously in this notice, there have recently been updates to the industry testing standard (ANSI Z21.10.3), as well as petitions for waiver submitted to DOE by stakeholders requesting an alternative test method for flow-activated instantaneous water heaters. DOE is also aware of issues with the existing DOE test method having certain ambiguous provisions in the test set-up, conditions, and operation that could allow for inconsistent application and could lead to differing results across different test labs. DOE believes it is imperative to update the test method to remedy these issues as soon as possible. Therefore, DOE decided to amend the existing test procedure while continuing with the energy conservation standards rulemaking in parallel. The comments pertaining to the timing of the energy conservation standards rulemaking are addressed separately in the final rule for the energy conservation standards of CWH equipment.

In response to Rheem's comment, DOE notes that by ''significantly alter,'' DOE meant that the measured energy efficiency or consumption would not be altered from the current test method to an extent that the current minimum standard must be adjusted. All of the provisions being adopted in this final rule either clarify the existing test method, improve repeatability of the existing test method, or establish a test method for equipment that either previously did not have a method (*e.g.,* CHPWH) or for which the test method did not work (*e.g.,* flow-activated instantaneous water heaters). However, the actual procedure for measuring the thermal efficiency and standby loss remains largely the same, and, thus, DOE continues to believe that efficiency ratings are not affected. Rheem did not provide any information as to which specific changes it believes would have an effect on efficiency ratings, other than the ''definitional changes.'' While definitions are an integral part of determining equipment classification, and thus, the applicability of the test method, DOE notes that they do not change the actual test method, and thus, would not impact the ratings. DOE understands that the changes to the definitions may cause certain water heaters that manufacturers currently classify as commercial equipment to be classified as consumer products. However, as discussed in section III.G.1, DOE has concluded that under EPCA, these products have always been covered consumer products. Therefore, this is not a change that would warrant reconsideration of the energy conservation standards under 42 U.S.C.6293(e).

2. Other Comments

The Gas Associations recommended that DOE adopt additional electrical consumption requirements, stating that the current test procedure only measures fossil fuel energy consumption without considering electrical usage. The Gas Associations further stated that the electrical energy consumption should be calculated using a source-based method rather than a site-based method. (Gas Associations, No. 22 at p. 2)

DOE disagrees with the comments from the Gas Associations. Both the current and the amended test procedures require the measurement of the electricity consumption by CWH equipment during the thermal efficiency and standby loss test, and the thermal efficiency and standby loss metrics account for the electricity use during the test. The equations for calculating the thermal efficiency and standby losses of storage and instantaneous water heaters require the addition of the measured electrical energy consumption to the total fossil fuel consumption, so electrical energy use is taken into account. Regarding the suggestion to use a source-based value for electrical energy consumption, DOE notes that such an approach would be inconsistent with the accounting of the gas consumption, which is based on site energy consumption, and inconsistent with the approach used in ANSI Z21.10.3–2015 to account for electrical energy consumption. Therefore, DOE does not believe an additional source-based electrical consumption metric is necessary.

CA IOUs requested that DOE release anonymized equipment testing data to allow stakeholders to provide stronger comments and strengthen the rulemaking process. (CA IOUs No. 23 at p. 3) Several proposals to which DOE believes this comment was likely directed are not adopted in this final rule (*i.e.,* narrowing the tolerance on ambient room temperature from 10 °F to 5 °F, establishing an ambient humidity requirement, and the standby loss test procedure for unfired hot water storage tanks). In regards to DOE's testing of flow-activated instantaneous water heaters, DOE notes that these tests were conducted in order to ensure that DOE's proposed test procedures could be conducted as written. For CHPWHs, DOE described in extensive detail in the May 2016 NOPR the evaporator entering air conditions, the capacities of the units, and the entering water temperatures that helped inform the rating conditions that were proposed for rating CHPWHs. DOE has not provided information on the units tested and the efficiency or standby loss results obtained to protect the confidentiality of the manufacturers of these products. Further, DOE did not conduct any additional testing as part of this final rule. Therefore, this final rule does not include any additional testing data that were not presented in the May 2016 NOPR.

3. Waiver Requests

DOE received waiver requests or interim waiver requests from A. O. Smith, HTP, Thermal Solutions, Raypak, and RBI.[21] The petitioners asserted that DOE's existing test method for determining standby loss applies to thermostatically activated models only, and is not appropriate for flow-activated models. The petitioners requested the use of alternative procedures for measuring the standby loss of flow-activated instantaneous water heaters. As described in section III.H, DOE is adopting a test procedure specifically for commercial instantaneous CWH equipment that is flow activated or externally thermostatically activated. Therefore, DOE believes that this final rule addresses the petitioners' concerns. Because the need for a waiver has been overtaken by DOE's adoption of a method of test for the basic models for which each of the petitioners sought a waiver, DOE is denying these petitions for waiver. Petitioners must begin using

[21] A.O. Smith: Case No. WH–001, requested interim waiver (no notice was published for this request). HTP: Case No. WH–002, 81 FR 36295 (June 6, 2016).

Thermal Solutions: Case No. WH–003, 81 FR 36284 (June 6, 2016).

Raypak: Case No. WH–004, 81 FR 36288 (June 6, 2016).

RBI: Case No. WH–005, requested interim waiver (no notice was published for this request).

this test procedure as of the effective date of the final rule.

IV. Procedural Issues and Regulatory Review

A. Review Under Executive Orders 12866

The Office of Management and Budget (OMB) has determined that test procedure rulemakings do not constitute ''significant regulatory actions'' under section 3(f) of Executive Order 12866, ''Regulatory Planning and Review,'' 58 FR 51735 (Oct. 4, 1993). Accordingly, this regulatory action was not subject to review under the Executive Order by the Office of Information and Regulatory Affairs (OIRA) in the Office of Management and Budget (OMB).

B. Review Under the Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 *et seq.,* as amended by the Small Business Regulatory Enforcement Fairness Act of 1996) requires preparation of an initial regulatory flexibility analysis (IRFA) for any rule that by law must be proposed for public comment and a final regulatory flexibility analysis (FRFA) for any such rule that an agency adopts as a final rule, unless the agency certifies that the rule, if promulgated, will not have a significant economic impact on a substantial number of small entities.

A regulatory flexibility analysis examines the impact of the rule on small entities and considers alternative ways of reducing negative effects. Also, as required by Executive Order 13272, ''Proper Consideration of Small Entities in Agency Rulemaking,'' 67 FR 53461 (August 16, 2002), DOE published procedures and policies on February 19, 2003, to ensure that the potential impacts of its rules on small entities are properly considered during the DOE rulemaking process. 68 FR 7990. DOE has made its procedures and policies available on the Office of the General Counsel's Web site at: *http://energy.gov/gc/office-general-counsel.*

The IRFA was published as part of the May 2016 NOPR. 81 FR 28588 (May 9, 2016). The FRFA has five sections and is published below:

1. Need for, and Objectives of, the Rule

The Energy Independence and Security Act of 2007 (EISA 2007), Public Law 110–140, amended EPCA to require that at least once every 7 years, DOE must review test procedures for each type of covered equipment, including CWH equipment, and either: (1) Amend the test procedures if the Secretary determines that the amended test procedures would more accurately or fully comply with the requirements of 42 U.S.C. 6314(a)(2)–(3),[22] or (2) publish a notice of determination not to amend a test procedure. (42 U.S.C. 6314(a)(1)(A)) Under this requirement, DOE must review the test procedures for CWH equipment no later than May 16, 2019, which is 7 years after the most recent final rule amending the Federal test method for CWH equipment.[23]

This final rule prescribes test procedure amendments that will be used to determine compliance with energy conservation standards for CWH equipment (except for CHPWHs, residential-duty commercial water heaters, and electric instantaneous water heaters with a storage capacity less than 10 gallons). The amendments will: (1) Update the referenced industry test standards by incorporating by reference ASTM D2156–09, ASTM C177–13, ASTM C518–15, and sections c and f of Annex E.1 of ANSI Z21.10.3–2015; (2) modify the required ambient conditions and measurement intervals for CWH equipment; (3) change the required test set-up for storage water heaters and storage-type instantaneous water heaters; (4) change the method for setting the thermostat for gas-fired and oil-fired storage water heaters and storage-type instantaneous water heaters from measurement of mean tank temperature to measurement of top tank sensor water temperature and clarify the method for setting thermostats on electric storage water heaters with multiple thermostats; (5) establish new requirements for establishing steady-state operation and a soak-in period; (6) define ''storage-type instantaneous water heater'' and modify several definitions for consumer water heaters and commercial water heating equipment included at 10 CFR 430.2 and 10 CFR 431.102, respectively; (7) include a new test method for measurement of standby loss for instantaneous water heaters and hot water supply boilers (including internally thermostatically-activated, externally thermostatically-activated and flow-activated instantaneous water heaters); (8) specify temperature-sensing locations, water valve locations, and clarifications for using a recirculating loop for thermal efficiency and standby loss testing of instantaneous water heaters and hot water supply boilers; (9) include a new test method for rating commercial heat pump water heaters; (10) establish a procedure for determining the fuel input rate of gas-fired and oil-fired CWH equipment and specify DOE's measures to verify fuel input rate; (11) add default values for certain testing parameters for oil-fired commercial water heating equipment; and (12) modify DOE's certification requirements for commercial water heating equipment. DOE reviewed all of these amendments to the existing test procedure under the provisions of the Regulatory Flexibility Act and the policies and procedures published on February 19, 2003. 68 FR 7990. Accordingly, DOE has prepared the following FRFA for the equipment that is the subject of this rulemaking.

2. Significant Issues Raised in Response to the IRFA

The Department did not received any comment that directly addressed the IRFA. However, DOE received several comments from stakeholders that referenced the impact of amended test procedures for CWH equipment on small businesses.

In the May 2016 NOPR, DOE proposed to establish a requirement to maintain ambient relative humidity at 60 percent ± 5 percent during the thermal efficiency and standby loss test for gas-fired and oil-fired CWH equipment. 81 FR 28588, 28597–28598 (May 9, 2016). HTP commented that complying with this proposed humidity requirement would impose a significant burden to small businesses such as HTP, and would require substantial renovations to their testing lab that cost $100,000–$250,000. (HTP, No. 24 at p. 1) In this final rule, DOE is not adopting an ambient relative humidity requirement; therefore, DOE believes that this concern of impact to small manufacturers is mitigated.

In the May 2016 NOPR, DOE also proposed to decrease the length of required measurement intervals to 30 seconds for both the thermal efficiency and standby loss tests. 81 FR 28588, 28597 (May 9, 2016). To accommodate DOE's proposed time intervals for data collection, AHRI commented that some manufacturers might need to upgrade

[22] 42 U.S.C. 6314(a)(2) requires that test procedures be reasonably designed to produce test results which reflect energy efficiency, energy use, and estimated operating costs of a type of industrial equipment (or class thereof) during a representative average use cycle (as determined by the Secretary), and not be unduly burdensome to conduct.

42 U.S.C. 6314(a)(3) requires that if the test procedure is a procedure for determining estimated annual operating costs, such procedure must provide that such costs are calculated from measurements of energy use in a representative average-use cycle (as determined by the Secretary), and from representative average unit costs of the energy needed to operate such equipment during such cycle. The Secretary must provide information to manufacturers of covered equipment regarding representative average unit costs of energy.

[23] DOE published a final rule in the **Federal Register** on May 16, 2012, that, in relevant part, amended its test procedure for commercial water-heating equipment. 77 FR 28928.

their facilities, and Raypak and Rheem argued that small manufacturers might need to purchase or upgrade data acquisition systems. (AHRI, No. 26 at pp. 6–7; Raypak, No. 28 at pp. 6–7; Rheem, No. 34 at p. 5)

DOE disagrees that its proposed measurement intervals would require costly upgrades to lab facilities for any manufacturers, including small businesses. Given that DOE's proposed measurement interval was only slightly different from the current requirement for the thermal efficiency test—30 seconds vs 1 minute—DOE does not believe that this proposal would require any upgrades. The duration of the standby loss test exceeds 24 hours and can reach up to 48 hours; therefore, DOE does not believe it is likely that any manufacturers, including small businesses, are performing this test without an automated data acquisition system. The one-time cost of a data acquisition system would likely be much less than the recurring labor costs of having a lab technician constantly monitor and record measurements for every standby loss test for up to 48 hours. DOE notes that no stakeholders have commented to DOE that they do not use data acquisition systems for testing of CWH equipment. Additionally, DOE does not believe that increasing the frequency of data collection would require significant upgrades to existing data acquisition systems. Rather, DOE believes that changing the measurement frequency would require a simple one-time software change and that the additional amount of data collected could easily be stored given the low cost of computer storage. Additionally, DOE is not adopting any requirements in this final rule that would require measurement with a data acquisition system other than time and temperature. Therefore, DOE does not expect the required data collection intervals adopted in this final rule—1 minute for both the thermal efficiency and standby loss tests—to impose a significant burden on any manufacturers, including small businesses.

In the May 2016 NOPR, DOE also proposed to adopt a standby loss test for unfired hot water storage tanks. 81 FR 28588, 28597 (May 9, 2016). DOE received numerous comments on this topic, and is still considering those comments. Therefore, DOE will address the comments and its proposed test procedure for unfired hot water storage tanks in a separate rulemaking notice.

In the May 2016 NOPR, DOE proposed a standby loss test method for flow-activated instantaneous water heaters. 81 FR 28588, 28607–28615 (May 9, 2016) DOE received comments from Bradley expressing concern with the complexity and burden associated with the test procedure. Bradley notes that it manufactures highly specialized water heaters and the burden to test their products with DOE's proposed test procedure would be an extreme financial burden to the business while not resulting in meaningful energy savings for customers. Bradley also expressed concern with the test procedure, specifically with regards to the method of test (including the standby loss equation) and the method proposed to determine the storage volume. Bradley suggested simplifying the test procedure would reduce the burden on small businesses that manufacture these specialized water heaters. (Bradley, No. 33 at pp. 1, 3–4)

The concerns expressed by Bradley with regards to the testing burden, pertain to instantaneous water heaters and hot water supply boilers that have a storage volume less than 10 gallons. DOE notes that maximum standby loss standards are currently only prescribed for instantaneous water heaters and hot water supply boilers with rated storage volume greater than or equal to 10 gallons. In the NOPR for the ongoing energy conservation standards rulemaking for CWH equipment, DOE did not propose standby loss standards for instantaneous water heaters with rated storage volume less than 10 gallons. 81 FR 34440 (May 31, 2016). Consequently, manufacturers are not required to test or certify their instantaneous water heaters and hot water supply boilers for standby loss, if the model is an either an electric instantaneous water heater or is a gas or oil-fired instantaneous water heater with a storage volume less than 10 gallons.

With regard to the technical concerns expressed by Bradley, DOE notes that it has responded to these comments in section III.H of this final rule. Specifically, DOE notes that in section III.H.2 of the final rule notice it has permitted the use of calculations based on physical dimensions and design drawings to determine the storage volume of instantaneous water heaters and hot water supply boilers (including flow-activated instantaneous water heaters). DOE has also decided to include additional provisions to allow water heaters that are not capable of meeting the required outlet water temperature (due to in-built safety features that restrict the maximum temperature within the unit), to conduct the test using the maximum water temperature the unit is capable of achieving. DOE believes that if manufacturers choose to rate their products using the test procedure adopted by DOE in this final rule, then these provisions will be beneficial in simplifying the test procedure particularly for the CWH equipment with in-built safety features that restrict the rise in water temperature.

3. Description and Estimate of the Number of Small Entities Affected

For manufacturers of covered CWH equipment, the Small Business Administration (SBA) has set a size threshold, which defines those entities classified as ''small businesses'' for the purposes of the statute. DOE used the SBA's small business size standards to determine whether any small entities would be subject to the requirements of the rule. (see 13 CFR part 121) The size standards are listed by North American Industry Classification System (NAICS) code and industry description and are available at: *https://www.sba.gov/sites/default/files/Size_Standards_Table.pdf.* Manufacturing of CWH equipment is classified under NAICS 333318, ''Other Commercial and Service Industry Machinery Manufacturing.'' [24] The SBA sets a size threshold of 1,000 employees or fewer for a manufacturer that falls under this category to qualify as a small business.

To estimate the number of companies that could be small business manufacturers of equipment covered by this rulemaking, DOE conducted market research and created a database of CWH equipment manufacturers. DOE's research involved industry trade association membership directories (including AHRI [25]), public databases (*e.g.,* the California Energy Commission Appliance Efficiency Database,[26] DOE's Compliance Certification Database [27]), individual company Web sites, and market research tools (*e.g.,* Hoovers reports [28]) to create a list of companies that manufacture equipment covered by this rulemaking. DOE screened out companies that do not manufacture equipment affected by this rule, do not meet the definition of a ''small business,'' or are foreign owned and

[24] On October 1, 2012, the NAICS code for ''Other Commercial and Service Industry Machinery Manufacturing,'' which includes manufacturing of commercial water heating equipment, changed from 333319 to 333318.

[25] The AHRI Directory is available at: *www.ahridirectory.org/ahriDirectory/pages/home.aspx.*

[26] The CEC database is available at: *http://www.energy.ca.gov/appliances/.*

[27] DOE's Compliance Certification Database is available at: *https://www.regulations.doe.gov/certification-data/.*

[28] Hoovers Inc., Company Profiles, Various Companies (Available at: *www.hoovers.com/*).

operated. Based upon this analysis and comprehensive search, DOE identified 29 manufacturers of CWH equipment affected by this rulemaking (excluding rebranders). Of these, DOE identified 18 as domestic small manufacturers.

4. Description and Estimate of Compliance Requirements

In the following sections, DOE discusses the potential burdens that could be faced by manufacturers of CWH equipment, particularly small businesses, as a result of each of the test procedure amendments being adopted in this final rule.

Updated Industry Test Methods

In this final rule, DOE is updating the referenced industry test method in its test procedures for CWH equipment from ANSI Z21.10.3–2011 (Exhibits G.1 and G.2) to sections c and f of Annex E.1 of ANSI Z21.10.3–2015. DOE does not expect that this update will impact the requirements, conditions, or duration of DOE's test procedures. DOE only identified one substantive difference in ANSI Z21.10.3–2015 from the currently referenced version ANSI Z21.10.3–2011—the standby loss equation. Because DOE concluded that the equation in the currently referenced ANSI Z21.10.3–2011 is correct and retains that equation in its test procedures, this updated reference to the industry test method will not affect conduct of or ratings from DOE's test procedure.

DOE's current test procedure, specified at 10 CFR 431.106, also requires that flue gases from oil-fired CWH equipment not contain smoke that exceeds No. 1 smoke, as determined by ASTM Standard D2156–80. In this final rule, DOE is incorporating by reference the most recent version of this test method, ASTM D2156–09. DOE did not identify any significant differences between the two versions of this test method; therefore, DOE concluded that this updated reference should not affect results from its test procedure.

Additionally, DOE is adopting several clarifications to the procedure for determining smoke spot number because the current procedure as specified in 10 CFR 431.106 does not specify the timing or location of measuring the smoke spot number. DOE considers conduct of the smoke spot test and measurement of CO_2 reading before the thermal efficiency test begins to be a less burdensome method than measuring during the test. Therefore, the Department does not consider this clarification likely to increase testing burden to manufacturers. Additionally, DOE clarifies situations when the smoke spot test and measurement of CO_2 reading are not needed to reduce burden. Finally, DOE specifies the location within the flue for determination of smoke spot number. Given that this requirement was adopted from an industry-accepted test method for similar commercial HVAC equipment, DOE selected this location because it was the least likely to increase burden to manufacturers, DOE's current definition for ''R-value'' at 10 CFR 431.102 references two industry test methods, ASTM C177–97 and ASTM C518–91. DOE is incorporating by reference the most recent versions of these test methods: ASTM C177–13 and ASTM C518–15. DOE did not identify any significant differences in the procedures for measuring R-value between the two versions of ASTM C177 or between the two versions of ASTM C518. Therefore, this updated reference should not affect results for calculation of R-value per DOE's definition at 10 CFR 431.102.

Ambient Test Conditions

DOE is adopting several amendments to its required ambient conditions for CWH equipment. Specifically, DOE is making the following modifications: (1) Setting a maximum air draft requirement of 50 ft/min as measured prior to beginning the steady-state verification period or the standby loss test; (2) decreasing the allowed variance from mean ambient temperature from ± 7.0 °F to ± 5.0 °F; (3) requiring measurement of test air temperature—the temperature of entering combustion air—and requiring the test air temperature not vary by more than ± 5 °F from the ambient room temperature at any measurement interval during the steady-state verification period and the thermal efficiency and standby loss tests for gas-fired and oil-fired CWH equipment; and (4) decreasing the time interval for data collection from fifteen minutes to one minute for the standby loss test.

For the first modification, depending on the conditions in the manufacturer's testing area, the manufacturer may need to protect the testing area from drafts greater than 50 ft/min. This draft protection could be accomplished by using wind barriers such as moveable walls, minimizing the opening and closing of doors near the test stand, or sealing windows. To measure draft velocity, manufacturers may have to purchase instrumentation that DOE estimates could cost up to $250. However, any manufacturer of residential water heaters should already have this instrumentation and be able to comply with this requirement, because it is similar to the requirement established for testing residential water heaters in the July 2014 final rule. 79 FR 40542, 40569 (July 11, 2014). DOE notes that measurement of air draft is only required at the beginning of each test; therefore, draft-measuring devices used for testing of CWH equipment do not need the capability to connect to a data acquisition system.

For the second modification, manufacturers need to maintain a slightly more stringent allowed variance from the average ambient room temperature over the course of the test. DOE received several comments suggesting that DOE adopt this decreased variance, indicating that this decrease in the allowed variance would not be burdensome to manufacturers, and that manufacturers could accommodate this decrease in the allowed variance with their existing lab HVAC systems. Therefore does not anticipate that this modification will impose a significant burden to manufacturers, including small businesses.

For the third modification, manufacturers need to measure the test air temperature, which is measured within two feet of the combustion air inlet. While this requirement was adopted from an industry test method for commercial packaged boilers, AHRI 1500–2015, it was not previously required for testing of CWH equipment. Therefore, manufacturers need to install temperature sensors in close proximity to the air intake. However, DOE believes that a requirement for this temperature measurement will not present any significant testing burden to manufacturers, because it simply involves taking more temperature measurements than are already being conducted, and the temperature readings could be recorded using the same data acquisition software that is used for measuring the ambient room temperature. DOE anticipates that adding additional temperature sensors to an existing data acquisition system would be a simple, one-time task and not present a significant burden to manufacturers.

Finally, DOE proposes reducing the time interval for data collection during the standby loss test from 15 minutes to 1 minute. Because the standby loss test duration is between 24 to 48 hours, DOE reasons that manufacturers already use a computer-connected data acquisition system. Additionally, manufacturers are already required to measure at one-minute intervals in DOE's existing thermal efficiency test procedure. DOE believes that changing the measurement frequency would require a simple one-

time software change and that the additional amount of data collected could easily be stored given the low cost of computer storage. Therefore, manufacturers were not expected to incur any additional testing costs due to the change in the relevant data recording time intervals, and DOE does not anticipate the one-time software change to impose any significant burden to manufacturers, including small businesses.

Test Set-Up for Storage and Storage-Type Instantaneous Water Heaters

In this final rule, DOE specifies the location for measurement of supply and outlet water temperature for storage water heaters and storage-type instantaneous water heaters. Specifically, in the test set-ups adopted in this final rule, DOE has specified exact locations for placement of the temperature sensors in terms of total piping length. DOE expects these lengths to align with the piping set-ups currently used in most testing of CWH equipment. If the test set-up changes adopted in this final rule are different from the set-ups currently used, DOE believes that these differences would be minor and would simply involve adding or removing several inches of piping. Additionally, DOE is adopting set-ups for tank-type water heaters with connections on the top, side, or bottom—thereby minimizing the likelihood that a significant change to the set-up currently used by manufacturers would be needed. Further, for certain water heaters with horizontal water connections that cannot meet the inlet side vertically downward piping distance of 24 inches (as proposed in the May 2016 NOPR), DOE allows such piping to be extended vertically downwards to the maximum extent possible. This would reduce the burden on manufacturers and small businesses from having to raise the water heater platform or have piping embedded under the flooring, to meet the 24 inches of vertically downward piping distance. Therefore, DOE concludes that the changes adopted with regards to the test set-up for storage and storage-type instantaneous water heaters would not present a significant burden to manufacturers, including small businesses.

Unfired Hot Water Storage Tanks

DOE is not adopting a test procedure for unfired hot water storage tanks in this final rule, and, therefore, there will be not any burden from test procedure amendments for this equipment.

Thermostat Settings for Storage Water Heaters

DOE is modifying its procedure for setting the tank thermostat for gas-fired and oil-fired storage water heaters and storage-type instantaneous water heaters by adopting a top tank sensor water temperature requirement rather than a mean tank temperature requirement. This change was suggested by manufacturers so that their models can more easily meet the specified conditions in the test procedure without having to sacrifice thermal efficiency gains when designing equipment. Because the top tank sensor water temperature (*i.e.,* the highest of six temperature sensors used to calculate mean tank temperature) is already measured in the current test method, this proposal would simplify DOE's test procedure, and would not create any additional test burden for manufacturers, including small businesses. DOE is also adopting a requirement that the tank be re-filled with supply water before re-adjusting the thermostat if the top tank sensor temperature requirement is not achieved. While this requirement may add to test time in certain cases, DOE believes that it is common industry practice, because this requirement is consistent with requirements in an industry-consensus test method, ASHRAE 118.1–2012, and DOE's test procedure for consumer water heaters and residential-duty commercial water heaters at appendix E to subpart B of 10 CFR part 430.

DOE is also clarifying its procedure for setting thermostats for electric storage water heaters with multiple thermostats. DOE is specifying that only the top-mosttopmost and bottom-mostbottommost thermostats be set, and that all other thermostats and corresponding heating elements not operate while setting thermostats or during conduct of the standby loss test. DOE believes that some manufacturers already use DOE's adopted method, and that this method simply clarifies which thermostats (and corresponding heating elements) to use during the test. DOE's clarifications are based upon comments from a manufacturer and industry trade organization; based on these comments, DOE does not anticipate that this procedure will impose a significant test burden to manufacturers, including small businesses.

Steady-State Requirements and Soak-In Period

DOE is adopting more stringent provisions for establishing steady-state operation prior to the thermal efficiency test. These provisions require a 30-minute verification period, rather than the 3-minute period in DOE's current test procedure. However, these provisions, with minor modifications, were suggested by multiple commenters as being supported by an industry working group, as an improvement to the repeatability of testing of CWH equipment. DOE also understands that many manufacturers, including small businesses, already often run CWH equipment for longer than required by DOE's current test procedure to ensure steady-state operation prior to beginning the thermal efficiency test. Therefore, DOE does not expect that these more-stringent provisions will impose a significant burden to manufacturers, including small businesses.

DOE has also added clarifying statements to its thermal efficiency and standby loss test procedures. Specifically, DOE is clarifying that during the steady-state verification period, the thermal efficiency test, and the standby loss test (as applicable), no settings on the water heating equipment can be changed until measurements for the test have finished. As discussed in section III.F.2, several manufacturers agreed to include the clarifying statements. Additionally, DOE expects that the majority of manufacturers already perform the thermal efficiency and standby loss tests in a manner as clarified in DOE's proposal. Therefore, DOE has concluded that its clarifying statements would only serve to remove any potential confusion regarding its test procedures, and would not add any burden to manufacturers, including small businesses.

DOE is adopting a requirement that a soak-in period be conducted prior to the standby loss test for storage water heaters in which the water heater must sit without any draws taking place for at least 12 hours from the end of a recovery from a cold start, unless the unit has been in operation and no settings have been changed since the end of a previously run efficiency test. While this soak-in period would add to the time required to conduct the test, it would not require extra personnel and would not necessitate the development of additional test platforms. DOE understands that a preconditioning period is already implemented by manufacturers as a best practice to allow the water heater to achieve operational temperature, so the added burden from the 12-hour soak-in is expected to be minimal. In addition, these tests can be conducted in the same facilities used for the current energy testing of these products, so there would be no

additional facility costs required by this amendment.

Storage-Type Instantaneous Water Heaters

DOE is adopting a new definition for ''storage-type instantaneous water heater,'' which includes instantaneous water heaters with integral storage tanks that have a tank volume greater than or equal to 10 gallons. DOE believes this kind of water heater should be tested similar to storage water heaters. However, DOE does not currently prescribe separate test procedures for storage water heaters and instantaneous water heaters. Only in the test procedures established in this final rule does DOE prescribe separate standby loss test procedures for storage water heaters and instantaneous water heaters. Additionally, DOE's research suggests that manufacturers already categorize units falling under DOE's proposed definition for ''storage-type instantaneous water heater'' with storage water heaters. Therefore, DOE does not anticipate that applying the test procedure prescribed for storage water heaters to storage-type instantaneous water heaters will present a burden for manufacturers, including small businesses.

Instantaneous Water Heaters and Hot Water Supply Boilers (Other Than Storage-Type Instantaneous Water Heaters)

Currently, all instantaneous water heaters and hot water supply boilers having a capacity of 10 gallons or more are required to undergo the same standby loss test that is prescribed in Exhibit G.2 of ANSI Z21.10.3–2011. In this final rule, DOE is adopting a separate standby loss test procedures for: (1) Internally thermostatically-activated instantaneous water heaters and (2) instantaneous water heaters that are either flow-activated or thermostatically activated by an external thermostat. In addition, DOE is adopting changes to the test set-up for instantaneous water heaters and hot water supply boilers.

For the changes in the test set-up, DOE is adopting: (1) Slight variations of Figure III.1, Figure III.2, and Figure III.3 of this final rule as the test set-ups for instantaneous water heaters and hot water supply boilers tested without a recirculating loop, and (2) Figure III.4 as the test set-ups for instantaneous water heaters and hot water supply boilers tested with a recirculating loop. Allowing the water heaters to be tested to the different configurations in the figures would be beneficial to all manufacturers, including small businesses, as it would allow them to use the test set-up most appropriate to the equipment being tested. In this final rule, DOE has decided to require three changes in the test set-up for instantaneous water heaters and hot water supply boilers: (1) Installation of an additional temperature sensor near the outlet of the water heater at a distance of one-inch (inside or outside) from the outlet port for the standby loss test; (2) installation of a temperature sensor in the outlet water piping at the second elbow (as per the test set-ups in Figure III.1, Figure III.2,Figure III.3, and Figure III.4 of this final rule); and (2) installation of an outlet water valve downstream of the outlet water heat trap, within a distance of 10 inches downstream from outlet water temperature sensor which is placed at the second elbow in the outlet water piping.

These modifications in the test set-up require: (1) Addition of a pipe fitting to hold the outlet water temperature-sensing instrument to a location immediately outside the CWH equipment; (2) addition of a temperature sensor near the outlet to the water heater; and (2) movement of the outlet water valve that is already installed further downstream in the piping, to a location closer to the CWH equipment. DOE estimates that a fitting to hold the temperature sensor would cost approximately $50, while the temperature sensor itself would cost about $100 (for a thermocouple). DOE reasons that the benefits of better representation of the outlet water temperature and close proximity of the water valves that need to be shut off to retain the hot water in the water heater during the standby loss test outweighs the small potential cost of an additional pipe fitting and temperature sensor. In addition to these changes, DOE is also clarifying the conditions for using a recirculating loop. The use of a recirculating loop is allowed in the current test procedure, and, thus, this modification would not cause an increase in testing cost. Therefore, DOE concluded that the adjustments described in this paragraph would not impose a significant burden on manufacturers, including small businesses.

The standby loss test procedure adopted for internally thermostatically-activated instantaneous water heaters is similar to the current test procedure in Exhibit G.2 of ANSI Z21.10.3–2011 (and Annex E.2 of ANSI Z21.10.3–2015) that is incorporated by reference as DOE's test procedure. The adopted test procedure requires the use of the heat exchanger outlet water temperature as an approximation for the stored water temperature instead of the mean tank temperature which is required by the current test procedure. DOE notes that this adopted modification to the current test procedure would only change the terms that are used in calculating standby loss. In the previous section, DOE discussed the cost involved in installing an additional temperature sensor to record the heat exchanger outlet water temperature. Therefore, the only change that manufacturers will be required to make is to record the heat exchanger outlet water temperature during the standby loss test. Accordingly, DOE has concluded that these changes will not be unduly burdensome to manufacturers, including small businesses.

For externally thermostatically-activated instantaneous water heaters and flow-activated instantaneous water heaters, DOE has adopted a test procedure that is similar to the current test procedure in Exhibit G.2 of ANSI Z21.10.3–2011. Similar to internally-activated instantaneous water heaters, the adopted test procedure for flow-activated and externally thermostatically-activated instantaneous water heaters uses the outlet water temperature as an approximation for the stored water temperature. In addition, the adopted test procedure would not require the water heater to cycle-on at any point in the course of the test. Therefore, the amount of fuel consumption is not required to be recorded for standby loss calculations. As a result, these two modifications will simplify the test and reduce the amount of data processing required for calculating the standby loss metric. As a result, this modification will be beneficial to all manufacturers, including small businesses.

The second difference pertains to the duration of the test. In the current test procedure, the equipment is tested until the first cut-out that occurs after 24 hours or 48 hours, whichever comes first. In the adopted standby loss test procedure for flow-activated instantaneous water heaters, the test ends when the outlet water temperature drops by 35 °F or after 24 hours, whichever comes first. DOE has concluded that it is very likely that a 35 °F drop in outlet water temperature will occur before 24 hours. Therefore, this modification will likely be beneficial to all manufacturers, including small businesses, as it would reduce the time required to conduct the standby loss test. In addition, DOE notes that the maximum test length of 24 hours in the test method is the same as the current minimum test length in the

existing test procedure, so the adopted test will always result in a test length either shorter or equal to that of the current test.

The third difference is with regard to the pump purge functionality. The current test procedure requires the outlet water valve to be closed immediately after the burner cuts out at the beginning of the standby loss test. In the test procedure adopted in this final rule, DOE has decided to allow units to use the integrated pump purge functionality (if so equipped) by delaying the closing of the outlet water valve until after the pump purge operation is completed. During this operation, the electricity consumed is not recorded for calculating the standby loss. DOE notes that the addition of this provision only changes the sequence of steps in the test procedure. As a result, DOE does not believe this modification will impose a significant burden on manufacturers, including small businesses. Rather, DOE believes that by allowing this modification, manufacturers will be able to benefit from the pump purge technology that is intended to reduce standby loss in the water heater.

Finally, in the adopted test procedure, DOE has permitted the use of calculations based on CAD designs and physical dimensions to rate the storage volume of instantaneous water heaters and hot water supply boilers. The current test procedure requires the use of the weight-based test specified in section 2.26 of ANSI Z21.10.3–2011 to determine the storage volume. The weight-based test requires the water heater to be weighed dry and then weighed after it is filled with water. The difference between the two weights is used to calculate the storage volume. DOE expects that allowing manufacturers to use their design drawing or physical dimensions to determine storage volume will be beneficial to manufacturers and save them time and cost. Therefore, DOE believe that this modification will be beneficial to all manufacturers, including small businesses.

In summary, DOE has concluded that the standby loss test procedure adopted in this final rule for flow-activated, externally thermostatically activated and internally thermostatically activated instantaneous water heaters will not impose any significant additional burden on manufacturers.

Commercial Heat Pump Water Heaters

DOE previously did not prescribe a test procedure for commercial heat pump water heaters. In this final rule, DOE adopts a new test procedure for measurement of the COP_h of CHPWHs. However, manufacturers are not required to certify COP_h for CHPWHs until DOE establishes energy conservation standards for this equipment based on a COP_h metric. Therefore, manufacturers are not required to certify for COP_h using the test procedure adopted in this final rule. However, DOE acknowledges that in the absence of a Federal COP_h standard, some manufacturers may choose, at their discretion, to rate the efficiency of their CHPWHs to help distinguish their equipment from competitor offerings.

DOE believes that manufacturers of CHPWHs already have the equipment, instrumentation, and facilities (including psychrometric chambers) for testing their units according to the adopted test method, because these will be needed for product development and measurement of COP_h values absent a DOE test method. However, DOE acknowledges that some manufacturers may need to purchase equipment, instrumentation, or test stands for measurement of COP_h according to the test method. For testing air-source CHPWH units, DOE estimates that the cost to build a test stand and a surrounding psychrometric chamber for the testing of CHPWHs will cost no more than $300,000. While the duration of the test for air-source CHWPHs is 30 minutes, DOE estimates the total time, including the time needed for set-up and stabilizing the outlet water temperatures prior to the test, may reach five hours. At a rate of $40 per hour for a laboratory technician, DOE estimates the cost for this labor will be $200 per model tested.

Given the small market size of air-source CHPWHs, DOE believes that most manufacturers without test facilities capable of testing air-source CHPWHs according to DOE's test procedure will choose to conduct testing at a third-party lab. DOE estimates that the average air-source CHPWH manufacturer sells six models, and that the cost of testing an air-source CHPWH would not exceed $11,000. Therefore, the average testing burden for manufacturers of air-source CHPWHs without testing facilities should not exceed $66,000.

For indoor water-source, ground-source closed-loop, and ground water-source CHPWHs, water solution conditioning and recirculation equipment similar to a chiller would be required for testing, in addition to the common instrumentation needed for testing air-source CHPWHs (*e.g.,* standard piping, instrumentation, a data acquisition system, and test stand). DOE expects most manufacturers already have such equipment in order to test and provide ratings for their current product offerings. However, DOE acknowledges that there may be some manufacturers that do not currently have equipment sufficient for conducting DOE's adopted test procedure. DOE estimates the total cost of a chiller to be about $20,000. The cost of instrumentation, piping, and a data acquisition unit could add up to an additional $5,000. Therefore, DOE does not expect capital investments would exceed $25,000 per manufacturer. DOE estimates that following the test procedure, it would take approximately 5–6 hours to set up the unit and to conduct the test. At a lab technician labor cost of $40 per hour, DOE estimates the total labor cost incurred to test each unit would be between $200 and $240. Alternatively, some manufacturers, including small businesses, may choose to test their units at third-party laboratories instead of investing in in-house testing facilities. DOE estimates that the cost of such testing would not exceed $3,000 per unit. DOE estimates that manufacturers may test about 6 models annually at third-party laboratories. Therefore, the total estimated cost burden for any such manufacturers would not be more than $18,000.

Based on the adopted test procedure, the test set-up for ground-source closed-loop, ground water-source, or indoor water-source CHPWHs will be similar to that for direct geo-exchange CHPWHs, with the only difference being that the test set-up for direct geo-exchange CHPWHs includes an additional solution heat exchanger. Similar to water-source CHPWHs, DOE expects that most manufacturers of direct geo-exchange CHPWHs already have such equipment in order to test and provide ratings for their current product offerings. DOE understands that the cost of this solution heat exchanger will be the only cost to be added to the total estimated cost for testing ground and indoor water-source CHPWHs in order to arrive at the estimated cost of testing a direct geo-exchange CHPWH. DOE estimates the cost of a liquid-to-liquid heat exchanger to be not more than $30,000. Therefore, the total estimated capital investment cost for testing a direct geo-exchange CHPWH should not exceed $55,000. Similar to water-source CHPWH manufacturers, DOE understands that many manufacturers of direct geo-exchange CHPWHs, including small businesses, may choose to test their units at third-party laboratories instead of investing in in-house testing

facilities. DOE estimates the cost of such testing will not exceed $5,000 per unit.

Gas Pressure

DOE is adopting requirements that the gas supply pressure must be within the range specified by the manufacturer, and that the difference between the outlet pressure of the gas appliance pressure regulator and the value specified by the manufacturer on the nameplate of the unit being tested must not exceed the greater of: ± 10 percent of the nameplate value or ± 0.2 in. w.c. The first requirement was suggested by commenters and is consistent with the industry-consensus test method, ANSI Z21.10.3–2015. The second requirement is also consistent with ANSI Z212.10.3–2015 except for the addition of an absolute tolerance. However, this absolute tolerance only serves to make the requirement more lenient than that included in ANSI Z21.10.3–2015. Therefore, DOE does not anticipate that these changes will impose a significant burden to manufacturers, including small businesses.

Fuel Input Rate

DOE is adopting provisions that the fuel input rate be determined at 10-minute intervals during the steady-state verification period and the thermal efficiency test. This requirement to determine fuel input rate simply requires measuring gas consumption every 10 minutes during the test, a change DOE expects will impose no significant burden. Additionally, DOE is requiring that the measured fuel input rates for these 10-minute periods must not vary by more than ± 2 percent between any two readings. However, DOE believes that this requirement is consistent with the requirement in ANSI Z21.10.3–2015, and does not expect this requirement to impose a significant burden to manufacturers, including small businesses.

Default Values for Certain Test Parameters

DOE is adding to its test procedure at 10 CFR 431.106 default values for certain test parameters for oil-fired CWH equipment, to be used if manufacturers do not report these in any of the following: (1) Product nameplate, (2) the literature that is shipped with the unit (*e.g.,* installation and operations manual), or (3) their supplemental instructions. Specifically, DOE is adopting default values for fuel pump pressure and a range for CO_2 reading for oil-fired CWH equipment. DOE does not expect these default values to present a significant burden to manufacturers because these are basic parameters needed for proper use of CWH equipment and are, therefore, typically specified by the manufacturer on the product nameplate and in manufacturer literature shipped with the unit.

4. Significant Alternatives to the Rule

DOE considered alternative test methods and modifications to the test procedures for CWH equipment, and determined that there are no better alternatives than the modifications and procedures established in this final rule. DOE examined relevant industry test standards, and incorporated these standards in the final test procedures whenever appropriate to reduce test burden to manufacturers. Specifically, in this final rule DOE updates its test procedures for CWH equipment to incorporate by reference the following updated standards: ASTM D2156–09, ASTM C177–13, ASTM C518–15, and sections c and f of Annex E.1 of ANSI Z21.10.3–2015. Additionally, DOE is incorporating by reference certain sections, figures, and tables in ASHRAE 118.1–2012 in the test procedure for measurement of COP_h of commercial heat pump water heaters that DOE establishes in this final rule.

Additional compliance flexibilities may be available through other means. For example, individual manufacturers may petition for a waiver of the applicable test procedure. (See 10 CFR 431.401) Additionally, Section 504 of the Department of Energy Organization Act, 42 U.S.C. 7194, provides authority for the Secretary to adjust a rule issued under EPCA in order to prevent ''special hardship, inequity, or unfair distribution of burdens'' that may be imposed on that manufacturer as a result of such rule. Manufacturers should refer to 10 CFR part 430, subpart E, and part 1003 for additional details.

C. Review Under the Paperwork Reduction Act of 1995

Manufacturers of CWH equipment must certify to DOE that their equipment complies with any applicable energy conservation standards. In certifying compliance, manufacturers must test their equipment according to the DOE test procedures for CWH equipment, including any amendments adopted for those test procedures, on the date that compliance is required. DOE has established regulations for the certification and recordkeeping requirements for all covered consumer products and commercial equipment, including CWH equipment. 76 FR 12422 (March 7, 2011); 80 FR 5099 (Jan. 30, 2015). The collection-of-information requirement for certification and recordkeeping is subject to review and approval by OMB under the Paperwork Reduction Act (PRA). This requirement has been approved by OMB under OMB control number 1910–1400. Public reporting burden for the certification is estimated to average 30 hours per manufacturer, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

Notwithstanding any other provision of the law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with, a collection of information subject to the requirements of the PRA, unless that collection of information displays a currently valid OMB Control Number.

D. Review Under the National Environmental Policy Act of 1969

In this final rule, DOE amends its test procedures for commercial water heating equipment. DOE has determined that this rule falls into a class of actions that are categorically excluded from review under the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*) and DOE's implementing regulations at 10 CFR part 1021. Specifically, this rule amends the existing test procedure without affecting the amount, quality, or distribution of energy usage, and, therefore, will not result in any environmental impacts. Thus, this rulemaking is covered by Categorical Exclusion (CX) A5 under 10 CFR part 1021, subpart D, which applies to any rulemaking that interprets or amends an existing rule without changing the environmental effect of that rule. Accordingly, DOE has made a CX determination for this rulemaking, and neither an environmental assessment nor an environmental impact statement is required. DOE's CX determination for this final rule is available at: *http://energy.gov/nepa/categorical-exclusion-cx-determinations-cx/.*

E. Review Under Executive Order 13132

Executive Order 13132, ''Federalism,'' 64 FR 43255 (August 10, 1999), imposes certain requirements on Federal agencies formulating and implementing policies or regulations that preempt State law or that have Federalism implications. The Executive Order requires agencies to examine the constitutional and statutory authority supporting any action that would limit the policymaking discretion of the States and to carefully assess the necessity for such actions. The Executive Order also requires agencies

to have an accountable process to ensure meaningful and timely input by State and local officials in the development of regulatory policies that have Federalism implications. On March 14, 2000, DOE published a statement of policy describing the intergovernmental consultation process it will follow in the development of such regulations. 65 FR 13735. DOE examined this final rule and determined that it will not have a substantial direct effect 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. EPCA governs and prescribes Federal preemption of State regulations as to energy conservation for the equipment that is the subject of this final rule. States can petition DOE for exemption from such preemption to the extent, and based on criteria, set forth in EPCA. (42 U.S.C. 6297(d)) Therefore, Executive Order 13132 requires no further action.

F. Review Under Executive Order 12988

With respect to the review of existing regulations and the promulgation of new regulations, section 3(a) of Executive Order 12988, ''Civil Justice Reform,'' 61 FR 4729 (Feb. 7, 1996), imposes on Federal agencies the general duty to adhere to the following requirements: (1) Eliminate drafting errors and ambiguity; (2) write regulations to minimize litigation; (3) provide a clear legal standard for affected conduct rather than a general standard; and (4) promote simplification and burden reduction. Regarding the review required by section 3(a), section 3(b) of Executive Order 12988 specifically requires that Executive agencies make every reasonable effort to ensure that the regulation: (1) Clearly specifies the preemptive effect, if any; (2) clearly specifies any effect on existing Federal law or regulation; (3) provides a clear legal standard for affected conduct while promoting simplification and burden reduction; (4) specifies the retroactive effect, if any; (5) adequately defines key terms; and (6) addresses other important issues affecting clarity and general draftsmanship under any guidelines issued by the Attorney General. Section 3(c) of Executive Order 12988 requires Executive agencies to review regulations in light of applicable standards in sections 3(a) and 3(b) to determine whether they are met or it is unreasonable to meet one or more of them. DOE has completed the required review and determined that, to the extent permitted by law, this final rule meets the relevant standards of Executive Order 12988.

G. Review Under the Unfunded Mandates Reform Act of 1995

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA) requires each Federal agency to assess the effects of Federal regulatory actions on State, local, and Tribal governments and the private sector. Public Law 104–4, sec. 201 (codified at 2 U.S.C. 1531). For a proposed regulatory action likely to result in a rule that may cause the expenditure by State, local, and Tribal governments, in the aggregate, or by the private sector of $100 million or more in any one year (adjusted annually for inflation), section 202 of UMRA requires a Federal agency to publish a written statement that estimates the resulting costs, benefits, and other effects on the national economy. (2 U.S.C. 1532(a), (b)) The UMRA also requires a Federal agency to develop an effective process to permit timely input by elected officers of State, local, and Tribal governments on a proposed ''significant intergovernmental mandate,'' and requires an agency plan for giving notice and opportunity for timely input to potentially affected small governments before establishing any requirements that might significantly or uniquely affect them. On March 18, 1997, DOE published a statement of policy on its process for intergovernmental consultation under UMRA. 62 FR 12820. (This policy is also available at *www.energy.gov/gc/office-general-counsel* under ''Guidance & Opinions'' (Rulemaking)) DOE examined this final rule according to UMRA and its statement of policy and determined that the rule contains neither an intergovernmental mandate, nor a mandate that may result in the expenditure by State, local, and Tribal governments, in the aggregate, or by the private sector, of $100 million or more in any year. Accordingly, no further assessment or analysis is required under UMRA.

H. Review Under the Treasury and General Government Appropriations Act, 1999

Section 654 of the Treasury and General Government Appropriations Act, 1999 (Pub. L. 105–277) requires Federal agencies to issue a Family Policymaking Assessment for any rule that may affect family well-being. This final rule will not have any impact on the autonomy or integrity of the family as an institution. Accordingly, DOE has concluded that it is not necessary to prepare a Family Policymaking Assessment.

I. Review Under Executive Order 12630

Pursuant to Executive Order 12630, ''Governmental Actions and Interference with Constitutionally Protected Property Rights,'' 53 FR 8859 (March 18, 1988), DOE has determined that this final rule will not result in any takings that might require compensation under the Fifth Amendment to the U.S. Constitution.

J. Review Under the Treasury and General Government Appropriations Act, 2001

Section 515 of the Treasury and General Government Appropriations Act, 2001 (44 U.S.C. 3516 note) provides for Federal agencies to review most disseminations of information to the public under information quality guidelines established by each agency pursuant to general guidelines issued by OMB. OMB's guidelines were published at 67 FR 8452 (Feb. 22, 2002), and DOE's guidelines were published at 67 FR 62446 (Oct. 7, 2002). DOE has reviewed this final rule under the OMB and DOE guidelines and has concluded that it is consistent with the applicable policies in those guidelines.

K. Review Under Executive Order 13211

Executive Order 13211, ''Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use,'' 66 FR 28355 (May 22, 2001), requires Federal agencies to prepare and submit to OIRA at OMB, a Statement of Energy Effects for any significant energy action. A ''significant energy action'' is defined as any action by an agency that promulgates or is expected to lead to promulgation of a final rule, and that: (1) Is a significant regulatory action under Executive Order 12866, or any successor order; and (2) is likely to have a significant adverse effect on the supply, distribution, or use of energy; or (3) is designated by the Administrator of OIRA as a significant energy action. For any significant energy action, the agency must give a detailed statement of any adverse effects on energy supply, distribution, or use if the regulation is implemented, and of reasonable alternatives to the action and their expected benefits on energy supply, distribution, and use.

DOE has concluded that the regulatory action in this document, which adopts amendments to the test procedure for commercial water heating equipment, is not a significant regulatory action under Executive Order 12866. Moreover, it would not have a significant adverse effect on the supply, distribution, or use of energy, nor has it been designated as a significant energy action by the Administrator of OIRA.

Accordingly, DOE has not prepared a Statement of Energy Effects for this final rule.

L. Review Under Section 32 of the Federal Energy Administration Act of 1974

Under section 301 of the Department of Energy Organization Act (Pub. L. 95–91; 42 U.S.C. 7101 *et seq.*), DOE must comply with all laws applicable to the former Federal Energy Administration, including section 32 of the Federal Energy Administration Act of 1974 (Pub. L. 93–275), as amended by the Federal Energy Administration Authorization Act of 1977 (Pub. L. 95–70). (15 U.S.C. 788; FEAA) Section 32 essentially provides in relevant part that, where a proposed rule authorizes or requires use of commercial standards, the notice of proposed rulemaking must inform the public of the use and background of such standards. In addition, section 32(c) requires DOE to consult with the Attorney General and the Chairwoman of the Federal Trade Commission (FTC) concerning the impact of the commercial or industry standards on competition.

This final rule incorporates testing methods contained in certain sections, figures, and tables in the following commercial standards: (1) ANSI Z21.10.3–2015/CSA 4.3–2015, ''Gas-fired Water Heaters, Volume III, Storage Water Heaters with Input Ratings Above 75,000 Btu Per Hour, Circulating and Instantaneous''; (2) ANSI/ASHRAE Standard 118.1–2012, ''Method of Testing for Rating Commercial Gas, Electric, and Oil Service Water-Heating Equipment''; (3) ASTM D2156–09, ''Standard Test Method for Smoke Density in Flue Gases from Burning Distillate Fuels''; (4) ASTM C177–13, ''Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus''; and (5) ASTM C518–15, ''Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus.'' While the amended test procedures are not exclusively based on these standards, DOE's amended test procedures adopt several provisions from these standards without amendment. The Department has evaluated these standards and is unable to conclude whether they fully comply with the requirements of section 32(b) of the FEAA, (*i.e.,* that they were developed in a manner that fully provides for public participation, comment, and review). DOE has consulted with both the Attorney General and the Chairwoman of the FTC concerning the impact of these test procedures on competition and has received no comments objecting to their use.

M. Congressional Notification

As required by 5 U.S.C. 801, DOE will report to Congress on the promulgation of this final rule before its effective date. The report will state that it has been determined that the rule is not a ''major rule'' as defined by 5 U.S.C. 804(2).

N. Description of Materials Incorporated by Reference

In this final rule, DOE incorporates by reference the following test standards:

(1) ANSI Z21.10.3–2015/CSA 4.3–2015, ''Gas-fired Water Heaters, Volume III, Storage Water Heaters with Input Ratings Above 75,000 Btu Per Hour, Circulating and Instantaneous,'' Annex E (normative) Efficiency test procedures, E.1 ''Method of test for measuring thermal efficiency'';

(2) ANSI/ASHRAE Standard 118.1–2012, ''Method of Testing for Rating Commercial Gas, Electric, and Oil Service Water-Heating Equipment,'' Section 3 ''Definition and Symbols,'' Section 4 ''Classifications by Mode of Operation,'' Section 6 ''Instruments,'' Section 7 ''Apparatus,'' Section 8 ''Methods of Testing,'' Section 9.1.1 ''Full Input Rating'', and Section 10.3.1 ''Type IV and Type V Full-Capacity Test Method'';

(3) ASTM C177–13, ''Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus''; and

(4) ASTM C518–15, ''Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus.''

(5) ASTM D2156–09, ''Standard Test Method for Smoke Density in Flue Gases from Burning Distillate Fuels'';

ANSI Z21.10.3–2015/CSA 4.3–2015 is an industry-accepted test procedure for measuring the performance of commercial water heaters. In this final rule, DOE incorporates by reference sections of this test procedure that address test set-up, instrumentation, test conditions, and test conduct. ANSI Z21.10.3–2015/CSA 4.3–2015 is available on ANSI's Web site at *http://webstore.ansi.org/RecordDetail.aspx?sku=ANSI+Z21.10.3-2015%2fCSA+4.3-2015.*

ANSI/ASHRAE Standard 118.1–2012 is an industry-accepted test procedure for measuring the performance of commercial water heaters. ANSI/ASHRAE 118.1–2012 is available on ANSI's Web site at *http://webstore.ansi.org/RecordDetail.aspx?sku=ANSI%2FASHRAE+Standard+118.1-2012.*

ASTM C177–13 is an industry-accepted test procedure for determining the R-value of a sample using a guarded-hot-plate apparatus. ASTM C177–13 is available on ASTM's Web site at *http://www.astm.org/Standards/C177.htm.*

ASTM C518–15 is an industry-accepted test procedure for determining the R-value of a sample using a heat flow meter apparatus. ASTM C518–15 is available on ASTM's Web site at *http://www.astm.org/Standards/C518.htm.*

ASTM D2156–09 is an industry-accepted test procedure for determining the smoke spot number of flue gases. ASTM D2156–09 is available on ASTM's Web site at *http://www.astm.org/Standards/D2156.htm.*

V. Approval of the Office of the Secretary

The Secretary of Energy has approved publication of this final rule.

List of Subjects

10 CFR Part 429

Confidential business information, Energy conservation, Household appliances, Imports, Reporting and recordkeeping requirements.

10 CFR Part 430

Administrative practice and procedure, Confidential business information, Energy conservation, Household appliances, Imports, Intergovernmental relations, Small businesses.

10 CFR Part 431

Administrative practice and procedure, Confidential business information, Incorporation by reference, Test procedures, Reporting and recordkeeping requirements.

Issued in Washington, DC, on October 21, 2016.

Kathleen B. Hogan,

Deputy Assistant Secretary for Energy Efficiency, Energy Efficiency and Renewable Energy.

For the reasons set forth in the preamble, DOE amends parts 429, 430, and 431 of chapter II, subchapter D of title 10, Code of Federal Regulations, as set forth below:

PART 429—CERTIFICATION, COMPLIANCE, AND ENFORCEMENT FOR CONSUMER PRODUCTS AND COMMERCIAL AND INDUSTRIAL EQUIPMENT

■ 1. The authority citation for part 429 continues to read as follows:

Authority: 42 U.S.C. 6291–6317; 28 U.S.C. 2461 note.

■ 2. Section 429.44 is amended by:

■ a. Revising paragraphs (b) and (c);
■ b. Redesignating paragraph (d) as (e) and revising newly redesignated paragraph (e); and
■ c. Adding a reserved paragraph (d).

The revisions read as follows:

§ 429.44 Commercial water heating equipment.

* * * * *

(b) *Determination of represented values for all types of commercial water heaters except residential-duty commercial water heaters.* Manufacturers must determine the represented values, which includes the certified ratings, for each basic model of commercial water heating equipment except residential-duty commercial water heaters, either by testing, in conjunction with the applicable sampling provisions, or by applying an AEDM as set forth in § 429.70.

(1) *Units to be tested.* If the represented value for a given basic model is determined through testing:

(i) The general requirements of § 429.11 apply; and

(ii) A sample of sufficient size must be randomly selected and tested to ensure that:

(A) Any represented value of energy consumption or other measure of energy use of a basic model for which consumers would favor lower values must be greater than or equal to the higher of:

(*1*) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

And, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample; or,

(*2*) The upper 95-percent confidence limit (UCL) of the true mean divided by 1.05, where:

$$UCL = \bar{x} + t_{.95}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.95}$ is the t statistic for a 95-percent one-tailed confidence interval with n-1 degrees of freedom (from appendix A to subpart B of this part). And,

(B) Any represented value of energy efficiency or other measure of energy consumption of a basic model for which consumers would favor higher values must be less than or equal to the lower of:

(*1*) The mean of the sample, where:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

And, $\bar{x}$ is the sample mean; n is the number of samples; and x_i is the ith sample; or,

(*2*) The lower 95-percent confidence limit (LCL) of the true mean divided by 0.95, where:

$$LCL = \bar{x} - t_{.95}\left(\frac{s}{\sqrt{n}}\right)$$

And $\bar{x}$ is the sample mean; s is the sample standard deviation; n is the number of samples; and $t_{0.95}$ is the t statistic for a 95-percent one-tailed confidence interval with n-1 degrees of freedom (from appendix A to subpart B of this part).

(2) *Alternative efficiency determination methods.* In lieu of testing, a represented value of efficiency or consumption for a basic model must be determined through the application of an AEDM pursuant to the requirements of § 429.70 and the provisions of this section, where:

(i) Any represented value of energy consumption or other measure of energy use of a basic model for which consumers would favor lower values must be greater than or equal to the output of the AEDM and less than or equal to the Federal standard for that basic model; and

(ii) Any represented value of energy efficiency or other measure of energy consumption of a basic model for which consumers would favor higher values must be less than or equal to the output of the AEDM and greater than or equal to the Federal standard for that basic model.

(3) *Rated input.* The rated input for a basic model reported in accordance with paragraph (c)(2) of this section must be the maximum rated input listed on the nameplate for that basic model.

(c) *Certification reports.* For commercial water heating equipment other than residential-duty commercial water heaters:

(1) The requirements of § 429.12 apply; and

(2) Pursuant to § 429.12(b)(13), a certification report must include the following public equipment-specific information:

(i) Commercial electric storage water heaters with storage capacity less than or equal to 140 gallons: The standby loss in percent per hour (%/h) and the measured storage volume in gallons (gal).

(ii) Commercial gas-fired and oil-fired storage water heaters with storage capacity less than or equal to 140 gallons: The thermal efficiency in percent (%), the standby loss in British thermal units per hour (Btu/h), the rated storage volume in gallons (gal), and the rated input in British thermal units per hour (Btu/h).

(iii) Commercial water heaters and hot water supply boilers with storage capacity greater than 140 gallons: The thermal efficiency in percent (%); whether the storage volume is greater than 140 gallons (Yes/No); whether the tank surface area is insulated with at least R–12.5 (Yes/No); whether a standing pilot light is used (Yes/No); for gas or oil-fired water heaters, whether the basic model has a fire damper or fan-assisted combustion (Yes/No); and, if applicable, pursuant to § 431.110 of this chapter, the standby loss in British thermal units per hour (Btu/h); the measured storage volume in gallons (gal); and the rated input in British thermal units per hour (Btu/h).

(iv) Commercial gas-fired and oil-fired instantaneous water heaters with storage capacity greater than or equal to 10 gallons and gas-fired and oil-fired hot water supply boilers with storage capacity greater than or equal to 10 gallons: The thermal efficiency in percent (%); the standby loss in British thermal units per hour (Btu/h); the rated storage volume in gallons (gal); the rated input in British thermal units per hour (Btu/h); whether the water heater includes a storage tank with a storage volume greater than or equal to 10 gallons (Yes/No). For equipment that does not meet the definition of storage-type instantaneous water heaters (as set forth in 10 CFR 431.102), in addition to the requirements discussed previously in this paragraph (c)(2)(iv), the following must also be included in the certification report: whether the measured storage volume is determined using weight-based test in accordance with § 431.106 of this chapter or the calculation-based method in accordance with § 429.72; whether the water heater will initiate main burner operation based on a temperature-controlled call for heating that is internal to the water heater (Yes/No); whether the water heater is equipped with an integral pump purge functionality (Yes/No); if the water heater is equipped with integral pump purge, the default duration of the pump off delay (minutes).

(v) Commercial gas-fired and oil-fired instantaneous water heaters with storage capacity less than 10 gallons and gas-fired and oil-fired hot water supply boilers with storage capacity less than 10 gallons: The thermal efficiency in percent (%); the rated storage volume in gallons (gal), the rated input in British

thermal units per hour (Btu/h); and whether the measured storage volume is determined using weight-based test in accordance with § 431.106 of this chapter or the calculation-based method in accordance with § 429.72.

(vi) Commercial unfired hot water storage tanks: The thermal insulation (*i.e.,* R-value) and stored volume in gallons (gal).

(3) Pursuant to § 429.12(b)(13), a certification report must include the following additional, equipment-specific information:

(i) Whether the basic model is engineered-to-order; and

(ii) For any basic model rated with an AEDM, whether the manufacturer elects the witness test option for verification testing. (See § 429.70(c)(5)(iii) for options.) However, the manufacturer may not select more than 10 percent of AEDM-rated basic models to be eligible for witness testing.

(4) Pursuant to § 429.12(b)(13), a certification report may include supplemental testing instructions in PDF format. If necessary to run a valid test, the equipment-specific, supplemental information must include any additional testing and testing set-up instructions (*e.g.,* whether a bypass loop was used for testing) for the basic model and all other information (*e.g.,* operational codes or overrides for the control settings) necessary to operate the basic model under the required conditions specified by the relevant test procedure. A manufacturer may also include with a certification report other supplementary items in PDF format for DOE's consideration in performing testing under subpart C of this part. For example, for oil-fired commercial water heating equipment (other than residential-duty commercial water heaters): The allowable range for CO_2 reading in percent (%) and the fuel pump pressure in pounds per square inch gauge (psig).

* * * * *

(e) Alternative methods for determining efficiency or energy use for commercial water heating equipment can be found in § 429.70 of this subpart.

■ 3. Section 429.72 is amended by adding paragraph (e) to read as follows:

§ 429.72 Alternative methods for determining non-energy ratings.

* * * * *

(e) *Commercial gas-fired and oil-fired instantaneous water heaters and hot water supply boilers.* The storage volume of a commercial gas-fired or oil-fired instantaneous water heater or a commercial gas-fired or oil-fired hot water supply boiler basic model may be determined by performing a calculation of the stored water volume based upon design drawings (including computer-aided design (CAD) models) or physical dimensions of the basic model. Any value of storage volume of a basic model reported to DOE in a certification of compliance in accordance with § 429.44(c)(2)(iv) and (v) must be calculated using the design drawings or physical dimensions, or measured as per the applicable provisions in the test procedures in 10 CFR 431.106. The storage volume determination must include all water contained within the water heater from the inlet connection to the outlet connection(s). The storage volume of water contained in the water heater must then be computed in gallons.

■ 4. Section 429.134 is amended by adding paragraph (n) to read as follows:

§ 429.134 Product-specific enforcement provisions.

* * * * *

(n) *Commercial water heating equipment other than residential-duty commercial water heaters*—(1) *Verification of fuel input rate.* The fuel input rate of each tested unit of the basic model will be measured pursuant to the test requirements of § 431.106 of this chapter. The measured fuel input rate (either the measured fuel input rate for a single unit sample or the average of the measured fuel input rates for a multiple unit sample) will be compared to the rated input certified by the manufacturer. The certified rated input will be considered valid only if the measured fuel input rate is within two percent of the certified rated input.

(i) If the certified rated input is found to be valid, then the certified rated input will serve as the basis for determination of the appropriate equipment class and calculation of the standby loss standard (as applicable).

(ii) If the measured fuel input rate for gas-fired commercial water heating equipment is not within two percent of the certified rated input, DOE will first attempt to increase or decrease the gas outlet pressure within 10 percent of the value specified on the nameplate of the model of commercial water heating equipment being tested to achieve the certified rated input (within 2 percent). If the fuel input rate is still not within two percent of the certified rated input, DOE will attempt to increase or decrease the gas supply pressure within the range specified on the nameplate of the model of commercial water heating equipment being tested. If the measured fuel input rate is still not within two percent of the certified rated input, DOE will attempt to modify the gas inlet orifice, if the unit is equipped with one. If the measured fuel input rate still is not within two percent of the certified rated input, the measured fuel input rate will serve as the basis for determination of the appropriate equipment class and calculation of the standby loss standard (as applicable).

(iii) If the measured fuel input rate for oil-fired commercial water heating equipment is not within two percent of the certified rated input, the measured fuel input rate will serve as the basis for determination of the appropriate equipment class and calculation of the standby loss standard (as applicable).

(2) [Reserved]

PART 430—ENERGY CONSERVATION PROGRAM FOR CONSUMER PRODUCTS

■ 5. The authority citation for part 430 continues to read as follows:

Authority: 42 U.S.C. 6291–6309; 28 U.S.C. 2461 note.

■ 6. Section 430.2 is amended by:

■ a. Removing the definition of ''Electric heat pump water heater'';

■ b. Revising the definitions of ''Electric instantaneous water heater'' and ''Electric storage water heater'';

■ c. Removing the definition of ''Gas-fired heat pump water heater''; and

■ d. Revising the definitions of ''Gas-fired instantaneous water heater'', ''Gas-fired storage water heater'', ''Oil-fired instantaneous water heater'', and ''Oil-fired storage water heater''.

The revisions read as follows:

§ 430.2 Definitions.

* * * * *

Electric instantaneous water heater means a water heater that uses electricity as the energy source, has a nameplate input rating of 12 kW or less, and contains no more than one gallon of water per 4,000 Btu per hour of input.

* * * * *

Electric storage water heater means a water heater that uses electricity as the energy source, has a nameplate input rating of 12 kW or less, and contains more than one gallon of water per 4,000 Btu per hour of input.

* * * * *

Gas-fired instantaneous water heater means a water heater that uses gas as the main energy source, has a nameplate input rating less than 200,000 Btu/h, and contains no more than one gallon of water per 4,000 Btu per hour of input.

Gas-fired storage water heater means a water heater that uses gas as the main energy source, has a nameplate input rating of 75,000 Btu/h or less, and contains more than one gallon of water per 4,000 Btu per hour of input.

* * * * *

Oil-fired instantaneous water heater means a water heater that uses oil as the main energy source, has a nameplate input rating of 210,000 Btu/h or less, and contains no more than one gallon of water per 4,000 Btu per hour of input.

Oil-fired storage water heater means a water heater that uses oil as the main energy source, has a nameplate input rating of 105,000 Btu/h or less, and contains more than one gallon of water per 4,000 Btu per hour of input.

* * * * *

PART 431—ENERGY EFFICIENCY PROGRAM FOR CERTAIN COMMERCIAL AND INDUSTRIAL EQUIPMENT

■ 7. The authority citation for part 431 continues to read as follows:

Authority: 42 U.S.C. 6291–6317; 28 U.S.C. 2461 note.

■ 8. Section 431.102 is amended by:

■ a. Revising the section heading;

■ b. Adding in alphabetical order a definition for ''Air-source commercial heat pump water heater;''

■ c. Removing the definition of ''ASTM–D–2156–80;''

■ d. Adding in alphabetical order definitions for ''Coefficient of performance,'' ''Commercial heat pump water heater,'' ''Direct geo-exchange commercial heat pump water heater,'' ''Flow-activated instantaneous water heater,'' ''Fuel input rate,'' ''Ground-source closed-loop commercial heat pump water heater,'' and ''Ground water-source commercial heat pump water heater;''

■ e. Revising the definition of ''Hot water supply boiler;''

■ f. Adding in alphabetical order a definition for ''Indoor water-source commercial heat pump water heater;''

■ g. Revising the definition of ''Instantaneous water heater;''

■ h. Removing the definition of ''Packaged boiler;''

■ i. Adding in alphabetical order a definition for ''Rated input;''

■ j. Revising the definitions of ''R-value,'' ''Residential-duty commercial water heater,'' and ''Standby loss,''

■ k. Adding in alphabetical order a definition for ''Storage-type instantaneous water heater;''

and

■ l. Revising the definition of ''Storage water heater.''

The revisions and additions read as follows:

§ 431.102 Definitions concerning commercial water heaters, hot water supply boilers, unfired hot water storage tanks, and commercial heat pump water heaters.

Air-source commercial heat pump water heater means a commercial heat pump water heater that utilizes indoor or outdoor air as the heat source.

* * * * *

Coefficient of performance (COP_h) means the dimensionless ratio of the rate of useful heat transfer gained by the water (expressed in Btu/h), to the rate of electric power consumed during operation (expressed in Btu/h).

Commercial heat pump water heater (CHPWH) means a water heater (including all ancillary equipment such as fans, blowers, pumps, storage tanks, piping, and controls, as applicable) that uses a refrigeration cycle, such as vapor compression, to transfer heat from a low-temperature source to a higher-temperature sink for the purpose of heating potable water, and has a rated electric power input greater than 12 kW. Such equipment includes, but is not limited to, air-source heat pump water heaters, water-source heat pump water heaters, and direct geo-exchange heat pump water heaters.

Direct geo-exchange commercial heat pump water heater means a commercial heat pump water heater that utilizes the earth as a heat source and allows for direct exchange of heat between the earth and the refrigerant in the evaporator coils.

Flow-activated instantaneous water heater means an instantaneous water heater or hot water supply boiler that activates the burner or heating element only if heated water is drawn from the unit.

Fuel input rate means the maximum measured rate at which gas-fired or oil-fired commercial water heating equipment uses energy as determined using test procedures prescribed under § 431.106 of this part.

Ground-source closed-loop commercial heat pump water heater means a commercial heat pump water heater that utilizes a fluid circulated through a closed piping loop as a medium to transfer heat from the ground to the refrigerant in the evaporator. The piping loop may be buried inside the ground in horizontal trenches or vertical bores, or submerged in a surface water body.

Ground water-source commercial heat pump water heater means a commercial heat pump water heater that utilizes ground water as the heat source.

Hot water supply boiler means a packaged boiler (defined in § 431.82 of this part) that is industrial equipment and that:

(1) Has a rated input from 300,000 Btu/h to 12,500,000 Btu/h and of at least 4,000 Btu/h per gallon of stored water;

(2) Is suitable for heating potable water; and

(3) Meets either or both of the following conditions:

(i) It has the temperature and pressure controls necessary for heating potable water for purposes other than space heating; or

(ii) The manufacturer's product literature, product markings, product marketing, or product installation and operation instructions indicate that the boiler's intended uses include heating potable water for purposes other than space heating.

Indoor water-source commercial heat pump water heater means a commercial heat pump water heater that utilizes indoor water as the heat source.

Instantaneous water heater means a water heater that uses gas, oil, or electricity, including:

(1) Gas-fired instantaneous water heaters with a rated input both greater than 200,000 Btu/h and not less than 4,000 Btu/h per gallon of stored water;

(2) Oil-fired instantaneous water heaters with a rated input both greater than 210,000 Btu/h and not less than 4,000 Btu/h per gallon of stored water; and

(3) Electric instantaneous water heaters with a rated input both greater than 12 kW and not less than 4,000 Btu/h per gallon of stored water.

* * * * *

Rated input means the maximum rate at which commercial water heating equipment is rated to use energy as specified on the nameplate.

R-value means the thermal resistance of insulating material as determined using ASTM C177–13 or C518–15 (incorporated by reference; see § 431.105) and expressed in (°F·ft²·h/Btu).

Residential-duty commercial water heater means any gas-fired storage, oil-fired storage, or electric instantaneous commercial water heater that meets the following conditions:

(1) For models requiring electricity, uses single-phase external power supply;

(2) Is not designed to provide outlet hot water at temperatures greater than 180 °F; and

(3) Does not meet any of the following criteria:

Water heater type	Indicator of non-residential application
Gas-fired Storage	Rated input >105 kBtu/h; Rated storage volume >120 gallons.
Oil-fired Storage	Rated input >140 kBtu/h; Rated storage volume >120 gallons.
Electric Instantaneous	Rated input >58.6 kW; Rated storage volume >2 gallons.

Standby loss means:

(1) For electric commercial water heating equipment (not including commercial heat pump water heaters), the average hourly energy required to maintain the stored water temperature expressed as a percent per hour (%/h) of the heat content of the stored water above room temperature and determined in accordance with appendix B or D to subpart G of part 431 (as applicable), denoted by the term ''S''; or

(2) For gas-fired and oil-fired commercial water heating equipment, the average hourly energy required to maintain the stored water temperature expressed in British thermal units per hour (Btu/h) based on a 70 °F temperature differential between stored water and ambient room temperature and determined in accordance with appendix A or C to subpart G of part 431 (as applicable), denoted by the term ''SL.''

Storage-type instantaneous water heater means an instantaneous water heater that includes a storage tank with a storage volume greater than or equal to 10 gallons.

Storage water heater means a water heater that uses gas, oil, or electricity to heat and store water within the appliance at a thermostatically-controlled temperature for delivery on demand, including:

(1) Gas-fired storage water heaters with a rated input both greater than 75,000 Btu/h and less than 4,000 Btu/h per gallon of stored water;

(2) Oil-fired storage water heaters with a rated input both greater than 105,000 Btu/h and less than 4,000 Btu/h per gallon of stored water; and

(3) Electric storage water heaters with a rated input both greater than 12 kW and less than 4,000 Btu/h per gallon of stored water.

* * * * *

§ 431.104 [Removed]

■ 9. Section 431.104 is removed.

■ 10. Section 431.105 is amended by revising paragraph (b) and adding paragraphs (c) and (d) to read as follows:

§ 431.105 Materials incorporated by reference.

* * * * *

(b) *ASHRAE.* American Society of Heating, Refrigerating and Air-Conditioning Engineers, 1791 Tullie Circle NE. Atlanta, GA 30329, (800) 527–4723, or go to *https://www.ashrae.org.*

(1) ANSI/ASHRAE Standard 118.1–2012, ''Method of Testing for Rating Commercial Gas, Electric, and Oil Service Water-Heating Equipment,'' approved by ASHRAE on October 26, 2012, IBR approved for appendix E to this subpart, as follows:

(i) Section 3—Definitions and Symbols;

(ii) Section 4—Classifications by Mode of Operation (sections 4.4, and 4.5 only);

(iii) Section 6—Instruments (except sections 6.3, 6.4 and 6.6);

(iv) Section 7—Apparatus (except section 7.4, Figures 1 through 4, section 7.7.5, Table 2, and section 7.7.7.4);

(v) Section 8—Methods of Testing:

(A) Section 8.2—Energy Supply, Section 8.2.1—Electrical Supply;

(B) Section 8.7—Water Temperature Control;

(vi) Section 9—Test Procedures: 9.1—Input Rating, Heating Capacity, Thermal Efficiency, Coefficient of Performance (COP), and Recovery Rating; 9.1.1—Full Input Rating;

(vii) Section 10—Calculation of Results: Section 10.3—Heat-Pump Water Heater Water-Heating Capacity, Coefficient of Performance (COP), and Recovery Rating; Section 10.3.1—Type IV and Type V Full-Capacity Test Method.

(2) [Reserved]

(c) *ASTM.* ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428–2959, (610) 832–9585, or go to *http://www.astm.org.*

(1) ASTM C177–13, ''Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus,'' approved September 15, 2013, IBR approved for § 431.102.

(2) ASTM C518–15, ''Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus,'' approved September 1, 2015, IBR approved for § 431.102t.

(3) ASTM D2156–09 (Reapproved 2013), ''Standard Test Method for Smoke Density in Flue Gases from Burning Distillate Fuels,'' approved October 1, 2013, IBR approved for appendices A and C to this subpart.

(d) CSA Group, 5060 Spectrum Way, Suite 100, Mississauga, Ontario, Canada L4W 5N6, 800–463–6727, or go to *http://www.csagroup.org/.*

(1) ANSI Z21.10.3–2015 * CSA 4.3–2015 (''ANSI Z21.10.3–2015''), ''Gas-fired water heaters, volume III, storage water heaters with input ratings above 75,000 Btu per hour, circulating and instantaneous,'' approved by ANSI on October 5, 2015, IBR approved for appendices A, B, and C to this subpart, as follows:

(i) Annex E (normative) Efficiency test procedures—E.1—Method of test for measuring thermal efficiency, paragraph c—Vent requirements; and

(ii) Annex E (normative) Efficiency test procedures—E.1—Method of test for measuring thermal efficiency, paragraph f—Installation of temperature sensing means.

(2) [Reserved]

■ 11. Section 431.106 is revised to read as follows:

§ 431.106 Uniform test method for the measurement of energy efficiency of commercial water heating equipment.

(a) *Scope.* This section contains test procedures for measuring, pursuant to EPCA, the energy efficiency of commercial water heating equipment.

(b) *Testing and calculations.* Determine the energy efficiency of commercial water heating equipment by conducting the applicable test procedure(s):

(1) *Residential-duty commercial water heaters.* Test in accordance with appendix E to subpart B of part 430 of this chapter.

(2) *Commercial water heating equipment other than residential-duty commercial water heaters.* Test in accordance with the appropriate test procedures in appendices to subpart G of this part.

(i) *Gas-fired and oil-fired storage water heaters and storage-type instantaneous water heaters.* Test according to appendix A to subpart G of this part.

(ii) *Electric storage water heaters and storage-type instantaneous water heaters.* Test according to appendix B to subpart G of this part.

(iii) *Gas-fired and oil-fired instantaneous water heaters and hot water supply boilers (other than storage-type instantaneous water heaters).* Test

according to appendix C to subpart G of this part.

(iv) *Electric instantaneous water heaters (other than storage-type instantaneous water heaters).* Test according to appendix D to subpart G of this part.

(v) *Commercial heat pump water heaters.* Test according to appendix E to subpart G of this part.

§ 431.107 [Removed]

■ 12. Section 431.107 is removed.

■ 13. Add appendix A to subpart G of part 431 to read as follows:

Appendix A to Subpart G of Part 431—Uniform Test Method for the Measurement of Thermal Efficiency and Standby Loss of Gas-Fired and Oil-Fired Storage Water Heaters and Storage-Type Instantaneous Water Heaters

Note: Prior to November 6, 2017, manufacturers must make any representations with respect to the energy use or efficiency of the subject commercial water heating equipment in accordance with the results of testing pursuant to this appendix or the procedures in 10 CFR 431.106 that were in place on January 1, 2016. On and after November 6, 2017, manufacturers must make any representations with respect to energy use or efficiency of gas-fired and oil-fired storage water heaters and storage-type instantaneous water heaters in accordance with the results of testing pursuant to this appendix to demonstrate compliance with the energy conservation standards at 10 CFR 431.110.

1. General

Determine the thermal efficiency and standby loss (as applicable) in accordance with the following sections of this appendix. Certain sections reference sections of Annex E.1 of ANSI Z21.10.3–2015 (incorporated by reference; see § 431.105). Where the instructions contained in the sections below conflict with instructions in Annex E.1 of ANSI Z21.10.3–2015, the instructions contained in this appendix control.

2. Test Set-Up

2.1. *Placement of Water Heater.* A water heater for installation on combustible floors must be placed on a ¾-inch plywood platform supported by three 2 x 4-inch runners. If the water heater is for installation on noncombustible floors, suitable noncombustible material must be placed on the platform. When the use of the platform for a large water heater is not practical, the water heater may be placed on any suitable flooring. A wall-mounted water heater must be mounted on a simulated wall section.

2.2. *Installation of Temperature Sensors.* Inlet and outlet water piping must be turned vertically downward from the connections on the water heater so as to form heat traps. Temperature sensors for measuring supply and outlet water temperatures must be installed upstream from the inlet heat trap piping and downstream from the outlet heat trap piping, respectively, in accordance with Figure 2.1, 2.2, or 2.3 (as applicable based on the location of inlet and outlet piping connections) of this section.

The water heater must meet the requirements shown in Figure 2.1, 2.2, or 2.3 (as applicable) at all times during the conduct of the thermal efficiency and standby loss tests. Any factory-supplied heat traps must be installed per the installation instructions while ensuring the requirements in Figure 2.1, 2.2, or 2.3 are met. All dimensions specified in Figure 2.1, 2.2, and 2.3 and in this section are measured from the outer surface of the pipes and water heater outer casing (as applicable).

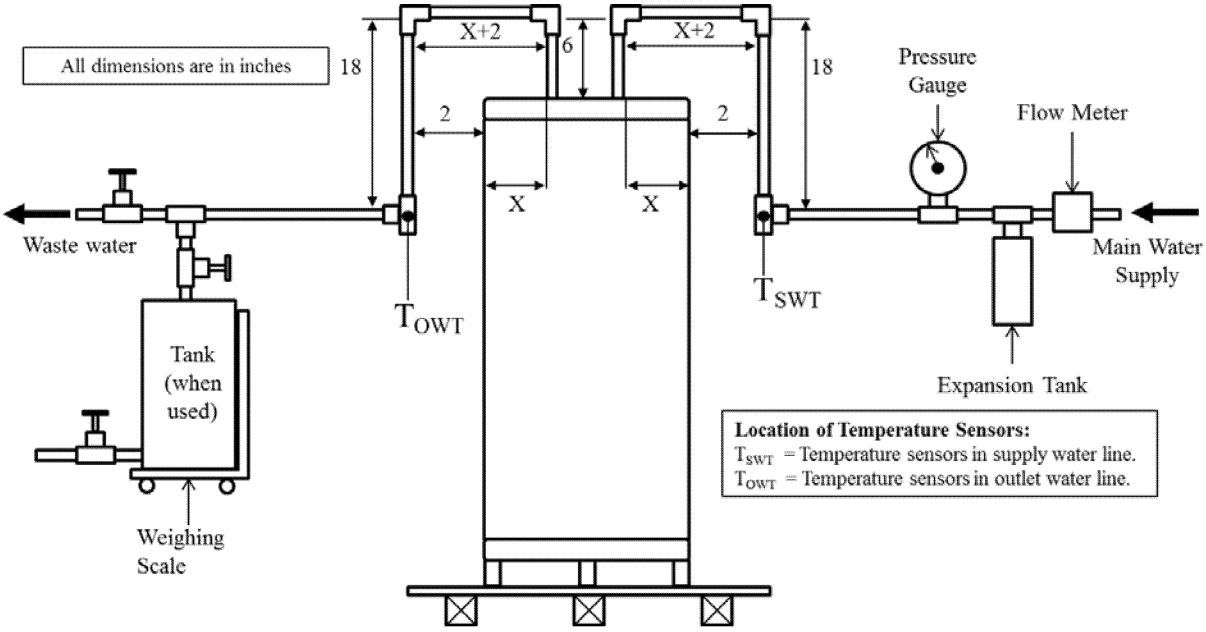

Figure 2.1. Set-up for thermal efficiency and standby loss test for water heaters equipped with vertical (top) connections

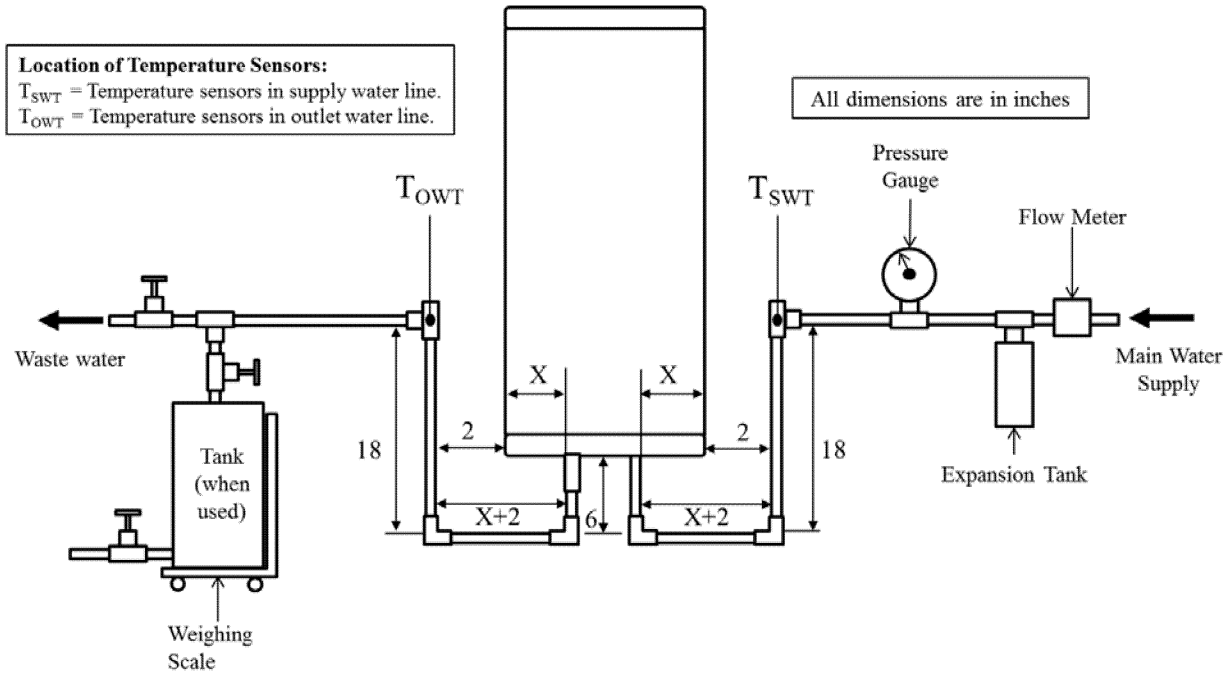

Figure 2.2. Set-up for thermal efficiency and standby loss test for water heaters equipped with vertical (bottom) connections

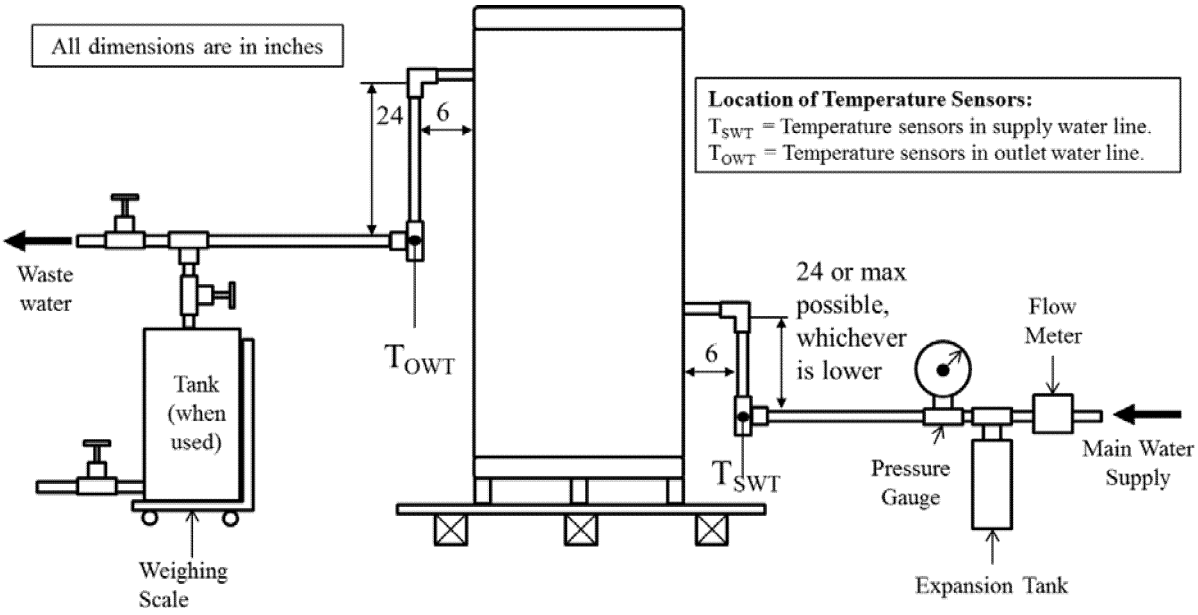

Figure 2.3. Set-up for thermal efficiency and standby loss test for water heaters equipped with horizontal connections

2.3 *Installation of Temperature Sensors for Measurement of Mean Tank Temperature.* Install temperature sensors inside the tank for measurement of mean tank temperature according to the instructions in paragraph f of Annex E.1 of ANSI Z21.10.3–2015 (incorporated by reference; see § 431.105). Calculate the mean tank temperature as the average of the six installed temperature sensors.

2.4. *Piping Insulation.* Insulate all water piping external to the water heater jacket, including heat traps and piping that are installed by the manufacturer or shipped with the unit, for at least 4 ft of piping length from the connection at the appliance, with material having an R-value not less than 4 °F·ft²·h/Btu. Ensure that the insulation does not contact any appliance surface except at the location where the pipe connections penetrate the appliance jacket or enclosure.

2.5. *Temperature and Pressure Relief Valve Insulation.* If the manufacturer has not provided a temperature and pressure relief valve, one shall be installed and insulated as specified in section 2.4 of this appendix.

2.6. *Vent Requirements.* Follow the requirements for venting arrangements specified in paragraph c of Annex E.1 of ANSI Z21.10.3–2015 (incorporated by reference; see § 431.105).

2.7. *Energy Consumption.* Install equipment that determines, within ± 1 percent:

2.7.1. The quantity and rate of fuel consumed.

2.7.2. The quantity of electricity consumed by factory-supplied water heater components.

3. Test Conditions

3.1. *Water Supply*

3.1.1. *Water Supply Pressure.* The pressure of the water supply must be maintained between 40 psi and the maximum pressure specified by the manufacturer of the unit being tested. The accuracy of the pressure-measuring devices must be within ± 1.0 pounds per square inch (psi).

3.1.2. *Water Supply Temperature.* During the steady-state verification period and the thermal efficiency test, the temperature of the supply water must be maintained at 70 °F ± 2 °F.

3.1.3. Isolate the water heater using a shutoff valve in the supply line with an expansion tank installed in the supply line downstream of the shutoff valve. There must be no shutoff means between the expansion tank and the appliance inlet.

3.2. *Gas Pressure for Gas-Fired Equipment.* The supply gas pressure must be within the range specified by the manufacturer on the nameplate of the unit being tested. The difference between the outlet pressure of the gas appliance pressure regulator and the value specified by the manufacturer on the nameplate of the unit being tested must not exceed the greater of: ± 10 percent of the nameplate value or ± 0.2 inches water column (in. w.c.). Obtain the higher heating value of the gas burned.

3.3. *Ambient Room Temperature.* During the soak-in period (as applicable), the steady-state verification period, the thermal efficiency test, and the standby loss test, maintain the ambient room temperature at 75 °F ± 10 °F at all times. Measure the ambient room temperature at 1-minute intervals during these periods, except for the soak-in period. Measure the ambient room temperature once before beginning the soak-in period, and ensure no actions are taken during the soak-in period that would cause the ambient room temperature to deviate from the allowable range. Measure the ambient room temperature at the vertical mid-point of the water heater and approximately 2 feet from the water heater jacket. Shield the sensor against radiation. Calculate the average ambient room temperature separately for the thermal efficiency test and standby loss test. During the thermal efficiency and standby loss tests, the ambient room temperature must not vary by more than ± 5.0 °F at any reading from the average ambient room temperature.

3.4. *Test Air Temperature.* During the steady-state verification period, the thermal efficiency test, and the standby loss test, the test air temperature must not vary by more than ± 5 °F from the ambient room temperature at any reading. Measure the test air temperature at 1-minute intervals during these periods and at a location within two feet of the air inlet of the water heater or the combustion air intake vent, as applicable. Shield the

sensor against radiation. For units with multiple air inlets, measure the test air temperature at each air inlet, and maintain the specified tolerance on deviation from the ambient room temperature at each air inlet. For units without a dedicated air inlet, measure the test air temperature within two feet of any location on the water heater where combustion air is drawn.

3.5. *Maximum Air Draft.* During the steady-state verification period, the thermal efficiency test, and the standby loss test, the water heater must be located in an area protected from drafts of more than 50 ft/min. Prior to beginning the steady-state verification period and the standby loss test, measure the air draft within three feet of the jacket or enclosure of the water heater to ensure this condition is met. Ensure that no other changes that would increase the air draft are made to the test set-up or conditions during the conduct of the tests.

3.6. *Setting the Tank Thermostat.* Before starting the steady-state verification period (as applicable) or before the soak-in period (as applicable), the thermostat setting must first be obtained by starting with the water in the system at 70 °F ± 2 °F. Set the thermostat to ensure:

3.6.1. With the supply water temperature set as per section 3.1.2 of this appendix (*i.e.,* 70 °F ± 2 °F), the water flow rate can be varied so that the outlet water temperature is constant at 70 °F ± 2 °F above the supply water temperature while the burner is firing at full firing rate; and

3.6.2. After the water supply is turned off and the thermostat reduces the fuel supply to a minimum, the maximum water temperature measured by the topmost tank temperature sensor (*i.e.,* the highest of the 6 temperature sensors used for calculating mean tank temperature, as required by section 2.3 of this appendix) is 140 °F ± 5 °F.

3.7. *Additional Requirements for Oil-Fired Equipment.*

3.7.1. *Venting Requirements.* Connect a vertical length of flue pipe to the flue gas outlet of sufficient height so as to meet the minimum draft specified by the manufacturer.

3.7.2. *Oil Supply.* Adjust the burner rate so that the following conditions are met:

3.7.2.1. The CO_2 reading is within the range specified by the manufacturer;

3.7.2.2. The fuel pump pressure is within ± 10 percent of manufacturer's specifications;

3.7.2.3. If either the fuel pump pressure or range for CO_2 reading are not specified by the manufacturer on the nameplate of the unit, in literature shipped with the unit, or in supplemental test report instructions included with a certification report, then a default value of 100 psig is to be used for fuel pump pressure, and a default range of 9–12 percent is to be used for CO_2 reading; and

3.7.2.4. Smoke in the flue does not exceed No. 1 smoke as measured by the procedure in ASTM D2156–09 (Reapproved 2013) (incorporated by reference, see § 431.105). To determine the smoke spot number, connect the smoke measuring device to an open-ended tube. This tube must project into the flue ¼ to ½ of the pipe diameter.

3.7.2.5. If no settings on the water heater have been changed and the water heater has not been turned off since the end of a previously run thermal efficiency or standby loss test, measurement of the CO_2 reading and conduct of the smoke spot test are not required prior to beginning a test. Otherwise, measure the CO_2 reading and determine the smoke spot number, with the burner firing, before the beginning of the steady-state verification period prior to the thermal efficiency test, and prior to beginning the standby loss test.

3.8. *Data Collection Intervals.* Follow the data recording intervals specified in the following sections.

3.8.1. *Soak-In Period.* For units that require a soak-in period, measure the ambient room temperature, in °F, prior to beginning the soak-in period.

3.8.2. *Steady-State Verification Period and Thermal Efficiency Test.* For the steady-state verification period and the thermal efficiency test, follow the data recording intervals specified in Table 3.1 of this appendix.

TABLE 3.1—DATA TO BE RECORDED BEFORE AND DURING THE STEADY-STATE VERIFICATION PERIOD AND THERMAL EFFICIENCY TEST

Item recorded	Before steady-state verification period	Every 1 minute [a]	Every 10 minutes
Gas supply pressure, in w.c.	X		
Gas outlet pressure, in w.c.	X		
Barometric pressure, in Hg	X		
Fuel higher heating value, Btu/ft^3 (gas) or Btu/lb (oil)	X		
Oil pump pressure, psig (oil only)	X		
CO_2 reading, % (oil only)	X [b]		
Oil smoke spot reading (oil only)	X [b]		
Air draft, ft/min	X		
Time, minutes/seconds		X	
Fuel weight or volume, lb (oil) or ft^3 (gas)			X [c]
Supply water temperature (T_{SWT}), °F		X	
Outlet water temperature (T_{OWT}), °F		X	
Ambient room temperature, °F		X	
Test air temperature, °F		X	
Water flow rate, (gpm)		X	

Notes:

[a] These measurements are to be recorded at the start of the steady-state verification period and the end of the thermal efficiency test, as well as every minute during both periods.

[b] The smoke spot test and CO_2 reading are not required prior to beginning the steady-state verification period if no settings on the water heater have been changed and the water heater has not been turned off since the end of a previously-run efficiency test (*i.e.,* thermal efficiency or standby loss).

[c] Fuel and electricity consumption over the course of the entire thermal efficiency test must be measured and used in calculation of thermal efficiency.

3.8.3. *Standby Loss Test.* For the standby loss test, follow the data recording intervals specified in Table 3.2 of this appendix. Additionally, the fuel and electricity consumption over the course of the entire test must be measured and used in calculation of standby loss.

TABLE 3.2—DATA TO BE RECORDED BEFORE AND DURING THE STANDBY LOSS TEST

Item recorded	Before test	Every 1 minute [a]
Gas supply pressure, in w.c.	X	
Gas outlet pressure, in w.c.	X	
Barometric pressure, in Hg	X	
Fuel higher heating value, Btu/ft^3 (gas) or Btu/lb (oil)	X	
Oil pump pressure, psig (oil only)	X	
CO_2 reading, % (oil only)	X [b]	
Oil smoke spot reading (oil only)	X [b]	
Air draft, ft/min	X	
Time, minutes/seconds		X
Mean tank temperature, °F		X [c]
Ambient room temperature, °F		X
Test air temperature, °F		X

Notes:

[a] These measurements are to be recorded at the start and end of the test, as well as every minute during the test.

[b] The smoke spot test and CO_2 reading are not required prior to beginning the standby loss test if no settings on the water heater have been changed and the water heater has not been turned off since the end of a previously-run efficiency test (*i.e.,* thermal efficiency or standby loss).

[c] Mean tank temperature is calculated as the average of the 6 tank temperature sensors, installed per section 2.3 of this appendix.

4. Determination of Storage Volume. Determine the storage volume by subtracting the tare weight, measured while the system is dry and empty, from the weight of the system when filled with water and dividing the resulting net weight of water by the density of water at the measured water temperature. The volume of the water contained in the water heater must be computed in gallons.

5. *Thermal Efficiency Test.* Before beginning the steady-state verification period, record the applicable parameters as specified in section 3.8.2 of this appendix. Begin drawing water from the unit by opening the main supply, and adjust the water flow rate to achieve an outlet water temperature of 70 °F ± 2 °F above supply water temperature. The thermal efficiency test shall be deemed complete when there is a continuous, one-hour-long period where the steady-state conditions specified in section 5.1 of this appendix have been met, as confirmed by consecutive readings of the relevant parameters recorded at 1-minute intervals (except for fuel input rate, which is determined at 10-minute intervals, as specified in section 5.4 of this appendix). During the one-hour-long period, the water heater must fire continuously at its full firing rate (*i.e.,* no modulations or cut-outs) and no settings can be changed on the unit being tested at any time. The first 30 minutes of the one-hour-period where the steady-state conditions in section 5.1 of this appendix are met is the steady-state verification period. The final 30 minutes of the one-hour-period where the steady-state conditions in section 5.1 of this appendix are met is the thermal efficiency test. The last reading of the steady-state verification period must be the first reading of the thermal efficiency test (*i.e.,* the thermal efficiency test starts immediately once the steady-state verification period ends).

5.1. *Steady-State Conditions.* The following conditions must be met at consecutive readings taken at 1-minute intervals (except for fuel input rate, for which measurements are taken at 10-minute intervals) to verify the water heater has achieved steady-state operation during the steady-state verification period and thermal efficiency test.

5.1.1. The water flow rate must be maintained within ± 0.25 gallons per minute (gpm) of the initial reading at the start of the steady-state verification period;

5.1.2. Outlet water temperature must be maintained at 70 °F ± 2 °F above supply water temperature;

5.1.3. Fuel input rate must be maintained within ± 2 percent of the rated input certified by the manufacturer;

5.1.4. The supply water temperature must be maintained within ± 0.50 °F of the initial reading at the start of the steady-state verification period; and

5.1.5. The rise between the supply and outlet water temperatures must be maintained within ± 0.50 °F of its initial value taken at the start of the steady-state verification period for units with rated input less than 500,000 Btu/h, and maintained within ± 1.00 °F of its initial value for units with rated input greater than or equal to 500,000 Btu/h.

5.2. *Water Flow Measurement.* Measure the total weight of water heated during the 30-minute thermal efficiency test with either a scale or a water flow meter. With either method, the error of measurement of weight of water heated must not exceed 1 percent of the weight of the total draw.

5.3. *Determination of Fuel Input Rate.* During the steady-state verification period and the thermal efficiency test, record the fuel consumed at 10-minute intervals. Calculate the fuel input rate over each 10-minute period using the equations in section 5.4 of this appendix. The measured fuel input rates for these 10-minute periods must not vary by more than ± 2 percent between any two readings. Determine the overall fuel input rate using the fuel consumption for the entire duration of the thermal efficiency test.

5.4. *Fuel Input Rate Calculation.* To calculate the fuel input rate, use the following equation:

$$Q = \frac{Q_s * C_s * H}{t}$$

Where,

Q = Fuel input rate, expressed in Btu/h

Q_s = Total fuel flow as metered, expressed in ft^3 for gas-fired equipment and lb for oil-fired equipment

C_s = Correction applied to the heating value of a gas H, when it is metered at temperature and/or pressure conditions other than the standard conditions for which the value of H is based. Cs=1 for oil-fired equipment.

H = Higher heating value of fuel, expressed in Btu/ft^3 for gas-fired equipment and Btu/lb for oil-fired equipment.

t = Duration of measurement of fuel consumption

5.5. *Thermal Efficiency Calculation.* Thermal efficiency must be calculated using data from the 30-minute thermal efficiency test. Calculate thermal efficiency, E_t, using the following equation:

$$E_t = \frac{K * W * (\theta_2 - \theta_1)}{(C_s * Q * H) + E_c}$$

Where,

K = 1.004 Btu/lb·°F, the nominal specific heat of water at 105 °F

W = Total weight of water heated, expressed in lb

θ_1 = Average supply water temperature, expressed in °F

θ_2 = Average outlet water temperature, expressed in °F

Q = Total fuel flow as metered, expressed in ft^3 for gas-fired equipment and lb for oil-fired equipment.

C_s = Correction applied to the heating value of a gas H, when it is metered at temperature and/or pressure conditions other than the standard conditions for which the value of H is based. C_s=1 for oil-fired equipment

H. = Higher heating value of the fuel, expressed in Btu/ft^3 for gas-fired equipment and Btu/lb for oil-fired equipment.

E_c = Electrical consumption of the water heater and, when used, the test set-up recirculating pump, expressed in Btu

6. Standby Loss Test

6.1. If no settings on the water heater have changed and the water heater has not been turned off since a previously run thermal efficiency or standby loss test, skip to section 6.3 of this appendix. Otherwise, conduct the soak-in period according to section 6.2 of this appendix.

6.2. *Soak-In Period.* Conduct a soak-in period, in which the water heater must sit without any draws taking place for at least 12 hours. Begin the soak-in period after setting the tank thermostat as specified in section 3.6 of this appendix, and maintain these thermostat settings throughout the soak-in period.

6.3. Begin the standby loss test at the first cut-out following the end of the soak-in period (if applicable); or at a cut-out following the previous thermal efficiency or standby loss test (if applicable). Allow the water heater to remain in standby mode. Do not change any settings on the water heater at any point until measurements for the standby loss test are finished. Begin recording the applicable parameters specified in section 3.8.3 of this appendix.

6.4. At the second cut-out, record the time and ambient room temperature, and begin measuring the fuel and electricity consumption. Record the initial mean tank temperature and initial ambient room temperature. For the remainder of the test, continue recording the applicable parameters specified in section 3.8.3 of this appendix.

6.5. Stop the test after the first cut-out that occurs after 24 hours, or at 48 hours, whichever comes first.

6.6. Immediately after conclusion of the standby loss test, record the total fuel flow and electrical energy consumption, the final ambient room temperature, the duration of the standby loss test, and if the test ends at 48 hours without a cut-out, the final mean tank temperature, or if the test ends after a cut-out, the maximum mean tank temperature that occurs after the cut-out. Calculate the average of the recorded values of the mean tank temperature and of the ambient room temperature taken at each measurement interval, including the initial and final values.

6.7. *Standby Loss Calculation.* To calculate the standby loss, follow the steps below:

6.7.1. The standby loss expressed as a percentage (per hour) of the heat content of the stored water above room temperature must be calculated using the following equation:

$$S = \frac{E_c + (C_s)(Q_s)(H) - \left(\frac{k(V_a)(\Delta T_4)}{E_t/100}\right)}{k(V_a)(\Delta T_3)(t)} \times 100$$

Where,

ΔT_3 = Average value of the mean tank temperature minus the average value of the ambient room temperature, expressed in °F

ΔT_4 = Final mean tank temperature measured at the end of the test minus the initial mean tank temperature measured at the start of the test , expressed in °F

k = 8.25 Btu/gallon·°F, the nominal specific heat of water

V_a = Volume of water contained in the water heater in gallons measured in accordance with section 4 of this appendix

E_t = Thermal efficiency of the water heater determined in accordance with this appendix, expressed in %

E_c = Electrical energy consumed by the water heater during the duration of the test in Btu

t = Total duration of the test in hours

C_s = Correction applied to the heating value of a gas H, when it is metered at temperature and/or pressure conditions other than the standard conditions for which the value of H is based. C_s=1 for oil-fired equipment.

Q_s = Total fuel flow as metered, expressed in ft^3 (gas) or lb (oil)

H = Higher heating value of fuel, expressed in Btu/ft^3 (gas) or Btu/lb (oil)

S = Standby loss, the average hourly energy required to maintain the stored water temperature expressed as a percentage of the heat content of the stored water above room temperature

6.7.2. The standby loss expressed in Btu per hour must be calculated as follows:

SL (Btu per hour) = S (% per hour) × 8.25 (Btu/gal-°F) × Measured Volume (gal) × 70 (°F).

Where, SL refers to the standby loss of the water heater, defined as the amount of energy required to maintain the stored water temperature expressed in Btu per hour

14. Add appendix B to subpart G of part 431 to read as follows:

Appendix B to Subpart G of Part 431—Uniform Test Method for the Measurement of Standby Loss of Electric Storage Water Heaters and Storage-Type Instantaneous Water Heaters

Note: Prior to November 6, 2017, manufacturers must make any representations with respect to the energy use or efficiency of the subject commercial water heating equipment in accordance with the results of testing pursuant to this appendix or the procedures in 10 CFR 431.106 that were in place on January 1, 2016. On and after November 6, 2017, manufacturers must make any representations with respect to energy use or efficiency of electric storage water heaters and storage-type instantaneous water heaters in accordance with the results of testing pursuant to this appendix to demonstrate compliance with the energy conservation standards at 10 CFR 431.110.

1. General

Determine the standby loss in accordance with the following sections of this appendix. Certain sections reference sections of Annex E.1 of ANSI Z21.10.3–2015 (incorporated by reference; see § 431.105). Where the instructions contained in the sections below conflict with instructions in Annex E.1 of ANSI Z21.10.3–2015, the instructions contained in this appendix control.

2. Test Set-Up

*2.*1. *Placement of Water Heater.* A water heater for installation on combustible floors must be placed on a ¾-inch plywood platform supported by three 2 × 4-inch runners. If the water heater is for installation on noncombustible floors, suitable noncombustible material must be placed on the platform. When the use of the platform for a large water heater is not practical, the water heater may be placed on any suitable flooring. A wall-mounted water heater must be mounted on a simulated wall section.

*2.*2. *Installation of Temperature Sensors.* Inlet and outlet piping must be turned vertically downward from the connections on a tank-type water heater so as to form heat traps. Temperature sensors for measuring supply water temperature must be installed upstream of the inlet heat trap piping, in accordance with Figure 2.1, 2.2, or 2.3 (as applicable) of this appendix.

The water heater must meet the requirements shown in either Figure 2.1, 2.2, or 2.3 (as applicable) at all times during the conduct of the standby loss test. Any factory-supplied heat traps must be installed per the installation instructions while ensuring the requirements in Figure 2.1, 2.2, or 2.3 are met. All dimensions specified in Figure 2.1, 2.2, and 2.3 are measured from the outer surface of the pipes and water heater outer casing (as applicable).

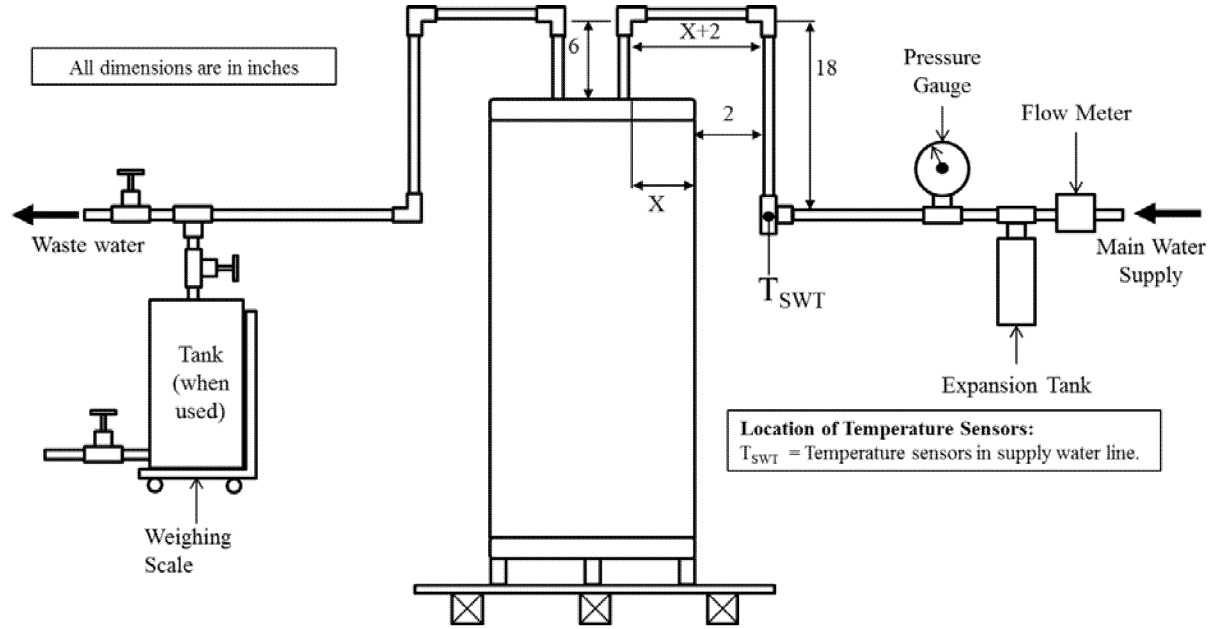

Figure 2.1. Set-up for standby loss test for electric storage water heaters equipped with vertical (top) connections

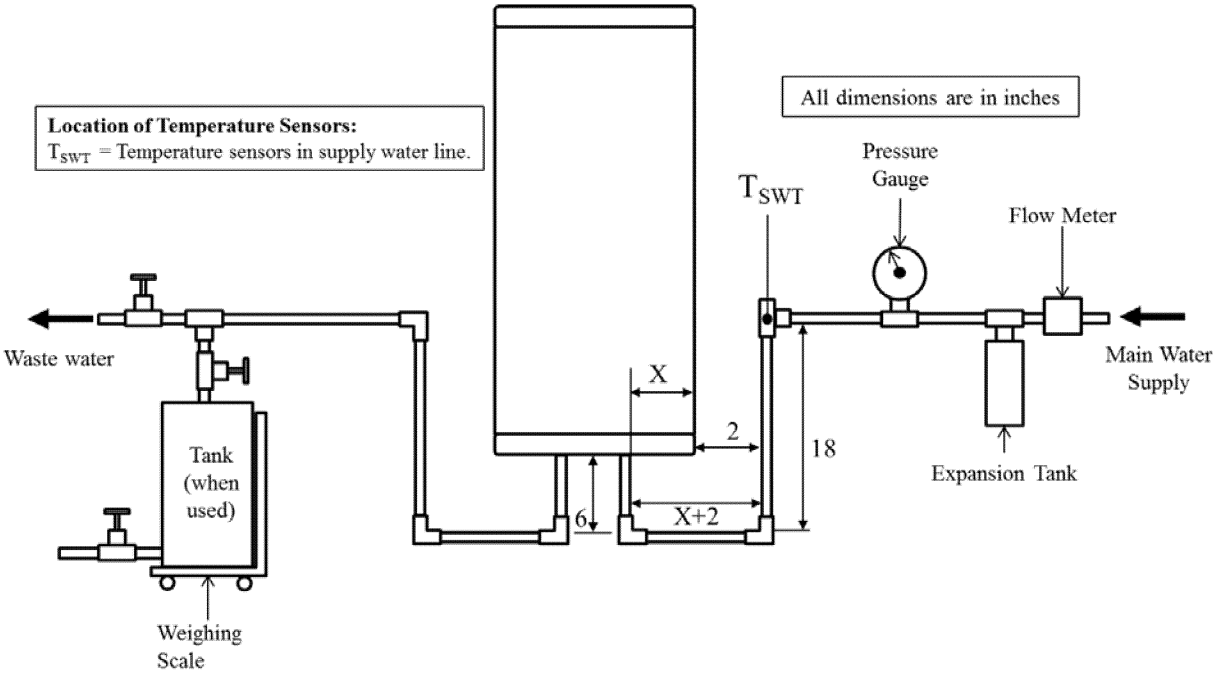

Figure 2.2. Set-up for standby loss test for electric storage water heaters equipped with vertical (bottom) connections

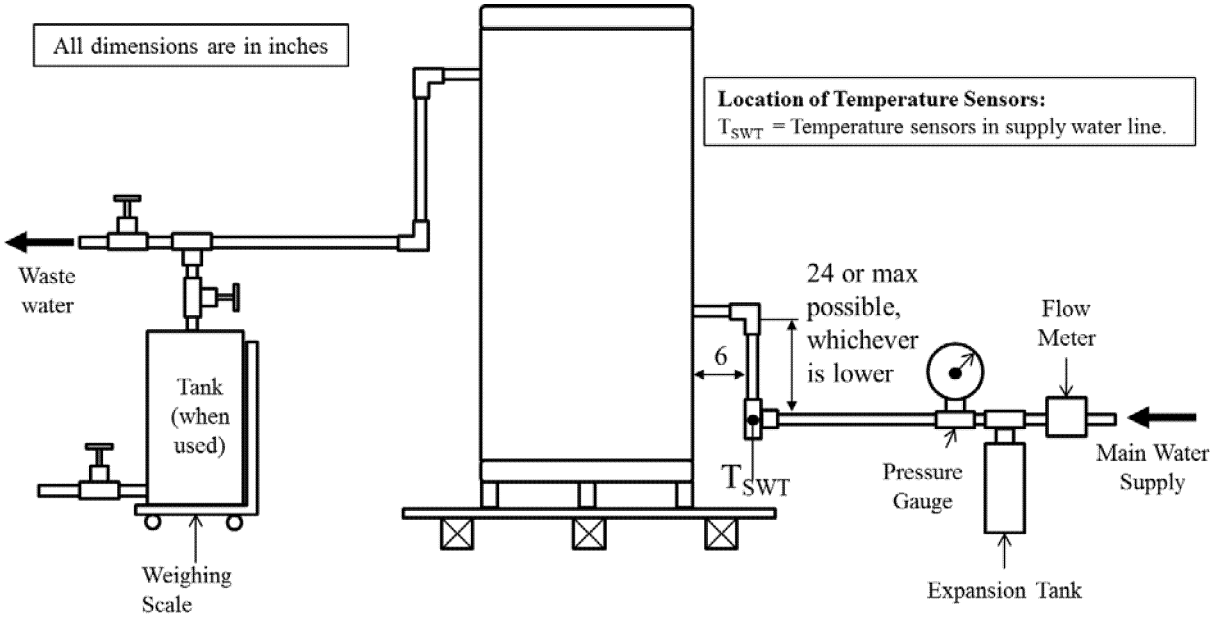

Figure 2.3. Set-up for standby loss test for electric storage water heaters equipped with horizontal connections

2.3. Installation of *Temperature Sensors for Measurement of Mean Tank Temperature.* Install temperature sensors inside the tank for measurement of mean tank temperature according to the instructions in paragraph f of Annex E.1 of ANSI Z21.10.3–2015 (incorporated by reference; see § 431.105 rt). Calculate the mean tank temperature as the average of the six installed temperature sensors.

2.4. *Piping Insulation.* Insulate all water piping external to the water heater jacket, including heat traps and piping that is installed by the manufacturer or shipped with the unit, for at least 4 ft of piping length from the connection at the appliance, with material having an R-value not less than 4 °F·ft²·h/Btu. Ensure that the insulation does not contact any appliance surface except at the location where the pipe connections penetrate the appliance jacket or enclosure.

2.5. *Temperature and Pressure Relief Valve Insulation.* If the manufacturer or has not provided a temperature and pressure relief valve, one shall be installed and insulated as specified in section 2.4 of this appendix.

2.6. *Energy Consumption.* Install equipment that determines, within ± 1 percent, the quantity of electricity consumed by factory-supplied water heater components.

3. Test Conditions

3.1. Water Supply

3.1.1. *Water Supply Pressure.* The pressure of the water supply must be maintained between 40 psi and the maximum pressure specified by the manufacturer of the unit being tested. The accuracy of the pressure-measuring devices must be within ± 1.0 pounds per square inch (psi).

3.1.2. *Water Supply Temperature.* When filling the tank with water prior to the soak-in period, maintain the supply water temperature at 70 °F ± 2 °F.

3.1.3. Isolate the water heater using a shutoff valve in the supply line with an expansion tank installed in the supply line downstream of the shutoff valve. There must be no shutoff means between the expansion tank and the appliance inlet.

3.2. *Electrical Supply.* Maintain the electrical supply voltage to within ± 5 percent of the voltage specified on the water heater nameplate. If a voltage range is specified on the nameplate, maintain the voltage to within ± 5 percent of the center of the voltage range specified on the nameplate.

3.3. *Ambient Room Temperature.* During the soak-in period and the standby loss test, maintain the ambient room temperature at 75 °F ± 10 °F at all times. Measure the ambient room temperature at 1-minute intervals during these periods, except for the soak-in period. Measure the ambient room temperature once before beginning the soak-in period, and ensure no actions are taken during the soak-in period that would cause the ambient room temperature to deviate from the allowable range. Measure the ambient room temperature at the vertical mid-point of the water heater and approximately 2 feet from the water heater jacket. Shield the sensor against radiation. Calculate the average ambient room temperature for the standby loss test. During the standby loss test, the ambient room temperature must not vary by more than ± 5.0 °F at any reading from the average ambient room temperature.

3.4. *Maximum Air Draft.* During the standby loss test, the water heater must be located in an area protected from drafts of more than 50 ft/min. Prior to beginning the standby loss test, measure the air draft within three feet of the jacket of the water heater to ensure this condition is met. Ensure that no other changes that would increase the air draft are made to the test set-up or conditions during the conduct of the test.

3.5. *Setting the Tank Thermostat(s).* Before starting the required soak-in period, the thermostat setting(s) must first be obtained as explained in the following sections. The thermostat setting(s) must be obtained by starting with the tank full of water at 70 °F ± 2 °F. After the tank is completely filled with water at 70 °F ± 2 °F, turn off the water flow, and set the thermostat(s) as follows.

3.5.1. For water heaters with a single thermostat, the thermostat setting must be set so that the maximum mean tank temperature after cut-out is 140 °F ± 5 °F.

3.5.2. For water heaters with multiple adjustable thermostats, set only the

topmost and bottommost thermostats, and turn off any other thermostats for the duration of the standby loss test. Set the topmost thermostat first to yield a maximum mean water temperature after cut-out of 140 °F ± 5 °F, as calculated using only the temperature readings measured at locations in the tank higher than the heating element corresponding to the topmost thermostat (the lowermost heating element corresponding to the topmost thermostat if the thermostat controls more than one element). While setting the topmost thermostat, all lower thermostats must be turned off so that no elements below that (those) corresponding to the topmost thermostat are in operation. After setting the topmost thermostat, set the bottommost thermostat to yield a maximum mean water temperature after cut-out of 140 °F ± 5 °F. When setting the bottommost thermostat, calculate the mean tank temperature using all the temperature sensors installed in the tank as per section 2.3 of this appendix.

3.6. *Data Collection Intervals.* Follow the data recording intervals specified in the following sections.

3.6.1. *Soak-In Period.* Measure the ambient room temperature, in °F, every minute during the soak-in period.

3.6.2. *Standby Loss Test.* Follow the data recording intervals specified in Table 3.1 of this appendix. Additionally, the electricity consumption over the course of the entire test must be measured and used in calculation of standby loss.

TABLE 3.1—DATA TO BE RECORDED BEFORE AND DURING THE STANDBY LOSS TEST

Item recorded	Before test	Every 1 minute [a]
Air draft, ft/min	X	
Time, minutes/seconds		X
Mean tank temperature, °F		X [b]
Ambient room temperature, °F		X

Notes:
[a] These measurements are to be recorded at the start and end of the test, as well as every minute during the test.
[b] Mean tank temperature is calculated as the average of the 6 tank temperature sensors, installed per section 2.3 of this appendix.

4. Determination of Storage Volume. Determine the storage volume by subtracting the tare weight, measured while the system is dry and empty, from the weight of the system when filled with water and dividing the resulting net weight of water by the density of water at the measured water temperature. The volume of water contained in the water heater must be computed in gallons.

5. Standby Loss Test

5.1. If no settings on the water heater have changed and the water heater has not been turned off since a previously run standby loss test, skip to section 5.3 of this appendix. Otherwise, conduct the soak-in period according to section 5.2 of this appendix.

5.2. *Soak-In Period.* Conduct a soak-in period, in which the water heater must sit without any draws taking place for at least 12 hours. Begin the soak-in period after setting the tank thermostat(s) as specified in section 3.5 of this appendix, and maintain these settings throughout the soak-in period.

5.3. Begin the standby loss test at the first cut-out following the end of the soak-in period (if applicable), or at a cut-out following the previous standby loss test (if applicable). Allow the water heater to remain in standby mode. At this point, do not change any settings on the water heater until measurements for the standby loss test are finished. Begin recording applicable parameters as specified in section 3.6.2 of this appendix.

5.4. At the second cut-out, record the time and ambient room temperature, and begin measuring the electric consumption. Record the initial mean tank temperature and initial ambient room temperature. For the remainder of the test, continue recording the applicable parameters specified in section 3.6.2 of this appendix.

5.5. Stop the test after the first cut-out that occurs after 24 hours, or at 48 hours, whichever comes first.

5.6. Immediately after conclusion of the standby loss test, record the total electrical energy consumption, the final ambient room temperature, the duration of the standby loss test, and if the test ends at 48 hours without a cut-out, the final mean tank temperature, or if the test ends after a cut-out, the maximum mean tank temperature that occurs after the cut-out. Calculate the average of the recorded values of the mean tank temperature and of the ambient air temperatures taken at each measurement interval, including the initial and final values.

5.7. *Standby Loss Calculation.* To calculate the standby loss, follow the steps below:

5.7.1 The standby loss expressed as a percentage (per hour) of the heat content of the stored water above room temperature must be calculated using the following equation:

$$S = \frac{E_c - \left(\frac{k(V_a)(\Delta T_4)}{E_t/100}\right)}{k(V_a)(\Delta T_3)(t)} \times 100$$

Where,
ΔT_3 = Average value of the mean tank temperature minus the average value of the ambient room temperature, expressed in °F
ΔT_4 = Final mean tank temperature measured at the end of the test minus the initial mean tank temperature measured at the start of the test, expressed in °F
k = 8.25 Btu/gallon·°F, the nominal specific heat of water
V_a = Volume of water contained in the water heater in gallons measured in accordance with section 4 of this appendix
E_t = Thermal efficiency = 98 percent for electric water heaters with immersed heating elements
E_c = Electrical energy consumed by the water heater during the duration of the test in Btu
t = Total duration of the test in hours
S = Standby loss, the average hourly energy required to maintain the stored water temperature expressed as a percentage of the heat content of the stored water above room temperature

■ 15. Add appendix C to subpart G of part 431 to read as follows:

Appendix C to Subpart G of Part 431—Uniform Test Method for the Measurement of Thermal Efficiency and Standby Loss of Gas-Fired and Oil-Fired Instantaneous Water Heaters and Hot Water Supply Boilers (Other Than Storage-Type Instantaneous Water Heaters)

Note: Prior to November 6, 2017, manufacturers must make any representations with respect to the energy use or efficiency of the subject commercial water heating equipment in accordance with the results of testing pursuant to this appendix or the procedures in 10 CFR 431.106 that were in place on January 1, 2016. On and after November 6, 2017, manufacturers must make any

representations with respect to energy use or efficiency of gas-fired and oil-fired instantaneous water heaters and hot water supply boilers (other than storage-type instantaneous water heaters) in accordance with the results of testing pursuant to this appendix to demonstrate compliance with the energy conservation standards at 10 CFR 431.110.

1. General

Determine the thermal efficiency and standby loss (as applicable) in accordance with the following sections of this appendix. Certain sections reference sections of Annex E.1 of ANSI Z21.10.3–2015 (incorporated by reference; see § 431.105). Where the instructions contained in the sections below conflict with instructions in Annex E.1 of ANSI Z21.10.3–2015, the instructions contained in this appendix control.

2. Test Set-Up

2.1. *Placement of Water Heater.* A water heater for installation on combustible floors must be placed on a ¾-inch plywood platform supported by three 2 x 4-inch runners. If the water heater is for installation on noncombustible floors, suitable noncombustible material must be placed on the platform. When the use of the platform for a large water heater is not practical, the water heater may be placed on any suitable flooring. A wall-mounted water heater must be mounted on a simulated wall section.

2.2. *Test Configuration.* If the instantaneous water heater or hot water supply boiler is not required to be tested using a recirculating loop, then set up the unit in accordance with Figures 2.1, 2.2, or 2.3 of this appendix (as applicable). If the unit is required to be tested using a recirculating loop, then set up the unit as per Figure 2.4 of this appendix.

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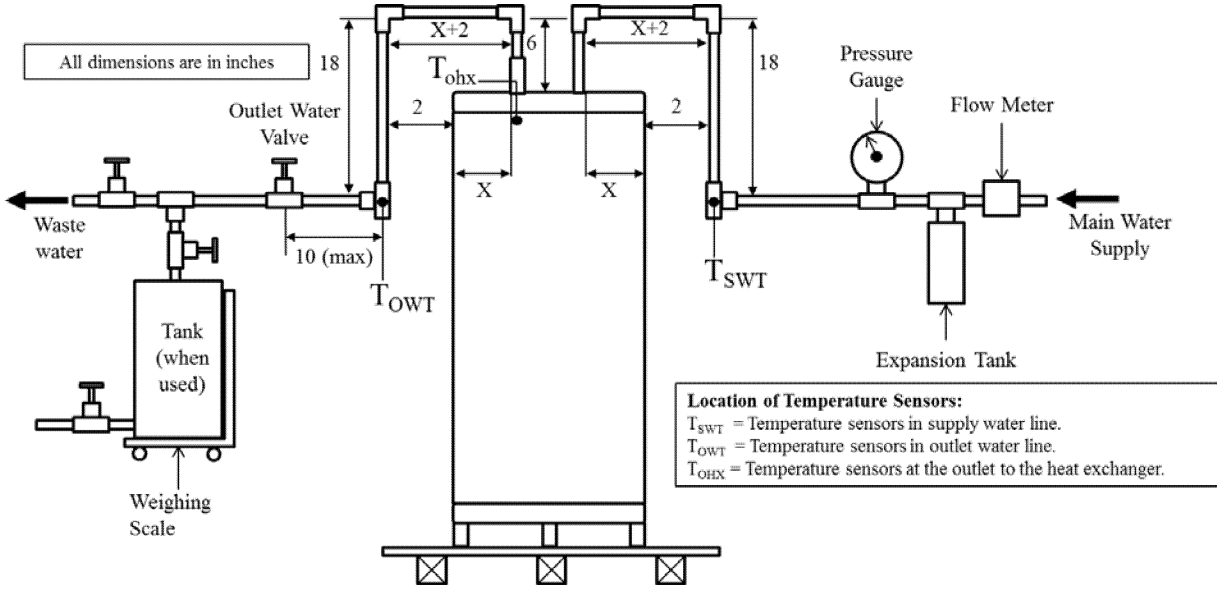

Figure 2.1. Set-up for thermal efficiency and standby loss test for gas-fired and oil-fired instantaneous water heaters and hot water supply boilers (other than storage-type instantaneous water heaters) equipped with vertical (top) connections not requiring a recirculating loop.

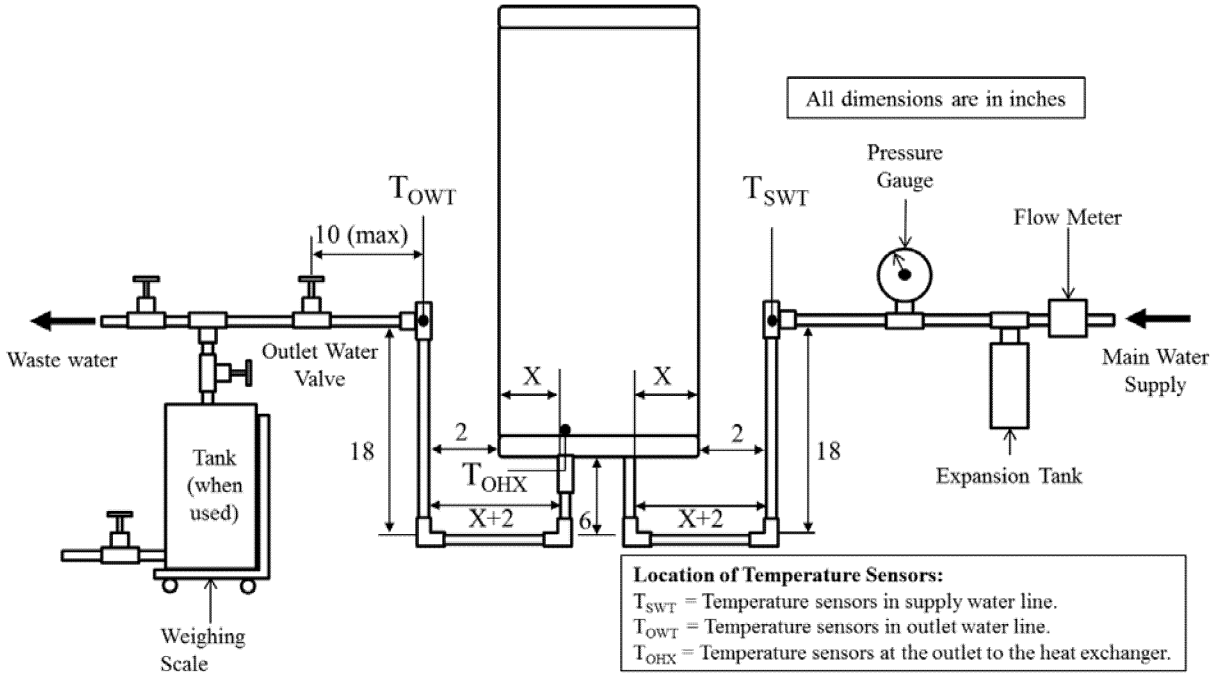

Figure 2.2. Set-up for thermal efficiency and standby loss test for gas-fired and oil-fired instantaneous water heaters and hot water supply boilers (other than storage-type instantaneous water heaters) equipped with vertical (bottom) connections not requiring a recirculating loop.

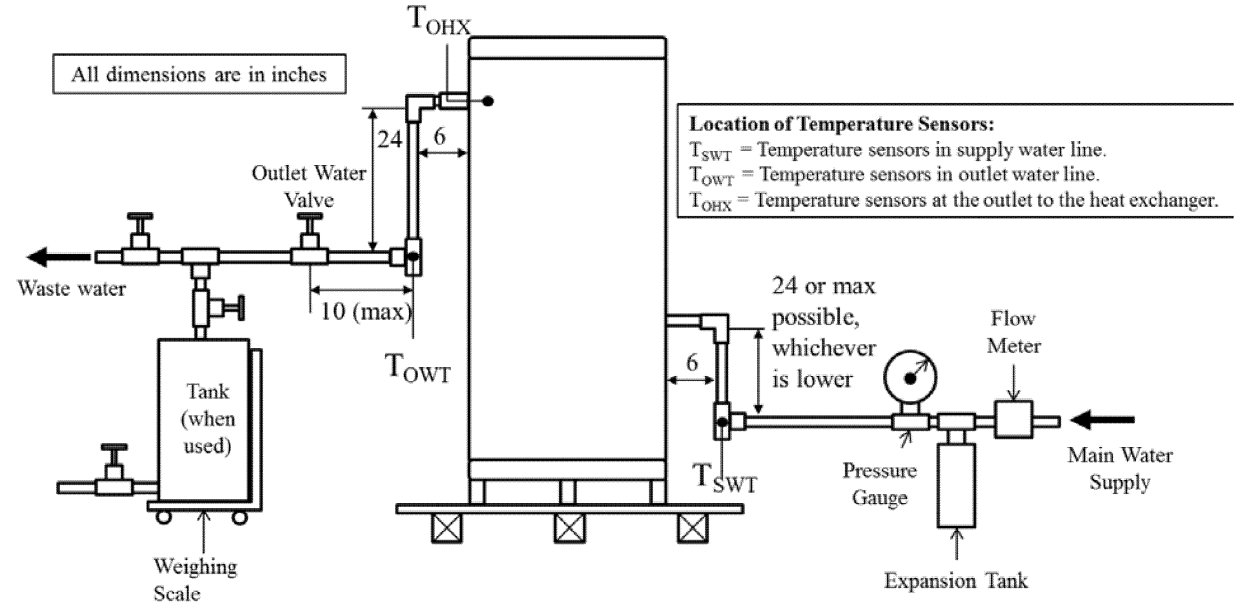

Figure 2.3. Set-up for thermal efficiency and standby loss test for gas-fired and oil-fired instantaneous water heaters and hot water supply boilers (other than storage-type instantaneous water heaters) equipped with horizontal connections not requiring a recirculating loop.

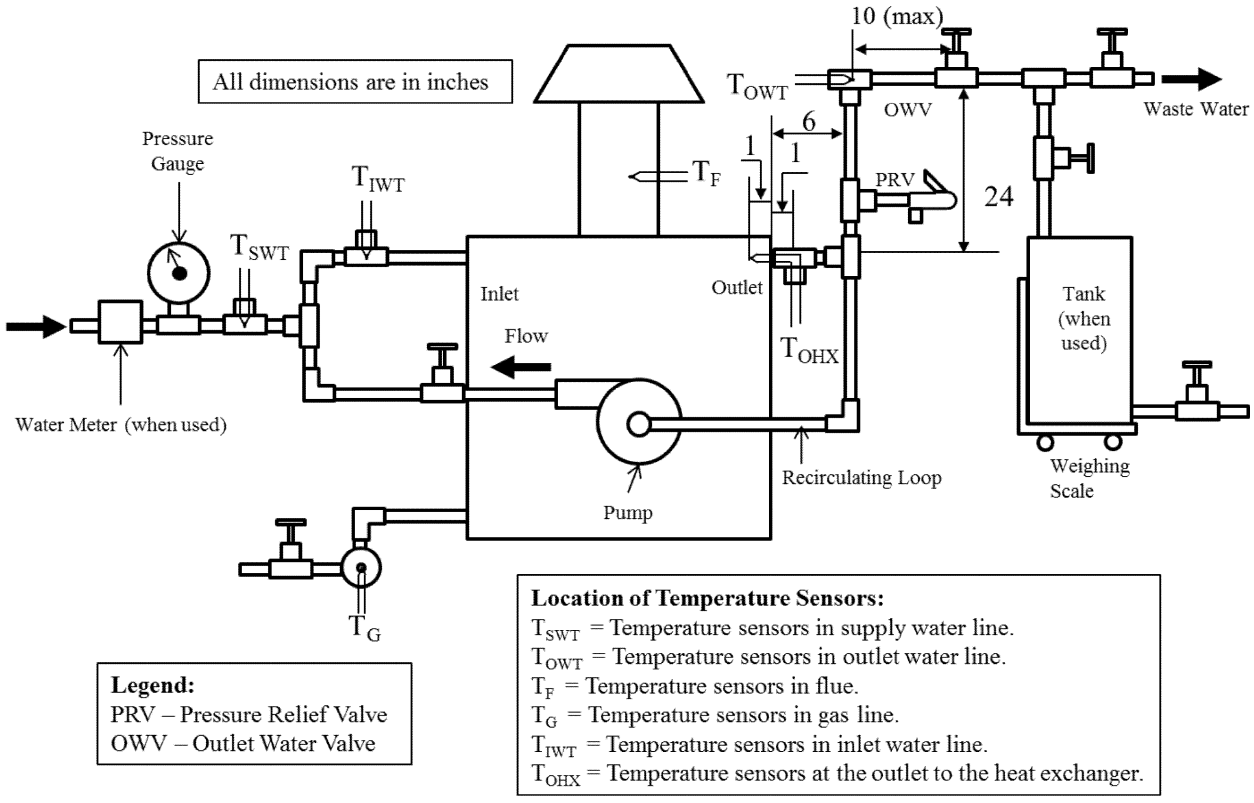

Figure 2.4. Set-up for thermal efficiency and standby loss test for gas-fired and oil-fired instantaneous water heaters and hot water supply boilers (other than storage-type instantaneous water heaters) requiring a recirculating loop for testing.

2.2.1. If the instantaneous water heater or hot water supply boiler does not have any external piping, install an outlet water valve within 10 inches of piping length of the water heater jacket or enclosure. If the instantaneous water

heater or hot water supply boiler includes external piping assembled at the manufacturer's premises prior to shipment, install water valves in the outlet piping within 5 inches of the end of the piping supplied with the unit.

2.2.2. If the water heater is not able to achieve an outlet water temperature of 70 °F ± 2 °F (T_{OWT}) above the supply water temperature at full firing rate, a recirculating loop with pump as shown in Figure 2.4 of this appendix must be used.

2.2.2.1. If a recirculating loop with a pump is used, then ensure that the inlet water temperature labeled as T_{IWT} in Figure 2.4 of this appendix, is greater than or equal to 70 °F and less than or equal to 120 °F at all times during the thermal efficiency test and steady-state verification period (as applicable).

2.3. Installation of Temperature Sensors

2.3.1. *Without Recirculating Loop.*

2.3.1.1. *Vertical Connections.* Use Figure 2.1 (for top connections) and 2.2 (for bottom connections) of this appendix.

2.3.1.2. *Horizontal Connections.* Use Figure 2.3 of this appendix.

2.3.2. *With Recirculating Loop.* Set up the recirculating loop as shown in Figure 2.4 of this appendix.

2.3.3. For water heaters with multiple outlet water connections leaving the water heater jacket that are required to be operated to achieve the rated input, temperature sensors must be installed for each outlet water connection leaving the water heater jacket or enclosure that is used during testing, in accordance with the provisions in sections 2.3.1 and 2.3.2 of this appendix (as applicable).

2.4. *Piping Insulation.* Insulate all water piping external to the water heater jacket or enclosure, including piping that is installed by the manufacturer or shipped with the unit, for at least 4 ft of piping length from the connection at the appliance with material having an R-value not less than 4 °F·ft²·h/Btu. Ensure that the insulation does not contact any appliance surface except at the location where the pipe connections penetrate the appliance jacket or enclosure.

2.5. *Temperature and Pressure Relief Valve Insulation.* If the manufacturer has not provided a temperature and pressure relief valve, one shall be installed and insulated as specified in section 2.4 of this appendix. The temperature and pressure relief valve must be installed in the outlet water piping, between the unit being tested and the outlet water valve.

2.6. *Vent Requirements.* Follow the requirements for venting arrangements specified in paragraph c of Annex E.1 of ANSI Z21.10.3–2015 (incorporated by reference; see § 431.105).

2.7. *Energy Consumption.* Install equipment that determines, within ± 1 percent:

2.7.1. The quantity and rate of fuel consumed.

2.7.2. The quantity of electricity consumed by factory-supplied water heater components, and of the test loop recirculating pump, if used.

3. Test Conditions

3.1. Water Supply

3.1.1. *Water Supply Pressure.* The pressure of the water supply must be maintained between 40 psi and the maximum pressure specified by the manufacturer of the unit being tested. The accuracy of the pressure-measuring devices must be within ± 1.0 psi.

3.1.2. *Water Supply Temperature.* During the thermal efficiency test and steady-state verification period (as applicable), the temperature of the supply water (T_{SWT}) must be maintained at 70 °F ± 2 °F.

3.2. *Gas Pressure for Gas-Fired Equipment.* The supply gas pressure must be within the range specified by the manufacturer on the nameplate of the unit being tested. The difference between the outlet pressure of the gas appliance pressure regulator and the value specified by the manufacturer on the nameplate of the unit being tested must not exceed the greater of: ± 10 percent of the nameplate value or ± 0.2 inches water column (in. w.c.). Obtain the higher heating value of the gas burned.

3.3. *Ambient Room Temperature.* Maintain the ambient room temperature at 75 °F ± 10 °F at all times during the steady-state verification period, the thermal efficiency test, and the standby loss test (as applicable). Measure the ambient room temperature at 1-minute intervals during these periods. Measure the ambient room temperature at the vertical mid-point of the water heater and approximately 2 feet from the water heater jacket or enclosure. Shield the sensor against radiation. Calculate the average ambient room temperature separately for the thermal efficiency test and the standby loss test. During the thermal efficiency and standby loss tests, the ambient room temperature must not vary by more than ± 5.0 °F at any reading from the average ambient room temperature.

3.4. *Test Air Temperature.* During the steady-state verification period, the thermal efficiency test, and the standby loss test (as applicable), the test air temperature must not vary by more than ± 5 °F from the ambient room temperature at any reading. Measure the test air temperature at 1-minute intervals during these periods and at a location within two feet of the air inlet of the water heater or the combustion air intake vent, as applicable. Shield the sensor against radiation. For units with multiple air inlets, measure the test air temperature at each air inlet, and maintain the specified tolerance on deviation from the ambient room temperature at each air inlet. For units without a dedicated air inlet, measure the test air temperature within two feet of any location on the water heater where combustion air is drawn.

3.5. *Maximum Air Draft.* During the steady-state verification period, the thermal efficiency test, and the standby loss test (as applicable), the water heater must be located in an area protected from drafts of more than 50 ft/min. Prior to beginning the steady-state verification period and the standby loss test, measure the air draft within three feet of the jacket or enclosure of the water heater to ensure this condition is met. Ensure that no other changes that would increase the air draft are made to the test set-up or conditions during the conduct of the tests.

3.6. Primary Control

3.6.1. *Thermostatically-Activated Water Heaters With an Internal Thermostat.* Before starting the thermal efficiency test and the standby loss test (unless the thermostat is already set before the thermal efficiency test), the thermostat setting must be obtained. Set the thermostat to ensure:

3.6.1.1. With supply water temperature set as per section 3.1.2 of this appendix (*i.e.,* 70 °F ± 2 °F) the water flow rate can be varied so that the outlet water temperature is constant at 70 °F ± 2 °F above the supply water temperature, while the burner is firing at full firing rate; and

3.6.1.2. After the water supply is turned off and the thermostat reduces the fuel supply to a minimum, the maximum heat exchanger outlet water temperature (T_{OHX}) is 140 °F ± 5 °F.

3.6.1.3. If the water heater includes a built-in safety mechanism that prevents it from achieving a heat exchanger outlet water temperature of 140 °F ± 5 °F, adjust the thermostat to its maximum setting.

3.6.2. *Flow-Activated Instantaneous Water Heaters and Thermostatically-Activated Instantaneous Water Heaters With an External Thermostat.* Energize the primary control such that it is always calling for heating and the burner is firing at the full firing rate. Maintain the supply water temperature as per section 3.1.2 of this appendix

(*i.e.,* 70 °F ± 2 °F). Set the control so that the outlet water temperature (T_{OWT}) is 140 °F ± 5 °F. If the water heater includes a built-in safety mechanism that prevents it from achieving a heat exchanger outlet water temperature of 140 °F ± 5 °F, adjust the control to its maximum setting.

3.7. Units With Multiple Outlet Water Connections

3.7.1. For each connection leaving the water heater that is required for the unit to achieve the rated input, the outlet water temperature must not differ from that of any other outlet water connection by more than 2 °F during the steady-state verification period and thermal efficiency test.

3.7.2. Determine the outlet water temperature representative for the entire unit at every required measurement interval by calculating the average of the outlet water temperatures measured at each connection leaving the water heater jacket or enclosure that is used during testing. Use the outlet water temperature representative for the entire unit in all calculations for the thermal efficiency and standby loss tests, as applicable.

3.8. *Additional Requirements for Oil-Fired Equipment.*

3.8.1. *Venting Requirements.* Connect a vertical length of flue pipe to the flue gas outlet of sufficient height so as to meet the minimum draft specified by the manufacturer.

3.8.2. *Oil Supply.* Adjust the burner rate so that the following conditions are met:

3.8.2.1. The CO_2 reading is within the range specified by the manufacturer;

3.8.2.2. The fuel pump pressure is within ± 10 percent of manufacturer's specifications;

3.8.2.3. If either the fuel pump pressure or range for CO_2 reading are not specified by the manufacturer on the nameplate of the unit, in literature shipped with the unit, or in supplemental test report instructions included with a certification report, then a default value of 100 psig is to be used for fuel pump pressure, and a default range of 9–12 percent is to be used for CO_2 reading; and

3.8.2.4. Smoke in the flue does not exceed No. 1 smoke as measured by the procedure in ASTM D2156–09 (Reapproved 2013) (incorporated by reference, see § 431.105). To determine the smoke spot number, the smoke measuring device shall be connected to an open-ended tube. This tube must project into the flue ¼ to ½ of the pipe diameter.

3.8.2.5. If no settings on the water heater have been changed and the water heater has not been turned off since the end of a previously run thermal efficiency (or standby loss test for thermostatically-activated instantaneous water heaters with an internal thermostat), measurement of the CO_2 reading and conduct of the smoke spot test are not required prior to beginning a test. Otherwise, measure the CO_2 reading and determine the smoke spot number, with the burner firing, before beginning measurements for the steady-state verification period (prior to beginning the thermal efficiency test or standby loss test, as applicable). However, measurement of the CO_2 reading and conduct of the smoke spot test are not required for the standby loss test for thermostatically-activated instantaneous water heaters with an external thermostat and flow-activated instantaneous water heaters.

3.9. *Data Collection Intervals.* Follow the data recording intervals specified in the following sections.

3.9.1. *Steady-State Verification Period and Thermal Efficiency Test.* For the steady-state verification period and the thermal efficiency test, follow the data recording intervals specified in Table 3.1 of this appendix. These data recording intervals must also be followed if conducting a steady-state verification period prior to conducting the standby loss test.

TABLE 3.1—DATA TO BE RECORDED BEFORE AND DURING THE STEADY-STATE VERIFICATION PERIOD AND THERMAL EFFICIENCY TEST

Item recorded	Before steady-state verification period	Every 1 minute [a]	Every 10 minutes
Gas supply pressure, in w.c.	X		
Gas outlet pressure, in w.c.	X		
Barometric pressure, in Hg	X		
Fuel higher heating value, Btu/ft^3 (gas) or Btu/lb (oil)	X		
Oil pump pressure, psig (oil only)	X		
CO_2 reading, % (oil only)	X [b]		
Oil smoke spot reading (oil only)	X [b]		
Air draft, ft/min	X		
Time, minutes/seconds		X	
Fuel weight or volume, lb (oil) or ft^3 (gas)			X [c]
Supply water temperature (T_{SWT}), °F		X	
Inlet water temperature (T_{IWT}), °F		X [d]	
Outlet water temperature (T_{OWT}), °F		X	
Ambient room temperature, °F		X	
Test air temperature, °F		X	
Water flow rate, gpm		X	

Notes:

[a] These measurements are to be recorded at the start and end of both the steady-state verification period and the thermal efficiency test, as well as every minute during both periods.

[b] The smoke spot test and CO_2 reading are not required prior to beginning the steady-state verification period if no settings on the water heater have been changed and the water heater has not been turned off since the end of a previously-run efficiency test (*i.e.,* thermal efficiency or standby loss).

[c] Fuel and electricity consumption over the course of the entire thermal efficiency test must be measured and used in calculation of thermal efficiency.

[d] Only measured when a recirculating loop is used.

3.9.2. *Standby Loss Test.* For the standby loss test, follow the data recording intervals specified in Table 3.2 of this appendix. (Follow the data recording intervals specified in Table 3.1 of this appendix of the steady-state verification period, if conducted prior to the standby loss test.) Additionally, the fuel and electricity consumption over the course of the entire test must be measured and used in calculation of standby loss.

TABLE 3.2—DATA TO BE RECORDED BEFORE AND DURING THE STANDBY LOSS TEST

Item recorded	Before test	Every 1 minute [a]
Gas supply pressure, in w.c.	X	.....
Gas outlet pressure, in w.c.	X	.....
Barometric pressure, in Hg	X	.....
Fuel higher heating value, Btu/ft^3 (gas) or Btu/lb (oil)	X	.....
Oil pump pressure, psig (oil only)	X	.....
Air draft, ft/min	X	.....
Time, minutes/seconds	.....	X
Heat exchanger outlet water temperature (T_{OHX}), °F	.....	X
Ambient room temperature, °F	.....	X
Test air temperature, °F	.....	X
Water flow rate, gpm	X [b]	.....
Inlet water temperature (T_{IWT}), °F	X [b]	.....

Notes:

[a] These measurements are to be recorded at the start and end of the test, as well as every minute during the test.

[b] The water flow rate and supply water temperature and inlet water temperature (if a recirculating loop is used) must be measured during the steady-state verification period at 1-minute intervals. After the steady-state verification period ends, flow rate, supply water temperature, and inlet water temperature (if measured) are not required to be measured during the standby loss test, as there is no flow occurring during the standby loss test.

4. Determination of Storage Volume. Determine the storage volume by subtracting the tare weight, measured while the system is dry and empty, from the weight of the system when filled with water and dividing the resulting net weight of water by the density of water at the measured water temperature. The volume of water contained in the water heater must be computed in gallons.

5. Fuel Input Rate

5.1. Determination of Fuel Input Rate. During the steady-state verification period and thermal efficiency test, as applicable, record the fuel consumption at 10-minute intervals. Calculate the fuel input rate for each 10-minute period using the equations in section 5.2 of this appendix. The measured fuel input rates for these 10-minute periods must not vary by more than ± 2 percent between any two readings. Determine the overall fuel input rate using the fuel consumption for the entire duration of the thermal efficiency test.

5.2. Fuel Input Rate Calculation. To calculate the fuel input rate, use the following equation:

$$Q = \frac{Q_s * C_s * H}{t}$$

Where:

Q = Fuel input rate, expressed in Btu/h

Q_s = Total fuel flow as metered, expressed in ft^3 for gas-fired equipment and lb for oil-fired equipment

C_s = Correction applied to the heating value of a gas H, when it is metered at temperature and/or pressure conditions other than the standard conditions for which the value of H is based. C_s=1 for oil-fired equipment.

H = Higher heating value of the fuel, expressed as Btu/ft^3 for gas-fired equipment and Btu/lb for oil-fired equipment.

t = Duration of measurement of fuel consumption

6. *Thermal Efficiency Test.* Before beginning the steady-state verification period, record the applicable parameters as specified in section 3.9.1 of this appendix. Begin drawing water from the unit by opening the main supply and outlet water valve, and adjust the water flow rate to achieve an outlet water temperature of 70 °F ± 2 °F above supply water temperature. The thermal efficiency test shall be deemed complete when there is a continuous, one-hour-long period where the steady-state conditions specified in section 6.1 of this appendix have been met, as confirmed by consecutive readings of the relevant parameters at 1-minute intervals (except for fuel input rate, which is determined at 10-minute intervals, as specified in section 5.1 of this appendix). During the one-hour-long period, the water heater must fire continuously at its full firing rate (*i.e.,* no modulation or cut-outs) and no settings can be changed on the unit being tested at any time. The first 30 minutes of the one-hour-period where the steady-state conditions in section 6.1 of this appendix are met is the steady-state verification period. The final 30 minutes of the one-hour-period where the steady-state conditions in section 6.1 of this appendix are met is the thermal efficiency test. The last reading of the steady-state verification period must be the first reading of the thermal efficiency test (*i.e.,* the thermal efficiency test starts immediately once the steady-state verification period ends).

6.1. *Steady-State Conditions.* The following conditions must be met at consecutive readings taken at 1-minute intervals (except for fuel input rate, for which measurements are taken at 10-minute intervals) to verify the water heater has achieved steady-state operation during the steady-state verification period and the thermal efficiency test.

6.1.1. The water flow rate must be maintained within ± 0.25 gallons per minute (gpm) of the initial reading at the start of the steady-state verification period.

6.1.2. Outlet water temperature must be maintained at 70 °F ± 2 °F above supply water temperature.

6.1.3. Fuel input rate must be maintained within ± 2 percent of the rated input certified by the manufacturer.

6.1.4. The supply water temperature (T_{SWT}) (or inlet water temperature (T_{IWT}) if a recirculating loop is used) must be maintained within ± 0.50 °F of the initial reading at the start of the steady-state verification period.

6.1.5. The rise between supply (or inlet if a recirculating loop is used) and outlet water temperatures must be maintained within ± 0.50 °F of its initial value taken at the start of the steady-

state verification period for units with rated input less than 500,000 Btu/h, and maintained within ± 1.00 °F of its initial value for units with rated input greater than or equal to 500,000 Btu/h.

6.2. *Water Flow Measurement.* Measure the total weight of water heated during the 30-minute thermal efficiency test with either a scale or a water flow meter. With either method, the error of measurement of weight of water heated must not exceed 1 percent of the weight of the total draw.

6.3. *Thermal Efficiency Calculation.* Thermal efficiency must be calculated using data from the 30-minute thermal efficiency test. Calculate thermal efficiency, E_t, using the following equation:

$$E_t = \frac{K * W * (\theta_2 - \theta_1)}{(C_s * Q * H) + E_c}$$

Where:

K = 1.004 Btu/lb·°F, the nominal specific heat of water at 105 °F

W = Total weight of water heated, lb

θ_1 = Average supply water temperature, expressed in °F

θ_2 = Average outlet water temperature, expressed in °F

Q = Total fuel flow as metered, expressed in ft^3 (gas) or lb (oil)

C_s = Correction applied to the heating value of a gas H, when it is metered at temperature and/or pressure conditions other than the standard conditions for which the value of H is based. C_s=1 for oil-fired equipment.

H = Higher heating value of the fuel, expressed in Btu/ft^3 (gas) or Btu/lb (oil)

E_c = Electrical consumption of the water heater and, when used, the test set-up recirculating pump, expressed in Btu

7. *Standby Loss Test.* If the standby loss test is conducted immediately after a thermal efficiency test and no settings or conditions have been changed since the completion of the thermal efficiency test, then skip to section 7.2 or 7.3 of this appendix (as applicable). Otherwise, perform the steady-state verification in section 7.1 of this appendix. For thermostatically-activated instantaneous water heaters with an internal thermostat, use section 7.2 of this appendix to conduct the standby loss test, and for flow-activated and/or thermostatically-activated instantaneous water heaters with an external thermostat use section 7.3 of this appendix to conduct the standby loss test.

7.1. *Steady-State Verification Period.* For water heaters where the standby loss test is not conducted immediately following the thermal efficiency test, the steady-state verification period must be conducted before starting the standby loss test. Set the primary control in accordance with section 3.6 of this appendix, such that the primary control is always calling for heat and the water heater is firing continuously at the full firing rate (*i.e.,* no modulation or cut-outs). Begin drawing water from the unit by opening the main supply and the outlet water valve, and adjust the water flow rate to achieve an outlet water temperature of 70 °F ± 2 °F above supply water temperature. The steady-state verification period is complete when there is a continuous 30-minute period where the steady-state conditions specified in section 7.1.1 of this appendix are met, as confirmed by consecutive readings of the relevant parameters recorded at 1-minute intervals (except for fuel input rate, which is determined at 10-minute intervals, as specified in section 5.1 of this appendix).

7.1.1. *Steady-State Conditions.* The following conditions must be met at consecutive readings taken at 1-minute intervals (except for fuel input rate, for which measurements are taken at 10-minute intervals) to verify the water heater has achieved steady-state operation during the steady-state verification period prior to conducting the standby loss test.

7.1.1.1. The water flow rate must be maintained within ± 0.25 gallons per minute (gpm) of the initial reading at the start of the steady-state verification period;

7.1.1.2. Fuel input rate must be maintained within ± 2 percent of the rated input certified by the manufacturer;

7.1.1.3. The supply water temperature (T_{SWT}) (or inlet water temperature (T_{IWT}) if a recirculating loop is used) must be maintained within ± 0.50 °F of the initial reading at the start of the steady-state verification period; and

7.1.1.4. The rise between the supply (or inlet if a recirculating loop is used) and outlet water temperatures must be maintained within ± 0.50 °F of its initial value taken at the start of the steady-state verification period for units with rated input less than 500,000 Btu/h, and maintained within ± 1.00 °F of its initial value for units with rated input greater than or equal to 500,000 Btu/h.

7.2. *Thermostatically-Activated Instantaneous Water Heaters with an Internal Thermostat.* For water heaters that will experience cut-in based on a temperature-activated control that is internal to the water heater, use the following steps to conduct the standby loss test.

7.2.1. Immediately after the thermal efficiency test or the steady-state verification period (as applicable), turn off the outlet water valve(s) (installed as per the provisions in section 2.2 of this appendix), and the water pump (if applicable) simultaneously and ensure that there is no flow of water through the water heater.

7.2.2. After the first cut-out following the end of the thermal efficiency test or steady-state verification period (as applicable), allow the water heater to remain in standby mode. Do not change any settings on the water heater at any point until measurements for the standby loss test are finished. Begin recording the applicable parameters specified in section 3.9.2 of this appendix.

7.2.3. At the second cut-out, record the time and ambient room temperature, and begin measuring the fuel and electricity consumption. Record the initial heat exchanger outlet water temperature (T_{OHX}) and initial ambient room temperature. For the remainder of the test, continue recording the applicable parameters specified in section 3.9.2 of this appendix.

7.2.4. Stop the test after the first cut-out that occurs after 24 hours, or at 48 hours, whichever comes first.

7.2.5. Immediately after conclusion of the standby loss test, record the total fuel flow and electrical energy consumption, the final ambient room temperature, the duration of the standby loss test, and if the test ends at 48 hours without a cut-out, the final heat exchanger outlet temperature, or if the test ends after a cut-out, the maximum heat exchanger outlet temperature that occurs after the cut-out. Calculate the average of the recorded values of the heat exchanger outlet water temperature and the ambient room temperature taken at each measurement interval, including the initial and final values.

7.2.6. *Standby Loss Calculation.* To calculate the standby loss, follow the steps below:

7.2.6.1. The standby loss expressed as a percentage (per hour) of the heat content of the stored water above room temperature must be calculated using the following equation:

$$S = \frac{E_c + (C_s)(Q_s)(H) - \left(\frac{k(V_a)(\Delta T_4)}{E_t/100}\right)}{k(V_a)(\Delta T_3)(t)} \times 100$$

Where:

ΔT_3 = Average value of the heat exchanger outlet water temperature (T_{OHX}) minus the average value of the ambient room temperature, expressed in °F

ΔT_4 = Final heat exchanger outlet water temperature (T_{OHX}) measured at the end of the test minus the initial heat exchanger outlet water temperature (T_{OHX}) measured at the start of the test, expressed in °F

K = 8.25 Btu/gallon·°F, the nominal specific heat of water

V_a = Volume of water contained in the water heater in gallons measured in accordance with section 4 of this appendix

E_t = Thermal efficiency of the water heater determined in accordance with section 6 of this appendix, expressed in %

E_c = Electrical energy consumed by the water heater during the duration of the test in Btu

T = Total duration of the test in hours

C_s = Correction applied to the heating value of a gas H, when it is metered at temperature and/or pressure conditions other than the standard conditions for which the value of H is based. C_s=1 for oil-fired equipment.

Q_s = Total fuel flow as metered, expressed in ft^3 (gas) or lb (oil)

H = Higher heating value of gas or oil, expressed in Btu/ft^3 (gas) or Btu/lb (oil)

S = Standby loss, the average hourly energy required to maintain the stored water temperature expressed as a percentage of the initial heat content of the stored water above room temperature

7.2.6.2. The standby loss expressed in Btu per hour must be calculated as follows:

SL (Btu per hour) = S (% per hour) × 8.25 (Btu/gal-°F) × Measured Volume (gal) × 70 (°F).

Where, SL refers to the standby loss of the water heater, defined as the amount of energy required to maintain the stored water temperature expressed in Btu per hour.

7.3. *Flow-Activated and Thermostatically-Activated Instantaneous Water Heaters with an External Thermostat.* For water heaters that are either flow-activated or thermostatically-activated with an external thermostat, use the following steps to conduct the standby loss test.

7.3.1. Immediately after the thermal efficiency test or the steady-state verification period (as applicable), de-energize the primary control to end the call for heating. If the main burners do not cut out, then turn off the fuel supply.

7.3.1.1. If the unit does not have an integral pump purge functionality, then turn off the outlet water valve and water pump at this time.

7.3.1.2. If the unit has an integral pump purge functionality, allow the pump purge operation to continue. After the pump purge operation is complete, immediately turn off the outlet water valve and water pump and continue recording the required parameters for the remainder of the test.

7.3.2. Recording Data

7.3.2.1. For units with pump purge functionality, record the initial heat exchanger outlet water temperature (T_{OHX}), and ambient room temperature when the main burner(s) cut-out or the fuel supply is turned off. After the pump purge operation is complete, record the time as t = 0 and the initial electricity meter reading. Continue to monitor and record the heat exchanger outlet water temperature (T_{OHX}) and time elapsed from the start of the test, and the electricity consumption as per the requirements in section 3.9.2 of this appendix.

7.3.2.2. For units not equipped with pump purge functionality, begin recording the measurements as per the requirements of section 3.9.2 of this appendix when the main burner(s) cut-out or the fuel supply is turned off. Specifically, record the time as t = 0, and record the initial heat exchanger outlet water temperature (T_{OHX}), ambient room temperature, and electricity meter readings. Continue to monitor and record the heat exchanger outlet water temperature (T_{OHX}) and the time elapsed from the start of the test as per the requirements in section 3.9.2 of this appendix.

7.3.3. *Stopping Criteria.* Stop the test when one of the following occurs:

7.3.3.1. The heat exchanger outlet water temperature (T_{OHX}) decreases by 35 °F from its value recorded immediately after the main burner(s) has cut-out, and the pump purge operation (if applicable) is complete; or

7.3.3.2. 24 hours have elapsed from the start of the test.

7.3.4. At the end of the test, record the final heat exchanger outlet water temperature (T_{OHX}), fuel consumed, electricity consumed from time t=0, and the time elapsed from the start of the test.

7.3.5. Standby Loss Calculation

7.3.5.1. Once the test is complete, use the following equation to calculate the standby loss as a percentage (per hour) of the heat content of the stored water above room temperature:

$$S = \frac{\frac{k(V_a)(\Delta T_1)}{E_t/100} + E_c}{k(V_a)(\Delta T_2)(t)} \times 100$$

Where,

ΔT_1 = Heat exchanger outlet water temperature (T_{OHX}) measured after the pump purge operation is complete (if the unit is integrated with pump purge functionality); or after the main burner(s) cut-out (if the unit is not equipped with pump purge functionality) minus heat exchanger outlet water temperature (T_{OHX}) measured at the end of the test, expressed in °F

ΔT_2 = Heat exchanger outlet water temperature (T_{OHX}) minus the ambient temperature, both measured after the main burner(s) cut-out, at the start of the test, expressed in °F

K = 8.25 Btu/gallon·°F, the nominal specific heat of water

V_a = Volume of water contained in the water heater in gallons measured in accordance with section 4 of this appendix

E_t = Thermal efficiency of the water heater determined in accordance with section 6 of this appendix, expressed in %

E_c = Electrical energy consumed by the water heater during the duration of the test in Btu

t = Total duration of the test in hours

S = Standby loss, the average hourly energy required to maintain the stored water temperature expressed as a percentage of the initial heat content of the stored water above room temperature

7.3.5.2. The standby loss expressed in terms of Btu per hour must be calculated as follows:

SL (Btu per hour) = S (% per hour) × 8.25 (Btu/gal-°F) × Measured Volume (gal) × 70 (°F)

Where, SL refers to the standby loss of the water heater, defined as the amount of energy required to maintain the stored water temperature expressed in Btu per hour.

16. Add appendix D to subpart G of part 431 to read as follows:

Appendix D to Subpart G of Part 431—Uniform Test Method for the Measurement of Standby Loss of Electric Instantaneous Water Heaters (Other Than Storage-Type Instantaneous Water Heaters)

Note: Prior to November 6, 2017, manufacturers must make any representations with respect to the energy use or efficiency of the subject

commercial water heating equipment in accordance with the results of testing pursuant to this appendix or the procedures in 10 CFR 431.106 that were in place on January 1, 2016. On and after November 6, 2017, manufacturers must make any representations with respect to energy use or efficiency of electric instantaneous water heaters (other than storage-type instantaneous water heaters) in accordance with the results of testing pursuant to this appendix to demonstrate compliance with the energy conservation standards at 10 CFR 431.110.

1. General

Determine the standby loss (as applicable) in accordance with the following sections of this appendix.

2. Test Set-Up

2.1. *Placement of Water Heater.* A water heater for installation on combustible floors must be placed on a ¾-inch plywood platform supported by three 2 × 4-inch runners. If the water heater is for installation on noncombustible floors, suitable noncombustible material must be placed on the platform. When the use of the platform for a large water heater is not practical, the water heater may be placed on any suitable flooring. A wall-mounted water heater must be mounted on a simulated wall section.

2.2. *Test Configuration.* If the instantaneous water heater is not required to be tested using a recirculating loop, then set up the unit in accordance with Figure 2.1, 2.2, or 2.3 of this appendix (as applicable). If the unit is required to be tested using a recirculating loop, then set up the unit as per Figure 2.4 of this appendix.

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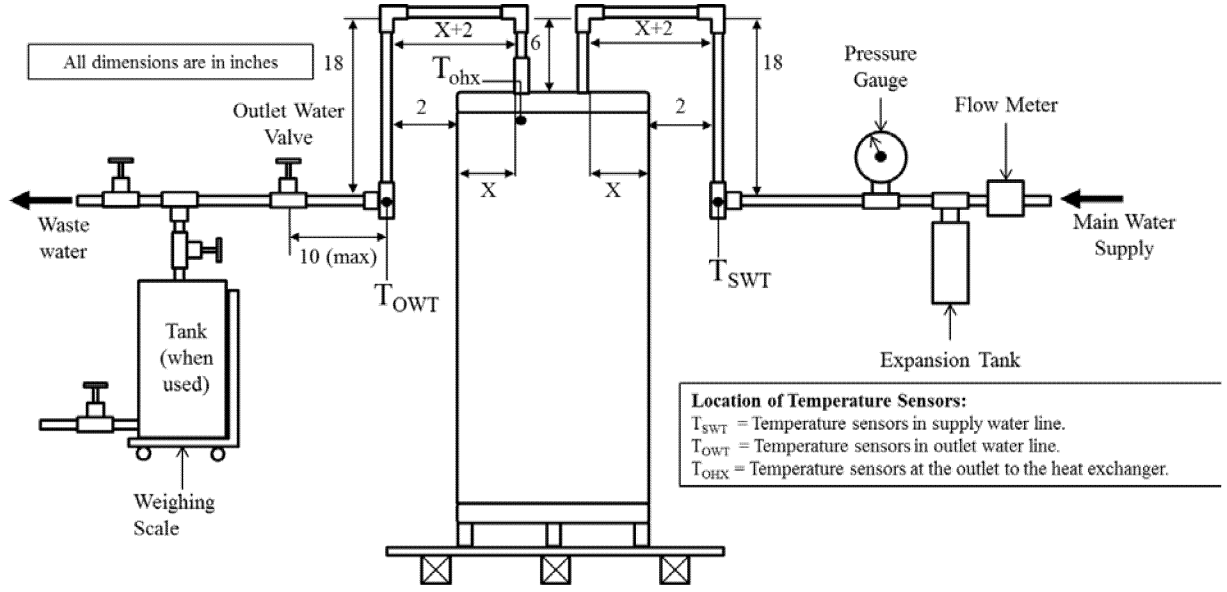

Figure 2.1. Set-up for standby loss test for electric instantaneous water heaters (other than storage-type instantaneous water heaters) equipped with vertical (top) connections not requiring a recirculating loop.

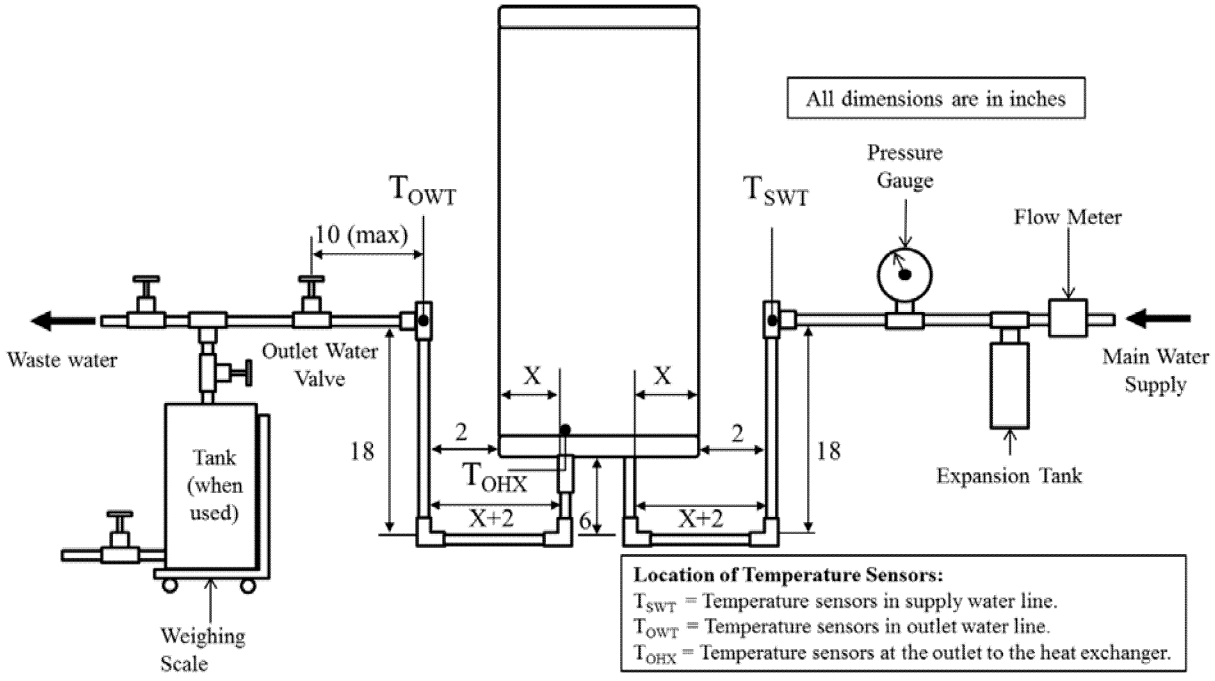

Figure 2.2. Set-up for standby loss test for electric instantaneous water heaters (other than storage-type instantaneous water heaters) equipped with vertical (bottom) connections not requiring a recirculating loop.

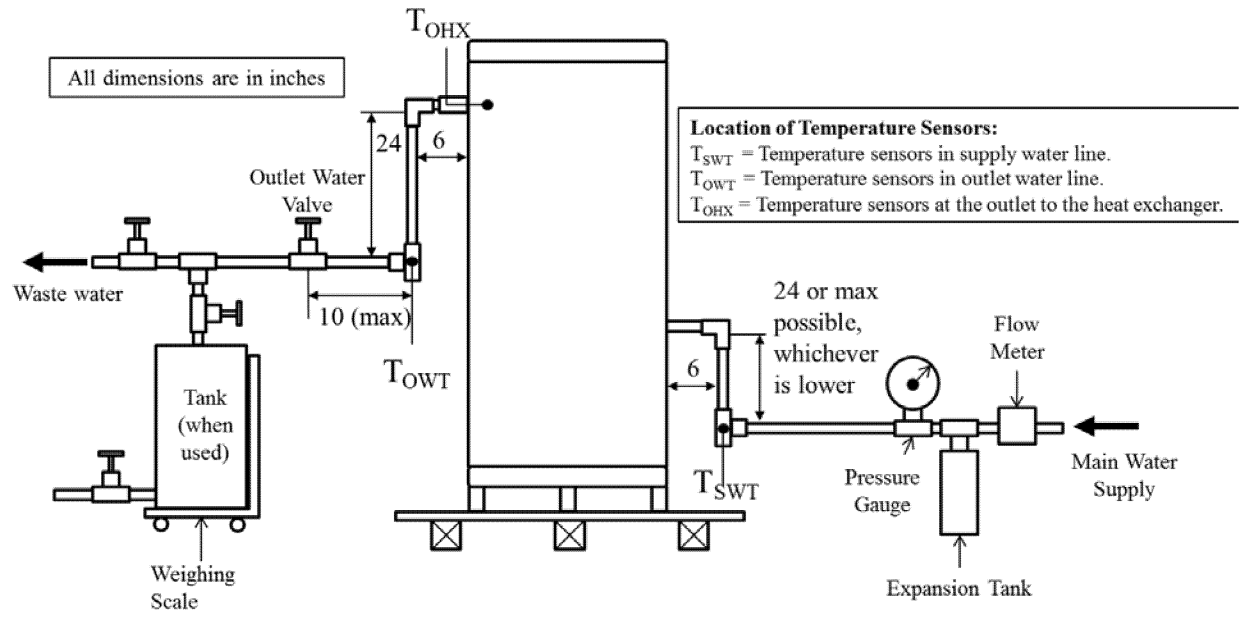

Figure 2.3. Set-up for standby loss test for electric instantaneous water heaters (other than storage-type instantaneous water heaters) equipped with horizontal connections not requiring a recirculating loop.

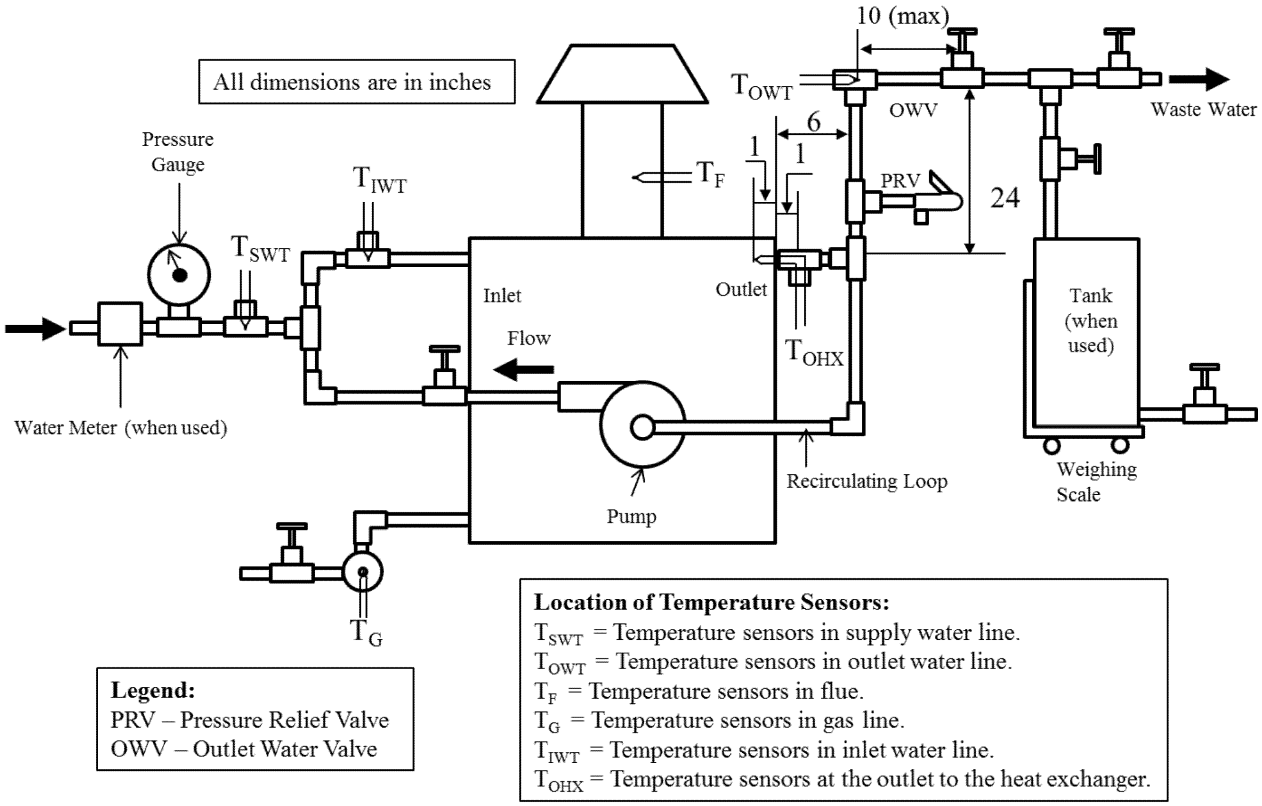

Figure 2.4. Set-up for standby loss test for electric instantaneous water heaters (other than storage-type instantaneous water heaters) requiring a recirculating loop for testing.

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2.2.1. If the instantaneous water heater does not have any external piping, install an outlet water valve within 10 inches of the piping length of the water heater jacket or enclosure. If the instantaneous water heater includes external piping assembled at the manufacturer's premises prior to

shipment, install water valves in the outlet piping within 5 inches of the end of the piping supplied with the unit.

2.2.2. If the water heater is not able to achieve an outlet water temperature of 70 °F ± 2 °F above the supply water temperature at a constant maximum electricity input rate, a recirculating loop with pump as shown in Figure 2.4 of this appendix must be used.

2.2.2.1. If a recirculating loop with a pump is used, then ensure that the inlet water temperature (labeled as T_{IWT} in Figure 2.4 of this appendix) is greater than or equal to 70 °F and less than or equal to 120 °F at all times during the steady-state verification period.

2.3. Installation of Temperature Sensors

2.3.1. Without Recirculating Loop

2.3.1.1. *Vertical Connections.* Use Figure 2.1 (for top connections) and 2.2 (for bottom connections) of this appendix.

2.3.1.2. *Horizontal Connections.* Use Figure 2.3 of this appendix.

2.3.2. *With Recirculating Loop.* Set up the recirculating loop as shown in Figure 2.4 of this appendix.

2.3.3. For water heaters with multiple outlet water connections leaving the water heater jacket that are required to be operated to achieve the rated input, temperature sensors must be installed for each outlet water connection leaving the water heater jacket or enclosure that is used during testing, in accordance with sections 2.3.1 and 2.3.2 of this appendix.

2.4. *Piping Insulation.* Insulate all the water piping external to the water heater jacket or enclosure, including piping that is installed by the manufacturer or shipped with the unit, for at least 4 ft of piping length from the connection at the appliance with material having an R-value not less than 4 °F·f^{t2}·h/Btu. Ensure that the insulation does not contact any appliance surface except at the location where the pipe connections penetrate the appliance jacket or enclosure.

2.5. *Temperature and Pressure Relief Valve Insulation.* If the manufacturer has not provided a temperature and pressure relief valve, one shall be installed and insulated as specified in section 2.4 of this appendix. The temperature and pressure relief valve must be installed in the outlet water piping between the unit being tested and the outlet water valve.

2.6. *Energy Consumption.* Install equipment that determines, within ± 1 percent, the quantity of electricity consumed by factory-supplied water heater components, and of the test loop recirculating pump, if used.

3. Test Conditions

3.1. Water Supply

3.1.1. *Water Supply Pressure.* The pressure of the water supply must be maintained between 40 psi and the maximum pressure specified by the manufacturer of the unit being tested. The accuracy of the pressure-measuring devices must be ± 1.0 psi.

3.1.2. *Water Supply Temperature.* During the steady-state verification period, the temperature of the supply water (T_{SWT}) must be maintained at 70 °F ± 2 °F.

.2. *Electrical Supply.* Maintain the electrical supply voltage to within ± 5 percent of the voltage specified on the water heater nameplate. If a voltage range is specified on the nameplate, maintain the voltage to within ± 5 percent of the center of the voltage range specified on the nameplate.

3.3. *Ambient Room Temperature.* Maintain the ambient room temperature at 75°F ± 10 °F at all times during the steady-state verification period and the standby loss test. Measure the ambient room temperature at 1-minute intervals during these periods. Measure the ambient room temperature at the vertical mid-point of the water heater and approximately 2 feet from the water heater jacket or enclosure. Shield the sensor against radiation. Calculate the average ambient room temperature for the standby loss test. During the standby loss test, the ambient room temperature must not vary more than ± 5.0 °F at any reading from the average ambient room temperature.

3.4. *Maximum Air Draft.* During the steady-state verification period and the standby loss test, the water heater must be located in an area protected from drafts of more than 50 ft/min. Prior to beginning steady-state verification before the standby loss test, measure the air draft within three feet of the jacket or enclosure of the water heater to ensure this condition is met. Ensure that no other changes that would increase the air draft are made to the test set-up or conditions during the conduct of the test.

3.5. Primary Control

3.5.1. *Thermostatically-Activated Water Heaters with an Internal Thermostat.* Before starting the steady-state verification prior to the standby loss test, the thermostat setting must be obtained. Set the thermostat to ensure:

3.5.1.1. With supply water temperature as per section 3.1.2 of this appendix (*i.e.,* 70 °F ± 2 °F) the water flow rate can be varied so that the outlet water temperature is constant at 70 °F ± 2 °F above the supply water temperature, while the heating element is operating at the rated input.

3.5.1.2. After the water supply is turned off and the thermostat reduces the electricity supply to the heating element to a minimum, the maximum heat exchanger outlet water temperature (T_{OHX}) is 140 °F ± 5 °F.

3.5.1.3. If the water heater includes a built-in safety mechanism that prevents it from achieving a heat exchanger outlet water temperature of 140 °F ± 5 °F, adjust the thermostat to its maximum setting.

3.5.2. *Flow-Activated Instantaneous Water Heaters and Thermostatically-Activated Instantaneous Water Heaters with an External Thermostat.* Before starting the steady-state verification prior to the standby loss test energize the primary control such that it is always calling for heating and the heating element is operating at the rated input. Maintain the supply water temperature as per section 3.1.2 of this appendix (*i.e.,* 70 °F ± 2 °F). Set the control so that the outlet water temperature (T_{OWT}) is 140 °F ± 5 °F. If the water heater includes a built-in safety mechanism that prevents it from achieving a heat exchanger outlet water temperature of 140 °F ± 5 °F, adjust the control to its maximum setting.

3.6. For Units With Multiple Outlet Water Connections

3.6.1. For each connection leaving the water heater that is required for the unit to achieve the rated input, the outlet water temperature must not differ from that of any other outlet water connection by more than 2 °F during the steady-state verification period prior to the standby loss test.

3.6.2. Determine the outlet water temperature representative for the entire unit at every required measurement interval by calculating the average of the outlet water temperatures measured at each connection leaving the water heater jacket or enclosure that is used during testing. Use the outlet water temperature representative for the entire unit in all calculations for the standby loss test.

3.7. *Data Collection Intervals.* During the standby loss test, follow the data recording intervals specified in Table 3.1 of this appendix. Also, the electricity consumption over the course of the entire test must be measured and used in calculation of standby loss.

3.7.1. *Steady-State Verification Period.* Follow the data recording intervals specified in Table 3.1 of this appendix.

TABLE 3.1—DATA TO BE RECORDED BEFORE AND DURING THE STEADY-STATE VERIFICATION PERIOD

Item recorded	Before steady-state verification period	Every 1 minute [a]	Every 10 minutes
Air draft, ft/min	X		
Time, minutes/seconds		X	
Electricity Consumed, Btu			X
Supply water temperature (T_{SWT}), °F		X	
Inlet water temperature (T_{IWT}), °F		X [b]	
Outlet water temperature (T_{OWT}), °F		X	
Ambient room temperature, °F		X	
Water flow rate, (gpm)		X	

Notes:
[a] These measurements are to be recorded at the start and end, as well as every minute of the steady-state verification period.
[b] Only measured when a recirculating loop is used.

3.7.2. *Standby Loss Test.* Follow the data recording intervals specified in Table 3.2 of this appendix. Additionally, the electricity consumption over the course of the entire test must be measured and used in calculation of standby loss.

TABLE 3.2—DATA TO BE RECORDED BEFORE AND DURING THE STANDBY LOSS TEST

Item recorded	Before test	Every 1 minute [a]
Air draft, ft/min	X	
Time, minutes/seconds		X
Heat exchanger outlet water temperature, °F (T_{OHX})		X
Ambient room temperature, °F		X

Note:
[a] These measurements are to be recorded at the start and end of the test, as well as every minute during the test.

4. *Determination of Storage Volume.* Determine the storage volume by subtracting the tare weight—measured while the system is dry and empty—from the weight of the system when filled with water and dividing the resulting net weight of water by the density of water at the measured water temperature. The volume of water contained in the water heater must be computed in gallons.

5. *Standby Loss Test.* Perform the steady-state verification period in accordance with section 5.1 of this appendix. For thermostatically-activated instantaneous water heaters with an internal thermostat, use section 5.2 of this appendix to conduct the standby loss test, and for flow-activated and/or thermostatically-activated instantaneous water heaters with an external thermostat (including remote thermostatically activated and/or flow-activated instantaneous water heaters), use section 5.3 of this appendix to conduct the standby loss test.

Set the primary control in accordance with section 3.5 of this appendix, such that the primary control is always calling for heat and the water heater is operating at its full rated input. Begin drawing water from the unit by opening the main supply and the outlet water valve, and adjust the water flow rate to achieve an outlet water temperature of 70 °F ± 2 °F above supply water temperature. At this time, begin recording the parameters specified in section 3.7.1 of this appendix. The steady-state verification period is complete when there is a continuous 30-minute period where the steady-state conditions specified in section 5.1 of this appendix are met, as confirmed by consecutive readings of the relevant parameters recorded at 1-minute intervals (except for electric power input rate, which is determined at 10-minute intervals, as specified in section 3.7.1 of this appendix).

5.1. *Steady-State Conditions.* The following conditions must be met at consecutive readings taken at 1-minute intervals (except for electricity input rate, for which measurements are taken at 10-minute intervals) to verify the water heater has achieved steady-state operation prior to conducting the standby loss test.

5.1.1. The water flow rate must be maintained within ± 0.25 gallons per minute (gpm) of the initial reading at the start of the steady-state verification period;

5.1.2. Electric power input rate must be maintained within 2 percent of the rated input certified by the manufacturer.

5.1.3. The supply water temperature (or inlet water temperature if a recirculating loop is used) must be maintained within ± 0.50 °F of the initial reading at the start of the steady-state verification period; and

5.1.4. The rise between the supply (or inlet if a recirculating loop is used) and outlet water temperatures is maintained within ± 0.50 °F of its initial value taken at the start of the steady-state verification period for units with rated input less than 500,000 Btu/h, and maintained within ± 1.00 °F of its initial value for units with rated input greater than or equal to 500,000 Btu/h.

5.2. *Thermostatically-Activated Instantaneous Water Heaters with an Internal Thermostat.* For water heaters that will experience cut-in based on a temperature-activated control that is internal to the water heater, use the following steps to conduct the standby loss test.

5.2.1. Immediately after the steady-state verification period, turn off the outlet water valve(s) (installed as per the provisions in section 2.2 of this appendix), and the water pump (if applicable) simultaneously and ensure that there is no flow of water through the water heater.

5.2.2. After the first cut-out following the steady-state verification period,

allow the water heater to remain in standby mode. Do not change any settings on the water heater at any point until measurements for the standby loss test are finished. Begin recording the applicable parameters specified in section 3.7.2 of this appendix.

5.2.3. At the second cut-out, record the time and ambient room temperature, and begin measuring the electricity consumption. Record the initial heat exchanger outlet water temperature (T_{OHX}) and initial ambient room temperature. For the remainder of the test, continue recording the applicable parameters specified in section 3.7.2 of this appendix.

5.2.4. Stop the test after the first cut-out that occurs after 24 hours, or at 48 hours, whichever comes first.

5.2.5. Immediately after conclusion of the standby loss test, record the total electrical energy consumption, the final ambient room temperature, the duration of the standby loss test, and if the test ends at 48 hours without a cut-out, the final heat exchanger outlet temperature, or if the test ends after a cut-out, the maximum heat exchanger outlet temperature that occurs after the cut-out. Calculate the average of the recorded values of the heat exchanger outlet water temperature and of the ambient air temperatures taken at each measurement interval, including the initial and final values.

5.2.6. *Standby Loss Calculation.* Calculate the standby loss, expressed as a percentage (per hour) of the heat content of the stored water above room temperature, using the following equation:

$$S = \frac{E_c - \left(\frac{k(V_a)(\Delta T_4)}{E_t/100}\right)}{k(V_a)(\Delta T_3)(t)} \times 100$$

Where,

ΔT_3 = Average value of the heat exchanger outlet water temperature (T_{OHX}) minus the average value of the ambient room temperature, expressed in °F

ΔT_4 = Final heat exchanger outlet water temperature (T_{OHX}) measured at the end of the test minus the initial heat exchanger outlet water temperature (T_{OHX}) measured at the start of the test, expressed in °F

k = 8.25 Btu/gallon·°F, the nominal specific heat of water

V_a = Volume of water contained in the water heater in gallons measured in accordance with section 4 of this appendix

E_t = Thermal efficiency = 98 percent for electric water heaters with immersed heating elements

E_c = Electrical energy consumed by the water heater during the duration of the test in Btu

t = Total duration of the test in hours

S = Standby loss, the average hourly energy required to maintain the stored water temperature expressed as a percentage of the initial heat content of the stored water above room temperature

5.3. *Flow-Activated and Thermostatically-Activated Instantaneous Water Heaters with an External Thermostat.* For water heaters that are either flow-activated or thermostatically-activated with an external thermostat, use the following steps to conduct the standby loss test:

5.3.1. Immediately after the steady-state verification period, de-energize the primary control to end the call for heating. If the heating elements do not cut out, then turn off the electricity supply to the heating elements. After the heating elements have cut-out, or the electricity supply to the heating elements is turned off, begin recording the measurements as per the requirements in section 3.7.2 of this appendix.

5.3.1.1. If the unit does not have an integral pump purge functionality, then turn off the outlet water valve and water pump immediately after the main burners cut-out.

5.3.1.2. If the unit has an integral pump purge functionality, allow the pump purge operation to continue. After the pump purge operation is complete, immediately turn off the outlet water valve and water pump and continue recording the required parameters for the remainder of the test.

5.3.2. Recording Data

5.3.2.1. For units with pump purge functionality, record the initial heat exchanger outlet water temperature (T_{OHX}), and ambient room temperature when the main heating element(s) cut-out or the electricity supply to the heating element(s) is turned off. After the pump purge operation is complete, record the time as t = 0 and the initial electricity meter reading. Continue to monitor and record the heat exchanger outlet water temperature (T_{OHX}) and time elapsed from the start of the test as per the requirements in section 3.7.2 of this appendix.

5.3.2.2. For units not equipped with pump purge functionality, begin recording the measurements as per the requirements of section 3.7.2 of this appendix when the main heating element(s) cut-out or the electricity supply to the heating element(s) is turned off. Specifically, record the time as t = 0, and record the initial heat exchanger outlet water temperature (T_{OHX}), ambient room temperature, and electricity meter readings. Continue to monitor and record the heat exchanger outlet water temperature (T_{OHX}) and the time elapsed from the start of the test as per the requirements in section 3.7.2 of this appendix.

5.3.3. *Stopping Criteria.* Stop the test when one of the following occurs:

5.3.3.1. The heat exchanger outlet water temperature (T_{OHX}) decreases by 35 °F from its value recorded after the main heating element(s) have cut-out, and the pump purge operation (if applicable) is complete; or

5.3.3.2. 24 hours have elapsed from the start of the test.

5.3.4. At the end of the test, record the final heat exchanger outlet water temperature (T_{OHX}), electricity consumed from time t = 0, and the time elapsed from the start of the test.

5.3.5. *Standby Loss Calculation.* Calculate the standby loss, expressed as a percentage (per hour) of the heat content of the stored water above room temperature, using the following equation:

$$S = \frac{\frac{k(V_a)(\Delta T_1)}{E_t/100} + E_c}{k(V_a)(\Delta T_2)(t)} \times 100$$

Where,

ΔT_1 = Heat exchanger outlet water temperature (T_{OHX}) measured after the pump purge operation is complete (if the unit is integrated with pump purge functionality); or after the main heating element(s) cut-out (if the unit is not equipped with pump purge functionality) minus heat exchanger outlet water temperature (T_{OHX}) measured at the end of the test, expressed in °F

ΔT_2 = Heat exchanger outlet water temperature (T_{OHX}) minus the ambient room temperature, both measured after the main heating element(s) cut-out at the start of the test, expressed in °F

k = 8.25 Btu/gallon·°F, the nominal specific heat of water

V_a = Volume of water contained in the water heater in gallons measured in accordance with section 4 of this appendix

E_t = Thermal efficiency = 98 percent for electric water heaters with immersed heating elements

E_c = Electrical energy consumed by the water heater during the duration of the test in Btu

t = Total duration of the test in hours

S = Standby loss, the average hourly energy required to maintain the stored water temperature expressed as a percentage of the initial heat content of the stored water above room temperature

17. Add appendix E to subpart G of part 431 to read as follows:

Appendix E to Subpart G of Part 431—Uniform Test Method for the Measurement of Energy Efficiency of Commercial Heat Pump Water Heaters

Note: On and after November 6, 2017, manufacturers must make any

representations with respect to energy use or efficiency of commercial heat pump water heaters in accordance with the results of testing pursuant to this appendix.

1. General. Determine the COP_h for commercial heat pump water heaters (CHPWHs) using the test procedure set forth below. Certain sections below reference ANSI/ASHRAE 118.1–2012 (incorporated by reference; see § 431.105). Where the instructions contained below differ from those contained in ANSI/ASHRAE 118.1–2012, the sections in this appendix control.

2. Definitions and Symbols. The definitions and symbols are as listed in section 3 of ANSI/ASHRAE 118.1–2012.

3. Instrumentation. The instruments required for the test are as described in section 6 of ANSI/ASHRAE 118.1–2012 (except sections 6.3, 6.4, and 6.6).

4. Test Set-Up. Follow the provisions described in this section to install the CHPWH for testing. Use the test set-up and installation instructions set forth for Type IV and Type V equipment (as applicable), defined in sections 4.4 and 4.5 of ANSI/ASHRAE 118.1–2012 and in accordance with the sections below:

*4.*1. Test set-up and installation instructions.

4.1.1. For air-source CHPWHs, set up the unit for testing as per section 7.1 and Figure 5a of ANSI/ASHRAE 118.1–2012 for CHPWHs without an integral storage tank, and as per Figure 6 in section 7.7.1 of ANSI/ASHRAE 118.1–2012 for CHPWHs with an integral storage tank.

*4.*1.2. For direct geo-exchange CHPWHs, set up the unit for testing as per section 7.1 and Figure 5b of ASNI/ASHRAE 118.1–2012 for CHPWHs without an integral storage tank, and as per Figure 7 in section 7.7.2 of ANSI/ASHRAE 118.1–2012 for CHPWHs with an integral storage tank.

*4.*1.3. For indoor water-source, ground-source closed-loop, and ground water-source CHPWHs, set up the unit for testing as per section 7.1 and Figure 5c of ANSI/ASHRAE 118.1–2012 for CHPWHs without an integral storage tank, and as per Figure 8 in section 7.7.3 of ANSI/ASHRAE 118.1–2012 for CHPWHs with an integral storage tank.

*4.*2. Use the water piping instructions described in section 7.2 of ANSI/ASHRAE 118.1–2012 and the special instructions described in section 7.7.6 of ANSI/ASHRAE 118.1–2012. Insulate all the pipes used for connections with material having a thermal resistance of not less than 4 $h \cdot °F \cdot ft^2/Btu$ for a total piping length of not less than 4 feet from the water heater connection ports.

4.3. Install the thermocouples, including the room thermocouples, as per the instructions in sections 7.3.1, 7.3.2, and 7.3.3 (as applicable) of ANSI/ASHRAE 118.1–2012.

4.4. Section 7.6 of ANSI/ASHRAE 118.1–2012 must be used if the manufacturer neither submits nor specifies a water pump applicable for the unit for laboratory testing.

4.5. Install the temperature sensors at the locations specified in Figure 5a, 5b, 5c, 6, 7, or 8 of ANSI/ASHRAE 118.1–2012, as applicable as per section 4.1 of this appendix. The sensor shall be installed in such a manner that the sensing portion of the device is positioned within the water flow and as close as possible to the center line of the pipe. Follow the instructions provided in sections 7.7.7.1 and 7.7.7.2 of ANSI/ASHRAE 118.1–2012 to install the temperature and flow-sensing instruments.

4.6. Use the following evaporator side rating conditions as applicable for each category of CHPWHs. These conditions are also mentioned in Table 5.1 of this appendix:

4.6.1. For air-source CHPWHs, maintain the evaporator air entering dry-bulb temperature at 80.6 °F ± 1 °F and wet-bulb temperature at 71.2 °F ± 1 °F throughout the conduct of the test.

4.6.2. For direct geo-exchange CHPWHs, maintain the evaporator refrigerant temperature at 32 °F ± 1 °F.

4.6.3. For indoor water-source CHPWHs, maintain the evaporator entering water temperature at 68 °F ± 1 °F.

4.6.4. For ground water-source CHPWHs, maintain the evaporator entering water temperature at 50 °F ± 1 °F.

4.6.5. For ground-source closed-loop CHPWHs, maintain the evaporator entering water temperature at 32 °F ± 1 °F.

4.6.5.1. For ground-source closed-loop CHPWHs, the evaporator water must be mixed with 15-percent methanol by-weight to allow the solution to achieve the rating conditions required in section 4.6.5.

4.7. The CHPWH being tested must be installed as per the instructions specified in sections 4.1 to 4.6 (as applicable) of this appendix. For all other installation requirements, use section 7.7.4 of ANSI/ASHRAE 118.1–2012 to resolve any issues related to installation (other than what is specified in this test procedure) of the equipment for testing. Do not make any alterations to the equipment except as specified in this appendix for installation, testing, and the attachment of required test apparatus and instruments.

*4.*8. Use Table 3 of ANSI/ASHRAE 118.1–2012 for measurement tolerances of various parameters.

4.9. If the CHPWH is equipped with a thermostat that is used to control the throttling valve of the equipment, then use the provisions in section 7.7.7.3 of ANSI/ASHRAE 118.1–2012 to set up the thermostat.

4.10. For CHPWHs equipped with an integral storage tank, supplemental heat inputs such as electric resistance elements must be disabled as per section 7.7.8 of ANSI/ASHRAE 118.1–2012.

4.11. Install instruments to measure the electricity supply to the equipment as specified in section 7.5 of ANSI/ASHRAE 118.1–2012.

5. Test Procedure

Test all CHPWHs that are not equipped with an integral storage tank as per the provisions described in ANSI/ASHRAE 118.1–2012 for ''Type IV'' equipment as defined in section 4.4 of ANSI/ASHRAE 118.1–2012. Test all CHPWHs that are equipped with an integral storage tank as per the provisions described in ANSI/ASHRAE 118.1–2012 for ''Type V'' equipment as defined in section 4.5 of ANSI/ASHRAE 118.1–2012. Tests for all CHPWHs must follow the steps described below.

5.1. Supply the CHPWH unit with electricity at the voltage specified by the manufacturer. Follow the provisions in section 8.2.1 of ANSI/ASHRAE 118.1–2012 to maintain the electricity supply at the required level.

5.1.1. For models with multiple voltages specified by the manufacturer, use the minimum voltage specified by the manufacturer to conduct the test. Maintain the voltage as per the limits specified in section 8.2.1 of ANSI/ASHRAE 118.1–2012. The test may be repeated at other voltages at the manufacturer's discretion.

5.2. Set the condenser supply water temperature and outlet water temperature per the following provisions and as set forth in Table 5.1 of this section:

TABLE 5.1—EVAPORATOR AND CONDENSER SIDE RATING CONDITIONS

Category of CHPWH	Evaporator side rating conditions	Condenser side rating conditions
Air-source commercial heat pump water heater.	Evaporator entering air conditions: Dry bulb: 80.6 °F ± 1 °F ..... Wet bulb: 71.2 °F ± 1 °F	Entering water temperature: 70 °F ± 1 °F. Vary water flow rate (if needed) to achieve the outlet water temperature as specified in section 8.7.2 of ANSI/ASHRAE 118.1–2012. If the required outlet water temperature as specified in section 8.7.2 of ANSI/ASHRAE 118.1–2012 is not met even after varying the flow rate, then change the condenser entering water temperature to 110 °F ± 1 °F. Vary flow rate to achieve the conditions in section 8.7.2 of ANSI/ASHRAE 118.1–2012.
Direct geo-exchange commercial heat pump water heater.	Evaporator refrigerant temperature: 32 °F ± 1 °F.	Entering water temperature: 110 °F ± 1 °F.
Indoor water-source commercial heat pump water heater.	Evaporator entering water temperature: 68 °F ± 1 °F.	Entering water temperature: 110 °F ± 1 °F.
Ground water-source commercial heat pump water heater.	Evaporator entering water temperature: 50 °F ± 1 °F.	Entering water temperature: 110 °F ± 1 °F.
Ground-source closed-loop commercial heat pump water heater.	Evaporator entering water temperature: 32 °F ± 1 °F.	Entering water temperature: 110 °F ± 1 °F.

5.2.1. For air-source CHPWHs:

5.2.1.1. Set the supply water temperature to 70 °F ± 1 °F. The water pressure must not exceed the maximum working pressure rating for the equipment under test.

5.2.1.2. Use the provisions in section 8.7.1 of ANSI/ASHRAE 118.1–2012 to set the tank thermostat for CHPWHs equipped with an integral storage tank.

5.2.1.3. Initiate operation at the rated pump flow rate and measure the outlet water temperature. If the outlet water temperature is maintained at 120 °F ± 5 °F with no variation in excess of 2 °F over a three-minute period, as required by section 8.7.2 of ANSI/ASHRAE 118.1–2012, skip to section 5.3 of this appendix.

5.2.1.4. If the outlet water temperature condition as specified in section 8.7.2 of ANSI/ASHRAE 118.1–2012 is not achieved, adjust the water flow rate over the range of the pump's capacity. If, after varying the water flow rate, the outlet water temperature is maintained at 120 °F ± 5 °F with no variation in excess of 2 °F over a three-minute period, as required by section 8.7.2 of ANSI/ASHRAE 118.1–2012, skip to section 5.3 of this appendix.

5.2.1.5. If, after adjusting the water flow rate within the range that is achievable by the pump, the outlet water temperature condition as specified in section 8.7.2 of ANSI/ASHRAE 118.1–2012 is still not achieved, then change the supply water temperature to 110 °F ± 1 °F and repeat the instructions from sections 5.2.1.2 and 5.2.1.4 of this appendix.

5.2.1. 6. If the outlet water temperature condition cannot be met, then a test procedure waiver is necessary to specify an alternative set of test conditions.

5.2.2. For direct geo-exchange, indoor water-source, ground-source closed-loop, and ground water-source CHPWHs use the following steps:

5.2.2.1. Set the condenser supply water temperature to 110 °F ± 1 °F. The water pressure must not exceed the maximum working pressure rating for the equipment under test.

5.2.2.2. Use the provisions in section 8.7.1 of ANSI/ASHRAE 118.1–2012 to set the tank thermostat for CHPWHs equipped with an integral storage tank.

5.2.2.3. Follow the steps specified in section 8.7.2 of ANSI/ASHRAE 118.1–2012 to obtain an outlet water temperature of 120 °F ± 5 °F with no variation in excess of 2 °F over a three-minute period.

5.3. Conduct the test as per section 9.1.1, ''Full Input Rating,'' of ANSI/ASHRAE 118.1–2012. The flow rate, ''FR,'' referred to in section 9.1.1 of ANSI/ASHRAE 118.1–2012 is the flow rate of water through the CHPWH expressed in gallons per minute obtained after following the steps in section 5.2 of this appendix. Use the evaporator side rating conditions specified in section 4.6 of this appendix to conduct the test as per section 9.1.1 of ANSI/ASHRAE 118.1–2012.

5.4. Calculate the COP_h of the CHPWH according to section 10.3.1 of the ANSI/ASHRAE 118.1–2012 for the ''Full Capacity Test Method.'' For all calculations, time differences must be expressed in minutes.

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Part V

Department of Commerce

National Oceanic and Atmospheric Administration

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to the Kodiak Transient Float Replacement Project; Notice

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

XRIN 0648–XE941

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to the Kodiak Transient Float Replacement Project

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice; proposed incidental harassment authorization; request for comments.

SUMMARY: NMFS has received an application from the City of Kodiak Port and Harbors (the City) for an Incidental Harassment Authorization (IHA) to take marine mammals, by harassment, incidental to the Kodiak transient float replacement project in Kodiak, Alaska. Pursuant to the Marine Mammal Protection Act (MMPA), NMFS is requesting comments on its proposal to issue an IHA to the City to incidentally take, by Level B Harassment only, marine mammals during the specified activity. The City requests that the IHA be valid for one year, from January 1, 2017 through December 31, 2017. Pursuant to NEPA, NMFS is preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) and will consider comments submitted in response to this notice as part of that process. The EA will be posted at *http://www.nmfs.noaa.gov/pr/permits/incidental/construction.htm* once it is finalized.

DATES: Comments and information must be received no later than December 12, 2016.

ADDRESSES: Comments on the application should be addressed to Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service, 1315 East-West Highway, Silver Spring, MD 20910. The mailbox address for providing email comments is *itp.mccue@noaa.gov.* Comments sent via email, including all attachments, must not exceed a 25-megabyte file size. NMFS is not responsible for comments sent to addresses other than those provided here.

Instructions: All comments received are a part of the public record and will generally be posted to *http://www.nmfs.noaa.gov/pr/permits/incidental.htm* without change. All Personal Identifying Information (for example, name, address, etc.) voluntarily submitted by the commenter may be publicly accessible. Do not submit Confidential Business Information or otherwise sensitive or protected information.

An electronic copy of the application may be obtained by writing to the address specified above, telephoning the contact listed below (see **FOR FURTHER INFORMATION CONTACT**), or visiting the internet at: *http://www.nmfs.noaa.gov/pr/permits/incidental/.* The following associated documents are also available at the same internet address: Draft EA, Monitoring Plan. Documents cited in this notice may also be viewed, by appointment, during regular business hours, at the aforementioned address.

FOR FURTHER INFORMATION CONTACT: Laura McCue, Office of Protected Resources, NMFS, (301) 427–8401.

SUPPLEMENTARY INFORMATION:

Availability

An electronic copy of the City's application and supporting documents, as well as a list of the references cited in this document, may be obtained by visiting the Internet at: *http://www.nmfs.noaa.gov/pr/permits/incidental/construction.htm.* In case of problems accessing these documents, please call the contact listed above.

Background

Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq.*) direct the Secretary of Commerce to allow, upon request, the incidental, but not intentional, taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region if certain findings are made and either regulations are issued or, if the taking is limited to harassment, a notice of a proposed authorization is provided to the public for review.

An authorization for incidental takings shall be granted if NMFS finds that the taking will have a negligible impact on the species or stock(s), will not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses (where relevant), and if the permissible methods of taking and requirements pertaining to the mitigation, monitoring and reporting of such takings are set forth. NMFS has defined ''negligible impact'' in 50 CFR 216.103 as ''an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival.''

Except with respect to certain activities not pertinent here, the MMPA defines ''harassment'' as: Any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild (Level A harassment); or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering (Level B harassment).

Summary of Request

On August 15, 2016, NMFS received an application from the City for the taking of marine mammals incidental to the Kodiak transient float replacement project in Kodiak, Alaska. On October 17, 2016 NMFS received a revised application with updated take numbers. NMFS determined that the application was adequate and complete on October 21, 2016. Subsequent to NMFS accepting the application, changes were made to the injury zones, take numbers, and shutdown zones. The City provided a memo to NMFS on November 1, 2016 noting these changes.

The City proposes to conduct in-water construction work (*i.e.,* pile driving and removal) that may incidentally harass marine mammals. The proposed activity would occur from January 1, 2017 through December 31, 2017, with restrictions on impact driving between May 1, 2017 and June 30, 2017.

Proposed activities included as part of the Kodiak transient float replacement project (transient float project) with the potential to take marine mammals include vibratory and impact pile-driving operations and use of a down-hole drill/hammer to install piles in bedrock. Take by Level B harassment of individuals of six species is anticipated to result from the specified activity.

On August 4, 2016, NMFS released its Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Guidance). This new guidance established new thresholds for predicting auditory injury, which equates to Level A harassment under the MMPA. The transient float project used this new guidance when determining the injury (Level A) zones.

Description of the Specified Activity

Overview

The City proposes to replace its existing transient float located in Kodiak's Near Island Channel. The

purpose of this project is to replace the transient float with one that meets modern standards for vessel mooring and public safety for the next 50 years. The existing float has structural issues due to failing walers, stringers, and bullrails. Due to these structural problems, the float's capacity has been reduced. The existing float needs to be replaced due to its poor condition and reduced capacity. The proposed action includes in-water construction, including the removal of the existing timber float and its associated timber and steel piles, and installation of the replacement float and steel piles. The replacement float will be located within nearly the same footprint as the existing facility; however, the overall float length will be shortened to improve all around accessibility within City right-of-way limits.

Dates and Duration

Pile installation and extraction associated with the Kodiak transient float replacement project is scheduled to begin in January 2017 and end in March 2017. Pile installation and removal will take approximately 57 hours and is expected to take place over a period of 12 days (not necessarily consecutive days). To minimize impacts to pink salmon fry (*Oncorhynchus gorbuscha*) and coho salmon smolt (*O. kisutch*), all in-water pile extraction and installation is planned to be completed by April 30, 2016. However, if work cannot be completed by that date, the Alaska Department of Fish & Game (ADF&G) has recommended that the City refrain from impact pile installation from May 1 through June 30 within the 12-hour period beginning daily at the start of civil dawn (Marie 2015). If impact pile-driving occurs from May 1 through June 30, it will occur in the evenings during daylight hours, after the end of the 12-hour period that begins at civil dawn.

The 2.5-month long construction period accounts for the time required to mobilize materials and resources, remove and replace piles, remove the existing float, and install the new float, abutment, gangway, electrical components, and other safety features. The 2.5-month long construction period also accounts for potential delays in material deliveries, equipment maintenance, inclement weather, and shutdowns that could occur if marine mammals come within disturbance zones associated with the project area. However, the City has requested an authorization for up to one year of construction activities in case unforeseen construction delays occur.

Pile extraction, pile driving, and drilling will occur intermittently over the work period, from minutes to hours at a time (Table 1 in the City's application). The proposed transient float replacement project will require an estimated 12 days total of pile extraction and installation, including eight hours of vibratory extraction and installation, 48 hours of down-hole drilling, and less than one hour of impact hammering. Timing will vary based on the weather, delays, substrate type (the rock is layered and is of varying hardness across the site, so some holes will be drilled quickly and others may take longer), and other factors.

Specified Geographic Region

The Kodiak transient float is located in the City of Kodiak, Alaska, at 57.788162° N., −152.400287° W., in Near Island Channel in the Gulf of Alaska (See Figures 1–3 in the City's Application). The transient float provides moorage for vessels from villages as well as from the commercial fishing fleet located in Near Island Channel, which separates downtown Kodiak from Near Island (Figure 1–2 in the City's application). The channel is approximately 200 meters (m) (656 feet (ft)) wide and 15 m (50 ft) deep in the project area. In the project footprint, the shoreline along the Transient Float is heavily armored with riprap (see Figure 4 of the City's application) and impervious surfaces directly abut the shoreline adjacent to the float. The channel is located within Chiniak Bay which opens to the Gulf of Alaska.

The proposed project is located in a busy industrial area (Figure 3 of the City's application). Channel Side Services' seafood packing facility is located approximately 25 m (82 ft) east of the float and Petro Marine Services floating fuel dock is located approximately 20 m (66 ft) west of the float. Pier 1, the Alaska Marine Highway Ferry dock, is located 100 m (328 ft) southwest of the float and Trident Seafood's shore-based seafood processing plant is located approximately 175 m (574 ft) to the southwest (See Figure 3 in the City's application). When in operation, Trident's plant receives numerous commercial fishing vessels daily for offloading and processing of catch.

Detailed Description of Activities

The proposed action for this IHA request includes in-water construction, including the removal of the existing timber float and its associated steel piles (19 12-inch steel piles), and installation of the replacement float and steel piles (12 24-inch steel piles). The replacement float will be located within nearly the same footprint as the existing facility; however, the overall float length will be shortened to improve all around accessibility within City right-of-way limits. The proposed transient float project will require an estimated 57 hours over 12 days total of pile extraction and installation, including approximately eight hours of vibratory extraction and installation, 48 hours of down-hole drilling, and less than one hour of impact hammering. In water construction activities are expected to occur over 2.5 months.

While work is conducted in the water, anchored barges would be used to stage construction materials and equipment. The existing piles, fixed pier, float and gangway will be removed and disposed of properly and the new float will be installed.

It is estimated that it will take 10 minutes of vibratory pile-driving and four hours of down-hole drilling per pile for installation, and 20 minutes of vibratory pile-driving per pile for extraction. For the installation of 12 piles, this is an estimated two hours of total time using active vibratory equipment and 48 hours of total time using down-hole drilling. For the in-water extraction of 19 piles, this is an estimated 6.33 hours of total time using active vibratory equipment. Two piles would remain in place, and two piles to be removed are above the high tide line. No temporary piles are associated with this project.

The 24-inch steel piles will be driven 3–4.6 m (10–15 ft) through sediment and drilled another 3 m (10 ft) into bedrock. The sequence for installing the 24-inch piles will begin with insertion through overlying sediment with a vibratory hammer for about eight minutes per pile. Next, a hole will be drilled in the underlying bedrock by using a down-hole drill. A down-hole drill is a drill bit that drills through the sediment and a pulse mechanism that functions at the bottom of the hole, using a pulsing bit to break up the harder materials or rock to allow removal of the fragments and insertion of the pile. The head extends so that the drilling takes place below the pile. Drill cuttings are expelled from the top of the pile as dust or mud. It is estimated that drilling piles through the layered bedrock will take about four hours per pile. Finally, the vibratory hammer will be used again to finish driving the piles into bedrock, for approximately two minutes per pile (Table 1).

Although impact pile-driving is not expected for this project, the contractor may choose to impact proof the piles after down-hole drilling. In this case, two to five blows of an impact hammer would be used to confirm that piles are

set into bedrock, for an expected maximum time of three minutes of impact hammering per pile. When the impact hammer is employed for proofing, a pile cap or cushion will be placed between the impact hammer and the pile.

TABLE 1—ESTIMATED NUMBER OF HOURS PROPOSED FOR PILE EXTRACTION AND INSTALLATION

Pile type, location, method	Number of piles	Vibratory hammer		Down-hole drill		Impact hammer	
		Number of piles	Hours	Number of piles	Hours	Number of piles	Hours
12-inch Steel Existing Float Extraction	19	19	6.33	0	0	0	0
24-inch Steel Replacement Float Installation	12	12	2	12	48	12	0.6
Total hours in-water			8.33		48		0.6

Description of Marine Mammals in the Area of the Specified Activity

Marine waters near Kodiak Island support many species of marine mammals, including pinnipeds and cetaceans; however, the number of species regularly occurring near the project area is limited. Steller sea lions (*Eumatopias jubatus*) are the most common marine mammals in the project area and are part of the western Distinct Population Segment (wDPS) that is listed as endangered under the Endangered Species Act (ESA). Harbor seals (*Phoca vitulina*), harbor porpoises (*Phocoena phocoena*), Dall's porpoise (*Phocoenoides dalli*), killer whales (*Orcinus orca*), and humpback whales (*Megaptera novaeangliae*) may also occur in the project area, especially in the waters between Near Island Channel and Woody Island, but far less frequently and in lower abundance than Steller sea lions. Fin whales (*Balaenoptera physalus*) and grey whales (*Eschrichtius robustus*) occur in the nearshore waters around Kodiak Island, but are not expected to be found near the project area because of the narrow channel and high level of boat traffic. The relatively large numbers of Steller sea lions in the area may serve as an additional deterrent for some marine mammals. Table 2 provides information about the species that are potentially present in the project area. This notice of proposed authorization assesses the potential impacts to Steller sea lion, harbor seal, harbor porpoise, Dall's porpoise, killer whale, and humpback whale, which are the species that regularly occur or that may occur in the project area.

In the species accounts provided here, we offer a brief introduction to the species and relevant stock as well as available information regarding population trends and threats, and describe any information regarding local occurrence.

TABLE 2—MARINE MAMMAL SPECIES POTENTIALLY PRESENT IN THE PROJECT AREA

Species	Stock	ESA/ MMPA status; strategic (Y/N) [1]	Stock abundance (CV, N_{min}, most recent abundance survey) [2]	PBR [3]	Relative occurrence in Kodiak
Order Cetartiodactyla—Cetacea—Superfamily Odontoceti (toothed whales, dolphins, and porpoises) Family Phocoenidae (porpoises)					
Dall's porpoise.	Alaska	–: N	83,400 (0.097; n/a; 1993)	Undet	Rare.
Harbor porpoise.	Gulf of Alaska	–: S	31,046 (n/a; n/a; 2010)	Undet	Common.
Order Cetartiodactyla—Cetacea—Superfamily Odontoceti (toothed whales, dolphins, and porpoises) Family Delphinidae (dolphins)					
Killer whale	Eastern North Pacific Alaska Resident	–: N	2,347 (n/a; 2,347; 2012)	23.4	Common.
	Eastern North Pacific Gulf of AK, Aleutian Islands, and Bering Sea Transient.	–: N	587 (n/a; 587; 2012)	5.9	Common.
Order Cetartiodactyla—Cetacea—Superfamily Odontoceti (toothed whales, dolphins, and porpoises) Family Balaenopteridae					
Humpback whale.	Central North Pacific	n/a [4]; S	10,103 (0.300; 7,890; 2006)	83	Rare.
	Western North Pacific	n/a [4]; S	1,107 (0.300; 865; 2006)	3	Rare.
Fin whale	Northeast Pacific	E/D; S	n/a (n/a; n/a; 2010)	undet	Rare.
Order Cetartiodactyla—Cetacea—Superfamily Odontoceti (toothed whales, dolphins, and porpoises) Family Eschrichtiidae					
Grey whale	Eastern North Pacific	–:N	20,990 (0.05; 20,125; 2011)	624	Rare.

TABLE 2—MARINE MAMMAL SPECIES POTENTIALLY PRESENT IN THE PROJECT AREA—Continued

Species	Stock	ESA/ MMPA status; strategic (Y/N) [1]	Stock abundance (CV, N_{min}, most recent abundance survey) [2]	PBR [3]	Relative occurrence in Kodiak
Order Carnivora—Superfamily Pinnipedia Family Otariidae (eared seals and sea lions)					
Steller sea lion.	wDPS	E/D; S	49,497 (n/a; 49,497; 2014)	297	Common.
Order Carnivora—Superfamily Pinnipedia Family Phocidae (earless seals)					
Harbor seal ...	South Kodiak	–; N	19,199 (n/a; 17,479; 2011)	314	Common.

[1] ESA status: Endangered (E), Threatened (T)/MMPA status: Depleted (D). A dash (–) indicates that the species is not listed under the ESA or designated as depleted under the MMPA. Under the MMPA, a strategic stock is one for which the level of direct human-caused mortality exceeds PBR (see footnote 3) or which is determined to be declining and likely to be listed under the ESA within the foreseeable future. Any species or stock listed under the ESA is automatically designated under the MMPA as depleted and as a strategic stock.

[2] CV is coefficient of variation; N_{min} is the minimum estimate of stock abundance. In some cases, CV is not applicable. For certain stocks of pinnipeds, abundance estimates are based upon observations of animals (often pups) ashore multiplied by some correction factor derived from knowledge of the species' (or similar species') life history to arrive at a best abundance estimate; therefore, there is no associated CV. In these cases, the minimum abundance may represent actual counts of all animals ashore.

[3] Potential biological removal, defined by the MMPA as the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population size (OSP).

[4] The newly defined DPSs do not currently align with the stocks under the MMPA.

Cetaceans

Harbor Porpoise

The harbor porpoise inhabits temporal, subarctic, and arctic waters. In the eastern North Pacific, harbor porpoises range from Point Barrow, Alaska, to Point Conception, California. Harbor porpoise primarily frequent coastal waters and occur most frequently in waters less than 100 m deep (Hobbs and Waite 2010). They may occasionally be found in deeper offshore waters.

In Alaska, harbor porpoises are currently divided into three stocks, based primarily on geography. These are the Bering Sea stock, the Southeast Alaska stock, and the Gulf of Alaska stock (Allen and Angliss 2015). Only the Gulf of Alaska stock is considered in this application because the other stocks are not found in the geographic area under consideration.

Harbor porpoises are neither designated as depleted under the MMPA nor listed as threatened or endangered under the ESA. Because the most recent abundance estimate is 14 years old and information on incidental harbor porpoise mortality in commercial fisheries is not well understood, the Gulf of Alaska stock of harbor porpoise is classified as strategic. Population trends and status of this stock relative to optimum sustainable population size are currently unknown with an undetermined PBR. The Gulf of Alaska stock is currently estimated at 31,046 individuals (Allen and Angliss 2015). No reliable information is available to determine trends in abundance.

According to the online database Ocean Biogeographic Information System, Spatial Ecological Analysis of Megavertebrate Populations (OBIS–SEAMAP), West Coast populations have more restricted movements and do not migrate as much as East Coast populations. Most harbor porpoise groups are small, generally consisting of less than five individuals (Halpin 2009 at OBIS–SEAMAP 2016). Harbor porpoise in Southeast Alaska are usually found in groups of one or two individuals (Dahlheim 2009, 2015).

Harbor porpoises commonly frequent Kodiak's nearshore waters, but are rarely if ever noted in the Kodiak channel (K. Wynne, pers. comm.). Harbor porpoises are expected to be encountered rarely in the project area. During the Kodiak ferry terminal reconstruction project, six sightings of singles or pairs of harbor porpoise were seen during 110 days of monitoring (ABR 2016).

Dall's Porpoise

Dall's porpoise are widely distributed in the North Pacific Ocean, usually in deep oceanic waters (>2,500 m) or over the continental shelf or along slopes (Muto *et al.,* 2015). They are present throughout the entire year. The stock structure of eastern North Pacific Dall's porpoise is not adequately understood at this time; therefore, only one stock is recognized in Alaskan waters: The Alaska stock (Muto *et al.,* 2015).

The Alaska stock of Dall's porpoise has an abundance estimate of 83,400 individuals based on surveys from the early 1990s. However, this data is unreliable because it is over eight years old. Information on PBR and population trends are not currently available (Muto *et al.*, 2015). Dall's porpoise are not designated as depleted or classified as strategic under the MMPA, nor are they listed under the ESA (Muto *et al.*, 2015). The main threat to this species is habitat modification from climate change and urban/industrial development (Muto *et al.,* 2015). Average group size for Dall's porpoise in Southeast Alaska is three individuals (Dahlheim 2009). The OBIS SEAMAP Web site states that this species forms small groups of between two and 12 individuals (Halpin 2009 at OBIS–SEAMAP 2016).

Dall's porpoise are considered uncommon in the action area, except in the narrow channel between Woody Island and Near Island Channel where the waters may be deeper. No Dall's porpoise were observed in the Near Island Channel during a recent project at the nearby Kodiak ferry terminal over 110 days of monitoring (ABR 2016).

Killer Whale

Killer whales have been observed in all oceans and seas of the world, but the highest densities occur in colder and more productive waters found at high latitudes (Muto *et al.,* 2015). Killer whales are found throughout the North Pacific, and occur along the entire Alaska coast, in British Columbia and Washington inland waterways, and

along the outer coasts of Washington, Oregon, and California (Muto *et al.,* 2015).

Based on data regarding association patterns, acoustics, movements, and genetic differences, eight killer whale stocks are now recognized within the Pacific U.S. Exclusive Economic Zone, seven of which occur in Alaska: (1) The Alaska Resident stock; (2) the Northern Resident stock; (3) the Southern Resident stock; (4) the Gulf of Alaska, Aleutian Islands, and Bering Sea Transient stock; (5) the AT1 Transient stock; (6) the West Coast transient stock, occurring from California through southeastern Alaska; and (7) the Offshore stock. Only the Alaska Resident stock and the Gulf of Alaska, Aleutian Islands, and Bering Sea Transient stock are considered in this application because other stocks occur outside the geographic area under consideration.

The Alaska Resident stock occurs from southeastern Alaska to the Aleutian Islands and Bering Sea. Although the Gulf of Alaska, Aleutian Islands, and Bering Sea Transient stock occupies a range that includes all of the U.S. Exclusive Economic Zone in Alaska, few individuals have been seen in southeastern Alaska. The transient stock occurs primarily from Prince William Sound through the Aleutian Islands and Bering Sea.

The Alaska Resident stock of killer whales is currently estimated at 2,347 individuals, and the estimate of the Gulf of Alaska, Aleutian Islands, and Bering Sea Transient stock is 587 individuals (Muto *et al.,* 2015). The abundance estimate for the Alaska Resident stock is likely underestimated because researchers continue to encounter new whales in the Gulf of Alaska and western Alaskan waters. At present, reliable data on trends in population abundance for both stocks are unavailable.

Transient killer whales are seen periodically in waters of Kodiak Harbor, with photo-documentation since at least 1993 (Kodiak Seafood and Marine Science Center 2015). One pod known to visit Kodiak Harbor includes an adult female and adult male that have distinctive dorsal fins that make repeated recognition possible. This, as well as their easy visibility from shore, has led to their ''popularity'' in Kodiak, where their presence is often announced on public radio. They have been repeatedly observed and photographed attacking Steller sea lions.

The Kodiak killer whales appear to specialize in preying on Steller sea lions commonly found near Kodiak's processing plants, fishing vessels, and docks. This pod kills and consumes at least four to six Steller sea lions per year from the Kodiak harbor area, primarily from February through May (Kodiak Seafood and Marine Science Center 2015, Wynne 2015b). Four pods, ranging from three to seven individuals, were observed during the Kodiak Ferry terminal reconstruction project over 110 days of monitoring, with animals staying between five minutes and five hours (ABR 2016). Further information on the biology and local distribution of these species can be found in the City's application available online at: *http://www.nmfs.noaa.gov/pr/permits/incidental/construction.htm* and the NMFS Marine Mammal Stock Assessment Reports, which may be found at: *http://www.nmfs.noaa.gov/pr/species/.*

Humpback Whale

Humpback whales are found worldwide in all ocean basins. In winter, most humpback whales occur in the subtropical and tropical waters of the Northern and Southern Hemispheres (Muto *et al.,* 2015). These wintering grounds are used for mating, giving birth, and nursing new calves. Humpback whales migrate nearly 3,000 mi (4,830 km) from their winter breeding grounds to their summer foraging grounds in Alaska.

There are five stocks of humpback whales, two of which occur in Alaska: The Central North Pacific Stock, which consists of winter/spring populations in the Hawaiian Islands which migrate primarily to northern British Columbia/Southeast Alaska, the Gulf of Alaska, and the Bering Sea/Aleutian Islands; and the Western North Pacific stock, which consists of winter/spring populations off Asia which migrate primarily to Russia and the Bering Sea/Aleutian Islands (Muto *et al.,* 2015). The Western North Pacific stock is found in coastal and inland waters around the Pacific Rim from Point Conception, California, north to the Gulf of Alaska and the Bering Sea, and west along the Aleutian Islands to the Kamchatka Peninsula and into the Sea of Okhotsk and north of the Bering Strait, which are historical feeding grounds (Muto *et al.,* 2015). Information from a variety of sources indicates that humpback whales from the Western and Central North Pacific stocks mix to a limited extent on summer feeding grounds ranging from British Columbia through the central Gulf of Alaska and up to the Bering Sea (Muto *et al.,* 2015).

The current abundance estimate for the Central North Pacific stock is 10,103 animals, with PBR at 83 animals, and it is considered a strategic stock (Muto *et al.,* 2015). The current abundance estimate for the Western North Pacific stock is 1,107 animals, with PBR at 3 animals, and it is also considered a strategic stock (Muto *et al.,* 2015).

In the Gulf of Alaska, high densities of humpback whales are found in the Shumagin Islands, south and east of Kodiak Island, and from the Barren Islands through Prince William Sound. Although densities in any particular location are not high, humpback whales are also found in deep waters south of the continental shelf from the eastern Aleutians through the Gulf of Alaska.

Humpback whales were listed as endangered under the Endangered Species Conservation Act (ESCA) in June 1970. In 1973, the ESA replaced the ESCA, and humpbacks continued to be listed as endangered. NMFS recently evaluated the status of the species, and on September 8, 2016, NMFS divided the species into 14 distinct population segments (DPS), removed the current species-level listing, and in its place listed four DPSs as endangered and one DPS as threatened (NMFS 2016b, 81 FR 62259). The remaining nine DPSs were not listed. There are three DPSs that may occur in the action area: The Mexico DPS, the Hawaii DPS, and the Western North Pacific (WNP) DPS. The Hawaii DPS of humpback whales is not listed under the ESA, the Mexico DPS is listed as threatened, and the WNP DPS is listed as endangered (NMFS 2016b, 81 FR 62259). Because this rule resulted in the designation of DPSs in the North Pacific, a parallel revision of MMPA population structure in the North Pacific is currently being considered.

Of the humpback whales found in Alaska, it is estimated that 89 percent are from the Hawaii DPS, 10.5 percent are from the Mexico DPS, and 0.5 percent are from the WNP DPS (Wade *et al.,* 2016). The current abundance estimate for the Hawaii DPS is 11,398 individuals and is thought to be increasing with a population trend estimate of 5.5–6 percent (NMFS 2016b; 81 FR 62259). The current abundance estimate for the Mexico DPS is 3,264 individuals and the population trend is unknown (NMFS 2016b; 81 FR 62259). The current abundance estimate for the Western North Pacific DPS is 1,059 individuals, with an unknown trend (NMFS 2016b; 81 FR 62259).

Humpback whales are rarely seen in the action area, but occur in nearshore waters around Kodiak Island. One humpback whale was observed in Near Island Channel on one occasion in March 2016 during the Kodiak ferry terminal reconstruction project over 110 days of monitoring (ABR 2016).

Humpbacks may also be present in the channel between Woody Island and Near Island Channel where a narrow band may be ensonified from construction activities.

Pinnipeds

Steller Sea Lion

The Steller sea lion is the largest of the eared seals. Steller sea lion populations that primarily occur west of 144° W (Cape Suckling, Alaska) comprise the western Distinct Population Segment (wDPS). Only the wDPS is considered in this application because the eastern DPS (eDPS) occurs outside the geographic area under consideration. Steller sea lions were listed as threatened range-wide under the ESA on 26 November 1990 (55 FR 49204). Steller sea lions were subsequently partitioned into the western and eastern DPSs in 1997 (Allen and Angliss 2010), with the wDPS being listed as endangered under the ESA and the eDPS remaining classified as threatened (62 FR 24345) until it was delisted in November 2013.

The range of the Steller sea lion includes the North Pacific Ocean rim from California to northern Japan. Steller sea lions forage in nearshore and pelagic waters where they are opportunistic predators. They feed primarily on a wide variety of fishes and cephalopods. Steller sea lions use terrestrial haulout sites to rest and take refuge. They also gather on well-defined, traditionally used rookeries to pup and breed. These habitats are typically gravel, rocky, or sand beaches; ledges; or rocky reefs (Allen and Angliss 2013).

The wDPS of Steller sea lions declined approximately 75 percent from 1976 to 1990. Factors that may have contributed to this decline include (1) incidental take in fisheries, (2) legal and illegal shooting, (3) predation, (4) contaminants, (5) disease, and (6) climate change. Non-pup Steller sea lion counts at trend sites in the wDPS increased 11 percent during 2000–2004. These counts were the first region-wide increases for the wDPS since standardized surveys began in the 1970s, and were due to increased or stable counts in all regions except the western Aleutian Islands. During 2004–2008, western Alaska non-pup counts increased only three percent; eastern Gulf of Alaska (Prince William Sound area) counts were higher; counts from the Kenai Peninsula through Kiska Island, including Kodiak Island, were stable; and western Aleutian counts continued to decline (Allen and Angliss 2010). Steller sea lions have a worldwide population estimated at 120,000 to 140,000 animals, with approximately 93,000 in Alaska. The most recent comprehensive estimate for abundance of the wDPS in Alaska is 49,497 sea lions, based on aerial and land-based surveys conducted in 2013–2014 (Muto *et al.*, 2015). Steller sea lions are the most obvious and abundant marine mammals in the project area.

On 27 August 1993, NMFS published a final rule designating critical habitat for the Steller sea lion as a 20 nautical mile (nmi) buffer around all major haul-outs and rookeries, as well as associated terrestrial, air and aquatic zones, and three large offshore foraging areas (NMFS 1993; 50 CFR 226.202). The major natural Steller sea lion haulouts closest to the project area are located on Long Island and Cape Chiniak, which are approximately 4.6 nmi (8.5 kilometers (km)) and 13.8 nmi (25.6 km) away from the project site, respectively. Annual counts averaged 33 animals on Long Island from 2008 through 2010, and 119 animals at Cape Chiniak during the same time period (Table 4–1 in the City's application). The closest rookery is located on Marmot Island, approximately 30 nmi (55.5 km) from the project site, which had average annual counts of 656 animals from 2008 through 2010 (*as cited in* NMFS 2013). Critical habitat is associated with breeding and haulout areas in Alaska, California, and Oregon (NMFS 1993).

Many individual sea lions have become habituated to human activity in the Kodiak harbor area and utilize a man-made haulout float called Dog Bay float located in St. Herman Harbor, about 1,300 m (4,300 feet) from the project site (See Figure 1–2; Figure 3–1 in the application). A section from an old floating breakwater, the float was relocated to Dog Bay in the year 2000 and was intended to serve as a dedicated sea lion haulout. It serves its purpose of reducing sea lion-human conflicts in Kodiak's docks and harbors by providing an undisturbed haulout location and reducing the numbers of sea lions that haul out on vessel moorage floats. However, the float is not a federally recognized haulout and is not considered part of sea lion critical habitat.

Counts of sea lions hauled out on the Dog Bay float may provide an index of the number of Steller sea lions in the harbor area. Because this float is not considered an official haulout by NMFS, few standardized surveys to count sea lions have been conducted (Wynne 2015a). Surveys from 2004 through 2006 indicated peak winter (October–April) counts ranging from 27 to 33 animals (Wynne *et al.*, 2011). Counts from February 2015 during a site visit by biologists for the Pier 1 Kodiak Ferry Terminal and Dock Improvements Project ranged from approximately 28 to 45 sea lions on the float. More than 100 sea lions were counted on the Dog Bay float at times in spring 2015, although the mean number was much smaller (Wynne 2015b).

Abundant and predictable sources of food for sea lions in the Kodiak area include fishing gear, fishing boats and tenders, and the many seafood processing facilities that accept transfers of fish from offloading vessels. Sea lions have become accustomed to depredating fishing gear and raiding fishing vessels during fishing and offloading and they follow potential sources of food around the harbors and docks, waiting for opportunities to feed. When vessels are offloading fish at the docks of processing facilities, the sea lions rear out of the water to look over the gunnels for fish on the deck; if the vessel is a stern trawler, they charge up the stern ramp or codend to gain access to the deck (Speckman 2015; Ward 2015; Wynne 2015a).

The number of sea lions in the immediate project area varies depending on the season and presence of commercial fishing vessels unloading their catch at the seafood processing plant dock immediately adjacent to Pier 1, approximately 100 m from the transient float. During the February 2015 Pier 1 site visit by HDR biologists, from zero up to about 25 sea lions were seen at one time in the Pier 1 project area. About 22 of those sea lions were subadults that were clearly foraging on schooling fishes in the area and were not interacting with the fishing vessels offloading at the seafood processing plant at the time. A stern trawler offloading at the processing plant dock during this period was attended by three mature bull sea lions, which constantly swam back and forth behind the stern watching for an opportunity to gain access.

At least four other seafood processing facilities are present in Kodiak and operate concurrently with the one located next to Pier 1. All are visited by sea lions looking for food, and all are successfully raided by sea lions with regularity (Wynne 2015a). Sea lions also follow and raid fishing vessels. The seafood processing facility adjacent to the Pier 1 project site is therefore not the only source of food for Kodiak sea lions that inhabit the harbor area. Furthermore, sea lions in a more ''natural'' situation do not generally eat every day, but tend to forage every 1–2 days and return to haulouts to rest between foraging trips (Merrick and

Loughlin 1997; Rehburg *et al.* 2009). Based on numbers at the Dog Bay float and sea lion behavior, it is estimated that about 40 unique individual sea lions likely pass by the project site each day (Speckman 2015; Ward 2015; Wynne 2015a). Sea lions in the Kodiak harbor area are habituated to fishing vessels and are skilled at gaining access to fish. It is likely that some of the same animals follow local vessels to the nearby fishing grounds and back to town. It is also likely that hearing-impaired or deaf sea lions are among the sea lions that attend the seafood processing facilities. It is not known how a hearing-impaired or deaf sea lion would respond to typical mitigation efforts at a construction site such as ramping up of pile-driving equipment. It is also unknown whether a hearing-impaired or deaf sea lion would avoid pile-driving activity, or whether such an animal might approach closely, without responding to or being impacted by the noise level.

Harbor Seal

Harbor seals range from Baja California north along the west coasts of Washington, Oregon, California, British Columbia, and Southeast Alaska; west through the Gulf of Alaska, Prince William Sound, and the Aleutian Islands; and north in the Bering Sea to Cape Newenham and the Pribilof Islands. Distribution of the South Kodiak stock extends from East Cape (northeast coast of Kodiak Island) south to South Cape (Chirikof Island), including Tugidak Island, and up the southwest coast of Kodiak Island to Middle Cape.

In 2010, harbor seals in Alaska were partitioned into 12 separate stocks based largely on genetic structure (Allen and Angliss 2010). Only the South Kodiak stock is considered in this application because other stocks occur outside the geographic area under consideration.

The current statewide abundance estimate for Alaskan harbor seals is 205,090, based on aerial survey data collected during 1998–2011 (Muto *et al.*, 2015). The abundance estimate for the South Kodiak stock is 19,199 (Muto *et al.*, 2015). Harbor seals have declined dramatically in some parts of their range over the past few decades, while in other parts their numbers have increased or remained stable over similar time periods.

A significant portion of the harbor seal population within the South Kodiak stock is located at and around Tugidak Island off the southwest of Kodiak Island. Sharp declines in the number of seals present on Tugidak were observed between 1976 and 1998. Although the number of seals on Tugidak Island has stabilized and shows some evidence of increase since the decline, the population in 2000 remained reduced by 80 percent compared to the levels in the 1970s (Jemison *et al.*, 2006). The current population trend for this stock is unknown.

Harbor seals haul out on rocks, reefs, beaches, and drifting glacial ice (Allen and Angliss 2014). They are non-migratory; their local movements are associated with tides, weather, season, food availability, and reproduction, as well as sex and age class (Allen and Angliss 2014; Boveng *et al.*, 2012; Lowry *et al.*, 2001; Swain *et al.*, 1996).

Although the number of harbor seals on eastern Kodiak haulouts has been increasing steadily since the early 1990s (Kodiak Seafood and Marine Science Center 2015), sightings are rare in the project area. Several harbor seals tagged at Uganik Bay (Northwest Kodiak Island) dispersed as far north as Anchorage and as far south as Chignik, but none were found near Kodiak (Kodiak Seafood and Marine Science Center 2015). Harbor seals are expected to be encountered occasionally in the project area. Harbor seals were occasionally observed during the Kodiak ferry terminal reconstruction project, with one seen in January 2016 and three observed in March 2016 (ABR 2016).

Potential Effects of the Specified Activity on Marine Mammals and Their Habitat

This section includes a summary and discussion of the ways that components, (*e.g.*, pile driving,) of the specified activity, including mitigation may impact marine mammals and their habitat. The *Estimated Take by Incidental Harassment* section later in this document will include a quantitative analysis of the number of individuals that are expected to be taken by this activity. The *Negligible Impact Analysis* section will include the analysis of how this specific activity will impact marine mammals and will consider the content of this section, the *Estimated Take by Incidental Harassment* section, and the *Proposed Mitigation* section to draw conclusions regarding the likely impacts of this activity on the reproductive success or survivorship of individuals and from that on the affected marine mammal populations or stocks. In the following discussion, we provide general background information on sound and marine mammal hearing before considering potential effects to marine mammals from sound produced by pile extraction, vibratory pile driving, impact pile driving, and down-hole drilling.

Description of Sound Sources

Sound travels in waves, the basic components of which are frequency, wavelength, velocity, and amplitude. Frequency is the number of pressure waves that pass by a reference point per unit of time and is measured in hertz (Hz) or cycles per second. Wavelength is the distance between two peaks of a sound wave; lower frequency sounds have longer wavelengths than higher frequency sounds and attenuate (decrease) more rapidly in shallower water. Amplitude is the height of the sound pressure wave or the 'loudness' of a sound and is typically measured using the decibel (dB) scale. A dB is the ratio between a measured pressure (with sound) and a reference pressure (sound at a constant pressure, established by scientific standards). It is a logarithmic unit that accounts for large variations in amplitude; therefore, relatively small changes in dB ratings correspond to large changes in sound pressure. When referring to sound pressure levels (SPLs; the sound force per unit area), sound is referenced in the context of underwater sound pressure to 1 microPascal (μPa). One pascal is the pressure resulting from a force of one newton exerted over an area of one square meter. The source level (SL) represents the sound level at a distance of 1 m from the source (referenced to 1 μPa). The received level is the sound level at the listener's position. Note that all underwater sound levels in this document are referenced to a pressure of 1 μPa and all airborne sound levels in this document are referenced to a pressure of 20 μPa.

Root mean square (rms) is the quadratic mean sound pressure over the duration of an impulse. Rms is calculated by squaring all of the sound amplitudes, averaging the squares, and then taking the square root of the average (Urick 1983). Rms accounts for both positive and negative values; squaring the pressures makes all values positive so that they may be accounted for in the summation of pressure levels (Hastings and Popper, 2005). This measurement is often used in the context of discussing behavioral effects, in part because behavioral effects, which often result from auditory cues, may be better expressed through averaged units than by peak pressures.

When underwater objects vibrate or activity occurs, sound-pressure waves are created. These waves alternately compress and decompress the water as the sound wave travels. Underwater sound waves radiate in all directions

away from the source (similar to ripples on the surface of a pond), except in cases where the source is directional. The compressions and decompressions associated with sound waves are detected as changes in pressure by aquatic life and man-made sound receptors such as hydrophones.

Even in the absence of sound from the specified activity, the underwater environment is typically loud due to ambient sound. Ambient sound is defined as environmental background sound levels lacking a single source or point (Richardson *et al.*, 1995), and the sound level of a region is defined by the total acoustical energy being generated by known and unknown sources. These sources may include physical (*e.g.*, waves, earthquakes, ice, atmospheric sound), biological (*e.g.*, sounds produced by marine mammals, fish, and invertebrates), and anthropogenic sound (*e.g.*, vessels, dredging, aircraft, construction). A number of sources contribute to ambient sound, including the following (Richardson *et al.*, 1995):

- Wind and waves: The complex interactions between wind and water surface, including processes such as breaking waves and wave-induced bubble oscillations and cavitation, are a main source of naturally occurring ambient noise for frequencies between 200 Hz and 50 kHz (Mitson 1995). In general, ambient sound levels tend to increase with increasing wind speed and wave height. Surf noise becomes important near shore, with measurements collected at a distance of 8.5 km from shore showing an increase of 10 dB in the 100 to 700 Hz band during heavy surf conditions.
- Precipitation: Sound from rain and hail impacting the water surface can become an important component of total noise at frequencies above 500 Hz, and possibly down to 100 Hz during quiet times.
- Biological: Marine mammals can contribute significantly to ambient noise levels, as can some fish and shrimp. The frequency band for biological contributions is from approximately 12 Hz to over 100 kHz.
- Anthropogenic: Sources of ambient noise related to human activity include transportation (surface vessels and aircraft), dredging and construction, oil and gas drilling and production, seismic surveys, sonar, explosions, and ocean acoustic studies. Shipping noise typically dominates the total ambient noise for frequencies between 20 and 300 Hz. In general, the frequencies of anthropogenic sounds are below 1 kHz and, if higher frequency sound levels are created, they attenuate rapidly (Richardson *et al.*, 1995). Sound from identifiable anthropogenic sources other than the activity of interest (*e.g.*, a passing vessel) is sometimes termed background sound, as opposed to ambient sound.

The sum of the various natural and anthropogenic sound sources at any given location and time—which comprise ''ambient'' or ''background'' sound—depends not only on the source levels (as determined by current weather conditions and levels of biological and shipping activity) but also on the ability of sound to propagate through the environment. In turn, sound propagation is dependent on the spatially and temporally varying properties of the water column and sea floor, and is frequency-dependent. As a result of the dependence on a large number of varying factors, ambient sound levels can be expected to vary widely over both coarse and fine spatial and temporal scales. Sound levels at a given frequency and location can vary by 10–20 dB from day to day (Richardson *et al.*, 1995). The result is that, depending on the source type and its intensity, sound from the specified activity may be a negligible addition to the local environment or could form a distinctive signal that may affect marine mammals.

The underwater acoustic environment at the ferry terminal is likely to be dominated by noise from day-to-day port and vessel activities. This is a highly industrialized area with high-use from small- to medium-sized vessels, and larger vessel that use the nearby major shipping channel. Ambient underwater sound was measured in Near Island Channel, approximately 100 m southwest and 900 m northeast of the Transient Float, in March 2016 during construction of the Pier 1 Kodiak Ferry Terminal and Dock Improvements Project. Measurements recorded highly variable sound pressure levels (SPLs), ranging from approximately 80 to 140 decibels referenced to one microPascal (dB re 1 µPa). Peaks ranging from approximately 130 to 140 dB re 1 µPa were produced by vessels passing near acoustic recorders (Warner and Austin 2016).

In-water construction activities associated with the project would include impact pile driving, vibratory pile driving and extraction, and down-hole drilling. The sounds produced by these activities fall into one of two general sound types: Pulsed and non-pulsed (defined in the following paragraphs). The distinction between these two sound types is important because they have differing potential to cause physical effects, particularly with regard to hearing (*e.g.*, Ward, 1997 in Southall *et al.*, 2007). Please see Southall *et al.*, (2007) for an in-depth discussion of these concepts.

Pulsed sound sources (*e.g.*, explosions, gunshots, sonic booms, impact pile driving) produce signals that are brief (typically considered to be less than one second), broadband, atonal transients (ANSI, 1986; Harris, 1998; NIOSH, 1998; ISO, 2003; ANSI, 2005) and occur either as isolated events or repeated in some succession. Pulsed sounds are all characterized by a relatively rapid rise from ambient pressure to a maximal pressure value followed by a rapid decay period that may include a period of diminishing, oscillating maximal and minimal pressures, and generally have an increased capacity to induce physical injury as compared with sounds that lack these features.

Non-pulsed sounds can be tonal, narrowband, or broadband, brief or prolonged, and may be either continuous or non-continuous (ANSI, 1995; NIOSH, 1998). Some of these non-pulsed sounds can be transient signals of short duration but without the essential properties of pulses (*e.g.*, rapid rise time). Examples of non-pulsed sounds include those produced by vessels, aircraft, machinery operations such as drilling or dredging, vibratory pile driving, and active sonar systems (such as those used by the U.S. Navy). The duration of such sounds, as received at a distance, can be greatly extended in a highly reverberant environment.

Impact hammers operate by repeatedly dropping a heavy piston onto a pile to drive the pile into the substrate. Sound generated by impact hammers is characterized by rapid rise times and high peak levels, a potentially injurious combination (Hastings and Popper, 2005). Vibratory hammers install piles by vibrating them and allowing the weight of the hammer to push them into the sediment. Vibratory hammers produce significantly less sound than impact hammers. Peak SPLs may be 180 dB or greater, but are generally 10 to 20 dB lower than SPLs generated during impact pile driving of the same-sized pile (Oestman *et al.*, 2009). Rise time is slower, reducing the probability and severity of injury, and sound energy is distributed over a greater amount of time (Nedwell and Edwards, 2002; Carlson *et al.*, 2005). Down-hole drilling uses a drill bit that drills through the sediment and a pulse mechanism that functions at the bottom of the hole, using a pulsing bit to break up the harder materials or rock to allow removal of the fragments and insertion of the pile. The head extends so that the

drilling takes place below the pile. Drilling is considered a continuous noise source, and has similar SPLs as vibratory driving.

Marine Mammal Hearing

Hearing is the most important sensory modality for marine mammals, and exposure to sound can have deleterious effects. To appropriately assess these potential effects, it is necessary to understand the frequency ranges marine mammals are able to hear. Current data indicate that not all marine mammal species have equal hearing capabilities (*e.g.*, Richardson *et al.*, 1995; Wartzok and Ketten, 1999; Au and Hastings, 2008). To reflect this, Southall *et al.*, (2007) recommended that marine mammals be divided into functional hearing groups based on measured or estimated hearing ranges on the basis of available behavioral data, audiograms derived using auditory evoked potential techniques, anatomical modeling, and other data. The lower and/or upper frequencies for some of these functional hearing groups have been modified by NMFS from those designated by Southall *et al.*, (2007) as new information has become available. The functional groups and the associated frequencies are indicated below (note that these frequency ranges do not necessarily correspond to the range of best hearing, which varies by species):

- Low frequency cetaceans (13 species of mysticetes): Functional hearing is estimated to occur between approximately 7 Hz and 25 kHz (up to 30 kHz in some species), with best hearing estimated to be from 100 Hz to 8 kHz (Watkins, 1986; Ketten, 1998; Houser *et al.*, 2001; Au *et al.*, 2006; Lucifredi and Stein, 2007; Ketten *et al.*, 2007; Parks *et al.*, 2007a; Ketten and Mountain, 2009; Tubelli *et al.*, 2012);
- Mid-frequency cetaceans (32 species of dolphins, six species of larger toothed whales, and 19 species of beaked and bottlenose whales): Functional hearing is estimated to occur between approximately 150 Hz and 160 kHz with best hearing from 10 to less than 100 kHz (Johnson, 1967; White, 1977; Richardson *et al.*, 1995; Szymanski *et al.*, 1999; Kastelein *et al.*, 2003; Finneran *et al.*, 2005a, 2009; Nachtigall *et al.*, 2005, 2008; Yuen *et al.*, 2005; Popov *et al.*, 2007; Au and Hastings, 2008; Houser *et al.*, 2008; Pacini *et al.*, 2010, 2011; Schlundt *et al.*, 2011);
- High frequency cetaceans (eight species of true porpoises, six species of river dolphins, and members of the genera *Kogia* and *Cephalorhynchus*; now considered to include two members of the genus *Lagenorhynchus* on the basis of recent echolocation data and genetic data [May-Collado and Agnarsson, 2006; Kyhn *et al.* 2009, 2010; Tougaard *et al.* 2010]): Functional hearing is estimated to occur between approximately 200 Hz and 180 kHz (Popov and Supin, 1990a,b; Kastelein *et al.*, 2002; Popov *et al.*, 2005);
- Phocid pinnipeds in Water: Functional hearing is estimated to occur between approximately 75 Hz and 100 kHz with best hearing between 1–50 kHz (Møhl, 1968; Terhune and Ronald, 1971, 1972; Richardson *et al.*, 1995; Kastak and Schusterman, 1999; Reichmuth, 2008; Kastelein *et al.*, 2009); and
- Otariid pinnipeds in Water: Functional hearing is estimated to occur between approximately 100 Hz and 48 kHz, with best hearing between 2–48 kHz (Schusterman *et al.*, 1972; Moore and Schusterman, 1987; Babushina *et al.*, 1991; Richardson *et al.*, 1995; Kastak and Schusterman, 1998; Kastelein *et al.*, 2005a; Mulsow and Reichmuth, 2007; Mulsow *et al.*, 2011a, b).

The pinniped functional hearing group was modified from Southall *et al.* (2007) on the basis of data indicating that phocid species have consistently demonstrated an extended frequency range of hearing compared to otariids, especially in the higher frequency range (Hemilä *et al.*, 2006; Kastelein *et al.*, 2009; Reichmuth *et al.*, 2013).

As mentioned previously in this document, six marine mammal species (four cetaceans and two pinnipeds) may occur in the project area. Of these four cetaceans, one is classified as a low-frequency cetacean (*i.e.*, humpback whale), one is classified as a mid-frequency cetacean (*i.e.*, killer whale), and two are classified as a high-frequency cetaceans (*i.e.*, harbor porpoise and Dall's porpoise) (Southall *et al.*, 2007). Additionally, harbor seals are classified as members of the phocid pinnipeds in water functional hearing group while Steller sea lions are grouped under the Otariid pinnipeds in water functional hearing group. A species' functional hearing group is a consideration when we analyze the effects of exposure to sound on marine mammals. Marine mammal hearing groups were also used in the establishment of marine mammal auditory weighting functions in the new acoustic guidance.

Acoustic Impacts

Please refer to the information given previously (*Description of Sound Sources*) regarding sound, characteristics of sound types, and metrics used in this document. Anthropogenic sounds cover a broad range of frequencies and sound levels and can have a range of highly variable impacts on marine life, from none or minor to potentially severe responses, depending on received levels, duration of exposure, behavioral context, and various other factors. The potential effects of underwater sound from active acoustic sources can potentially result in one or more of the following: Temporary or permanent hearing impairment, non-auditory physical or physiological effects, behavioral disturbance, stress, and masking (Richardson *et al.*, 1995; Gordon *et al.*, 2004; Nowacek *et al.*, 2007; Southall *et al.*, 2007; Gotz *et al.*, 2009). The degree of effect is intrinsically related to the signal characteristics, received level, distance from the source, and duration of the sound exposure. In general, sudden, high level sounds can cause hearing loss, as can longer exposures to lower level sounds. Temporary or permanent loss of hearing will occur almost exclusively for noise within an animal's hearing range. In this section, we first describe specific manifestations of acoustic effects before providing discussion specific to the City's construction activities in the next section.

Permanent Threshold Shift—Marine mammals exposed to high-intensity sound, or to lower-intensity sound for prolonged periods, can experience hearing threshold shift (TS), which is the loss of hearing sensitivity at certain frequency ranges (Kastak *et al.*, 1999; Schlundt *et al.*, 2000; Finneran *et al.*, 2002, 2005b). TS can be permanent (PTS), in which case the loss of hearing sensitivity is not fully recoverable, or temporary (TTS), in which case the animal's hearing threshold would recover over time (Southall *et al.*, 2007). Repeated sound exposure that leads to TTS could cause PTS. In severe cases of PTS, there can be total or partial deafness, while in most cases the animal has an impaired ability to hear sounds in specific frequency ranges (Kryter, 1985).

When PTS occurs, there is physical damage to the sound receptors in the ear (*i.e.*, tissue damage), whereas TTS represents primarily tissue fatigue and is reversible (Southall *et al.*, 2007). In addition, other investigators have suggested that TTS is within the normal bounds of physiological variability and tolerance and does not represent physical injury (*e.g.*, Ward, 1997). Therefore, NMFS does not consider TTS to constitute auditory injury.

Relationships between TTS and PTS thresholds have not been studied in marine mammals—PTS data exists only for a single harbor seal (Kastak *et al.*,

2008)—but are assumed to be similar to those in humans and other terrestrial mammals. PTS typically occurs at exposure levels at least several decibels above (a 40-dB threshold shift approximates PTS onset; *e.g.*, Kryter *et al.*, 1966; Miller, 1974) that inducing mild TTS (a 6-dB threshold shift approximates TTS onset; *e.g.*, Southall *et al.* 2007). Based on data from terrestrial mammals, a precautionary assumption is that the PTS thresholds for impulse sounds (such as impact pile driving pulses as received close to the source) are at least six dB higher than the TTS threshold on a peak-pressure basis and PTS cumulative sound exposure level thresholds are 15 to 20 dB higher than TTS cumulative sound exposure level thresholds (Southall *et al.*, 2007).

Temporary threshold shift—TTS is the mildest form of hearing impairment that can occur during exposure to sound (Kryter, 1985). While experiencing TTS, the hearing threshold rises, and a sound must be at a higher level in order to be heard. In terrestrial and marine mammals, TTS can last from minutes or hours to days (in cases of strong TTS). In many cases, hearing sensitivity recovers rapidly after exposure to the sound ends. Few data on sound levels and durations necessary to elicit mild TTS have been obtained for marine mammals, and none of the data published at the time of this writing concern TTS elicited by exposure to multiple pulses of sound.

Marine mammal hearing plays a critical role in communication with conspecifics, and interpretation of environmental cues for purposes such as predator avoidance and prey capture. Depending on the degree (elevation of threshold in dB), duration (*i.e.*, recovery time), and frequency range of TTS, and the context in which it is experienced, TTS can have effects on marine mammals ranging from discountable to serious. For example, a marine mammal may be able to readily compensate for a brief, relatively small amount of TTS in a non-critical frequency range that occurs during a time where ambient noise is lower and there are not as many competing sounds present. Alternatively, a larger amount and longer duration of TTS sustained during time when communication is critical for successful mother/calf interactions could have more serious impacts.

Currently, TTS data only exist for four species of cetaceans (bottlenose dolphin [*Tursiops trancatus*], beluga whale [*Delphinapterus leucas*], harbor porpoise, and Yangtze finless porpoise [*Neophocoena asiaeorientalis*]) and three species of pinnipeds (northern elephant seal [*Mirounga angustirostris*], harbor seal, and California sea lion [*Zalophus californianus*]) exposed to a limited number of sound sources (*i.e.*, mostly tones and octave-band noise) in laboratory settings (*e.g.*, Finneran *et al.*, 2002; Nachtigall *et al.*, 2004; Kastak *et al.*, 2005; Lucke *et al.*, 2009; Popov *et al.*, 2011). In general, harbor seals (Kastak *et al.*, 2005; Kastelein *et al.*, 2012a) and harbor porpoises (Lucke *et al.*, 2009; Kastelein *et al.*, 2012b) have a lower TTS onset than other measured pinniped or cetacean species. Additionally, the existing marine mammal TTS data come from a limited number of individuals within these species. There are no data available on noise-induced hearing loss for mysticetes. For summaries of data on TTS in marine mammals or for further discussion of TTS onset thresholds, please see Southall *et al.* (2007) and Finneran and Jenkins (2012).

Behavioral effects—Behavioral disturbance may include a variety of effects, including subtle changes in behavior (*e.g.*, minor or brief avoidance of an area or changes in vocalizations), more conspicuous changes in similar behavioral activities, and more sustained and/or potentially severe reactions, such as displacement from or abandonment of high-quality habitat. Behavioral responses to sound are highly variable and context-specific and any reactions depend on numerous intrinsic and extrinsic factors (*e.g.*, species, state of maturity, experience, current activity, reproductive state, auditory sensitivity, time of day), as well as the interplay between factors (*e.g.*, Richardson *et al.*, 1995; Wartzok *et al.*, 2003; Southall *et al.*, 2007; Weilgart, 2007; Archer *et al.*, 2010). Behavioral reactions can vary not only among individuals but also within an individual, depending on previous experience with a sound source, context, and numerous other factors (Ellison *et al.*, 2012), and can vary depending on characteristics associated with the sound source (*e.g.*, whether it is moving or stationary, number of sources, distance from the source). Please see Appendices B–C of Southall *et al.* (2007) for a review of studies involving marine mammal behavioral responses to sound.

Habituation can occur when an animal's response to a stimulus wanes with repeated exposure, usually in the absence of unpleasant associated events (Wartzok *et al.*, 2003). Animals are most likely to habituate to sounds that are predictable and unvarying. It is important to note that habituation is appropriately considered as a ''progressive reduction in response to stimuli that are perceived as neither aversive nor beneficial,'' rather than as, more generally, moderation in response to human disturbance (Bejder *et al.*, 2009). The opposite process is sensitization, when an unpleasant experience leads to subsequent responses, often in the form of avoidance, at a lower level of exposure. As noted, behavioral state may affect the type of response. For example, animals that are resting may show greater behavioral change in response to disturbing sound levels than animals that are highly motivated to remain in an area for feeding (Richardson *et al.*, 1995; NRC, 2003; Wartzok *et al.*, 2003). Controlled experiments with captive marine mammals have showed pronounced behavioral reactions, including avoidance of loud sound sources (Ridgway *et al.*, 1997; Finneran *et al.*, 2003). Observed responses of wild marine mammals to loud pulsed sound sources (typically seismic airguns or acoustic harassment devices) have been varied but often consist of avoidance behavior or other behavioral changes suggesting discomfort (Morton and Symonds, 2002; see also Richardson *et al.*, 1995; Nowacek *et al.*, 2007).

Available studies show wide variation in response to underwater sound; therefore, it is difficult to predict specifically how any given sound in a particular instance might affect marine mammals perceiving the signal. If a marine mammal does react briefly to an underwater sound by changing its behavior or moving a small distance, the impacts of the change are unlikely to be significant to the individual, let alone the stock or population. However, if a sound source displaces marine mammals from an important feeding or breeding area for a prolonged period, impacts on individuals and populations could be significant (*e.g.*, Lusseau and Bejder 2007; Weilgart 2007; NRC 2005). However, there are broad categories of potential response, which we describe in greater detail here, that include alteration of dive behavior, alteration of foraging behavior, effects to breathing, interference with or alteration of vocalization, avoidance, and flight.

Changes in dive behavior can vary widely, and may consist of increased or decreased dive times and surface intervals as well as changes in the rates of ascent and descent during a dive (*e.g.*, Frankel and Clark 2000; Costa *et al.*, 2003; Ng and Leung 2003; Nowacek *et al.*, 2004; Goldbogen *et al.*, 2013a,b). Variations in dive behavior may reflect interruptions in biologically significant activities (*e.g.*, foraging) or they may be of little biological significance. The impact of an alteration to dive behavior

resulting from an acoustic exposure depends on what the animal is doing at the time of the exposure and the type and magnitude of the response.

Disruption of feeding behavior can be difficult to correlate with anthropogenic sound exposure, so it is usually inferred by observed displacement from known foraging areas, the appearance of secondary indicators (*e.g.*, bubble nets or sediment plumes), or changes in dive behavior. As for other types of behavioral response, the frequency, duration, and temporal pattern of signal presentation, as well as differences in species sensitivity, are likely contributing factors to differences in response in any given circumstance (*e.g.*, Croll *et al.*, 2001; Nowacek *et al.*, 2004; Madsen *et al.*, 2006; Yazvenko *et al.*, 2007). A determination of whether foraging disruptions incur fitness consequences would require information on or estimates of the energetic requirements of the affected individuals and the relationship between prey availability, foraging effort and success, and the life history stage of the animal.

Variations in respiration naturally vary with different behaviors and alterations to breathing rate as a function of acoustic exposure can be expected to co-occur with other behavioral reactions, such as a flight response or an alteration in diving. However, respiration rates in and of themselves may be representative of annoyance or an acute stress response. Various studies have shown that respiration rates may either be unaffected or could increase, depending on the species and signal characteristics, again highlighting the importance in understanding species differences in the tolerance of underwater noise when determining the potential for impacts resulting from anthropogenic sound exposure (*e.g.*, Kastelein *et al.*, 2001, 2005b, 2006; Gailey *et al.*, 2007).

Marine mammals vocalize for different purposes and across multiple modes, such as whistling, echolocation click production, calling, and singing. Changes in vocalization behavior in response to anthropogenic noise can occur for any of these modes and may result from a need to compete with an increase in background noise or may reflect increased vigilance or a startle response. For example, in the presence of potentially masking signals, humpback whales and killer whales have been observed to increase the length of their songs (Miller *et al.*, 2000; Fristrup *et al.*, 2003; Foote *et al.*, 2004), while right whales have been observed to shift the frequency content of their calls upward while reducing the rate of calling in areas of increased anthropogenic noise (Parks *et al.*, 2007b). In some cases, animals may cease sound production during production of aversive signals (Bowles *et al.*, 1994).

Avoidance is the displacement of an individual from an area or migration path as a result of the presence of a sound or other stressors, and is one of the most obvious manifestations of disturbance in marine mammals (Richardson *et al.*, 1995). For example, grey whales are known to change direction—deflecting from customary migratory paths—in order to avoid noise from seismic surveys (Malme *et al.*, 1984). Avoidance may be short-term, with animals returning to the area once the noise has ceased (*e.g.*, Bowles *et al.*, 1994; Goold 1996; Stone *et al.*, 2000; Morton and Symonds 2002; Gailey *et al.*, 2007). Longer-term displacement is possible, however, which may lead to changes in abundance or distribution patterns of the affected species in the affected region if habituation to the presence of the sound does not occur (*e.g.*, Blackwell *et al.*, 2004; Bejder *et al.*, 2006; Teilmann *et al.*, 2006).

A flight response is a dramatic change in normal movement to a directed and rapid movement away from the perceived location of a sound source. The flight response differs from other avoidance responses in the intensity of the response (*e.g.*, directed movement, rate of travel). Relatively little information on flight responses of marine mammals to anthropogenic signals exist, although observations of flight responses to the presence of predators have occurred (Connor and Heithaus 1996). The result of a flight response could range from brief, temporary exertion and displacement from the area where the signal provokes flight to, in extreme cases, marine mammal strandings (Evans and England 2001). However, it should be noted that response to a perceived predator does not necessarily invoke flight (Ford and Reeves 2008), and whether individuals are solitary or in groups may influence the response.

Behavioral disturbance can also impact marine mammals in more subtle ways. Increased vigilance may result in costs related to diversion of focus and attention (*i.e.*, when a response consists of increased vigilance, it may come at the cost of decreased attention to other critical behaviors such as foraging or resting). These effects have generally not been demonstrated for marine mammals, but studies involving fish and terrestrial animals have shown that increased vigilance may substantially reduce feeding rates (*e.g.*, Beauchamp and Livoreil 1997; Fritz *et al.*, 2002; Purser and Radford 2011). In addition, chronic disturbance can cause population declines through reduction of fitness (*e.g.*, decline in body condition) and subsequent reduction in reproductive success, survival, or both (*e.g.*, Harrington and Veitch 1992; Daan *et al.*, 1996; Bradshaw *et al.*, 1998). However, Ridgway *et al.* (2006) reported that increased vigilance in bottlenose dolphins exposed to sound over a five-day period did not cause any sleep deprivation or stress effects.

Many animals perform vital functions, such as feeding, resting, traveling, and socializing, on a diel cycle (24-hour cycle). Disruption of such functions resulting from reactions to stressors such as sound exposure are more likely to be significant if they last more than one diel cycle or recur on subsequent days (Southall *et al.*, 2007). Consequently, a behavioral response lasting less than one day and not recurring on subsequent days is not considered particularly severe unless it could directly affect reproduction or survival (Southall *et al.*, 2007). Note that there is a difference between multi-day substantive behavioral reactions and multi-day anthropogenic activities. For example, just because an activity lasts for multiple days does not necessarily mean that individual animals are either exposed to activity-related stressors for multiple days or, further, exposed in a manner resulting in sustained multi-day substantive behavioral responses.

Stress responses—An animal's perception of a threat may be sufficient to trigger stress responses consisting of some combination of behavioral responses, autonomic nervous system responses, neuroendocrine responses, or immune responses (*e.g.*, Seyle 1950; Moberg 2000). In many cases, an animal's first and sometimes most economical (in terms of energetic costs) response is behavioral avoidance of the potential stressor. Autonomic nervous system responses to stress typically involve changes in heart rate, blood pressure, and gastrointestinal activity. These responses have a relatively short duration and may or may not have a significant long-term effect on an animal's fitness.

Neuroendocrine stress responses often involve the hypothalamus-pituitary-adrenal system. Virtually all neuroendocrine functions that are affected by stress—including immune competence, reproduction, metabolism, and behavior—are regulated by pituitary hormones. Stress-induced changes in the secretion of pituitary hormones have been implicated in failed reproduction, altered metabolism, reduced immune

competence, and behavioral disturbance (*e.g.*, Moberg 1987; Blecha 2000). Increases in the circulation of glucocorticoids are also equated with stress (Romano *et al.*, 2004).

The primary distinction between stress (which is adaptive and does not normally place an animal at risk) and ''distress'' is the cost of the response. During a stress response, an animal uses glycogen stores that can be quickly replenished once the stress is alleviated. In such circumstances, the cost of the stress response would not pose serious fitness consequences. However, when an animal does not have sufficient energy reserves to satisfy the energetic costs of a stress response, energy resources must be diverted from other functions. This state of distress will last until the animal replenishes its energetic reserves sufficient to restore normal function.

Relationships between these physiological mechanisms, animal behavior, and the costs of stress responses are well-studied through controlled experiments and for both laboratory and free-ranging animals (*e.g.*, Holberton *et al.*, 1996; Hood *et al.*, 1998; Jessop *et al.*, 2003; Krausman *et al.*, 2004; Lankford *et al.*, 2005). Stress responses due to exposure to anthropogenic sounds or other stressors and their effects on marine mammals have also been reviewed (Fair and Becker 2000; Romano *et al.*, 2002b) and, more rarely, studied in wild populations (*e.g.*, Romano *et al.*, 2002a). For example, Rolland *et al.* (2012) found that noise reduction from reduced ship traffic in the Bay of Fundy was associated with decreased stress in North Atlantic right whales. These and other studies lead to a reasonable expectation that some marine mammals will experience physiological stress responses upon exposure to acoustic stressors and that it is possible that some of these would be classified as ''distress.'' In addition, any animal experiencing TTS would likely also experience stress responses (NRC 2003).

Auditory masking—Sound can disrupt behavior through masking, or interfering with, an animal's ability to detect, recognize, or discriminate between acoustic signals of interest (*e.g.*, those used for intraspecific communication and social interactions, prey detection, predator avoidance, navigation) (Richardson *et al.*, 1995). Masking occurs when the receipt of a sound is interfered with by another coincident sound at similar frequencies and at similar or higher intensity, and may occur whether the sound is natural (*e.g.*, snapping shrimp, wind, waves, precipitation) or anthropogenic (*e.g.*, shipping, sonar, seismic exploration) in origin. The ability of a noise source to mask biologically important sounds depends on the characteristics of both the noise source and the signal of interest (*e.g.*, signal-to-noise ratio, temporal variability, direction), in relation to each other and to an animal's hearing abilities (*e.g.*, sensitivity, frequency range, critical ratios, frequency discrimination, directional discrimination, age or TTS hearing loss), and existing ambient noise and propagation conditions.

Under certain circumstances, marine mammals experiencing significant masking could also be impaired from maximizing their performance fitness in survival and reproduction. Therefore, when the coincident (masking) sound is man-made, it may be considered harassment when disrupting or altering critical behaviors. It is important to distinguish TTS and PTS, which persist after the sound exposure, from masking, which occurs during the sound exposure. Because masking (without resulting in TS) is not associated with abnormal physiological function, it is not considered a physiological effect, but rather a potential behavioral effect.

The frequency range of the potentially masking sound is important in determining any potential behavioral impacts. For example, low-frequency signals may have less effect on high-frequency echolocation sounds produced by odontocetes but are more likely to affect detection of mysticete communication calls and other potentially important natural sounds such as those produced by surf and some prey species. The masking of communication signals by anthropogenic noise may be considered as a reduction in the communication space of animals (*e.g.*, Clark *et al.*, 2009) and may result in energetic or other costs as animals change their vocalization behavior (*e.g.*, Miller *et al.*, 2000; Foote *et al.*, 2004; Parks *et al.*, 2007b; Di Iorio and Clark, 2009; Holt *et al.*, 2009). Masking can be reduced in situations where the signal and noise come from different directions (Richardson *et al.*, 1995), through amplitude modulation of the signal, or through other compensatory behaviors (Houser and Moore, 2014). Masking can be tested directly in captive species (*e.g.*, Erbe, 2008), but in wild populations it must be either modeled or inferred from evidence of masking compensation. There are few studies addressing real-world masking sounds likely to be experienced by marine mammals in the wild (*e.g.*, Branstetter *et al.*, 2013).

Masking affects both senders and receivers of acoustic signals and can potentially have long-term chronic effects on marine mammals at the population level as well as at the individual level. Low-frequency ambient sound levels have increased by as much as 20 dB (more than three times in terms of SPL) in the world's ocean from pre-industrial periods, with most of the increase from distant commercial shipping (Hildebrand, 2009). All anthropogenic sound sources, but especially chronic and lower-frequency signals (*e.g.*, from vessel traffic), contribute to elevated ambient sound levels, thus intensifying masking.

Non-auditory physiological effects—Non-auditory physiological effects or injuries that theoretically might occur in marine mammals exposed to strong underwater sound include stress, neurological effects, bubble formation, resonance effects, and other types of organ or tissue damage (Cox *et al.*, 2006; Southall *et al.*, 2007). Studies examining such effects are limited. In general, little is known about the potential for pile driving to cause auditory impairment or other physical effects in marine mammals. Available data suggest that such effects, if they occur at all, would presumably be limited to short distances from the sound source, where SLs are much higher, and to activities that extend over a prolonged period. The available data do not allow identification of a specific exposure level above which non-auditory effects can be expected (Southall *et al.*, 2007) or any meaningful quantitative predictions of the numbers (if any) of marine mammals that might be affected in those ways. Marine mammals that show behavioral avoidance of pile driving, including some odontocetes and some pinnipeds, are especially unlikely to incur auditory impairment or non-auditory physical effects.

Strandings—When a live or dead marine mammal swims or floats onto shore and is incapable of returning to sea, the event is termed a ''stranding'' (16 U.S.C. 1421h(3)). Marine mammals are known to strand for a variety of reasons, such as infectious agents, biotoxicosis, starvation, fishery interaction, ship strike, unusual oceanographic or weather events, sound exposure, or combinations of these stressors sustained concurrently or in series (*e.g.*, Geraci *et al.*, 1999). However, the cause or causes of most strandings are unknown (*e.g.*, Best 1982). Combinations of dissimilar stressors may combine to kill an animal or dramatically reduce its fitness, even though one exposure without the other would not be expected to produce the

same outcome (*e.g.*, Sih *et al.*, 2004). For further description of stranding events see, *e.g.*, Southall *et al.*, 2006; Jepson *et al.*, 2013; Wright *et al.*, 2013. Strandings are not expected from the City's activities since construction activities are not associated with any of the reasons for strandings stated above, with the exception of sound exposure. However, the SLs from the construction activities are not at levels that cause injury or mortality, and therefore are not expected to cause strandings. If a stranded animal is observed, the City shall follow NMFS protocol described in the *Proposed Reporting Measures* section.

Underwater Acoustic Effects From the City's Activities

Potential Effects of Pile Driving Sound—The effects of sounds from pile driving might include one or more of the following: Temporary or permanent hearing impairment, non-auditory physical or physiological effects, behavioral disturbance, and masking (Richardson *et al.*, 1995; Gordon *et al.*, 2003; Nowacek *et al.*, 2007; Southall *et al.*, 2007). The effects of pile driving on marine mammals are dependent on several factors, including the type and depth of the animal; the pile size and type, and the intensity and duration of the pile driving sound; the substrate; the standoff distance between the pile and the animal; and the sound propagation properties of the environment. Impacts to marine mammals from pile driving activities are expected to result primarily from acoustic pathways. As such, the degree of effect is intrinsically related to the frequency, received level, and duration of the sound exposure, which are in turn influenced by the distance between the animal and the source. The further away from the source, the less intense the exposure should be. The substrate and depth of the habitat affect the sound propagation properties of the environment. In addition, substrates that are soft (*e.g.*, sand) would absorb or attenuate the sound more readily than hard substrates (*e.g.*, rock) which may reflect the acoustic wave. Soft porous substrates would also likely require less time to drive the pile, and possibly less forceful equipment, which would ultimately decrease the intensity of the acoustic source.

Hearing Impairment and Other Physical Effects—Marine mammals exposed to high intensity sound repeatedly or for prolonged periods can experience hearing threshold shifts. PTS constitutes injury, but TTS does not (Southall *et al.*, 2007). Based on the best scientific information available, the SPLs for the City's construction activities may exceed the thresholds that could cause TTS or the onset of PTS based on NMFS' new acoustic guidance (NMFS 2016a, 81 FR 51694; August 4, 2016).

Non-auditory Physiological Effects—Non-auditory physiological effects or injuries that theoretically might occur in marine mammals exposed to high level underwater sound or as a secondary effect of extreme behavioral reactions (*e.g.*, change in dive profile as a result of an avoidance reaction) caused by exposure to sound include neurological effects, bubble formation, resonance effects, and other types of organ or tissue damage (Cox *et al.*, 2006; Southall *et al.*, 2007; Zimmer and Tyack, 2007). The City's activities do not involve the use of devices such as explosives or mid-frequency active sonar that are associated with these types of effects, nor do they have SLs that may cause these extreme behavioral reactions, and are therefore, considered unlikely.

Disturbance Reactions—Responses to continuous sound, such as vibratory pile installation, have not been documented as well as responses to pulsed sounds. With both types of pile driving, it is likely that the onset of pile driving could result in temporary, short term changes in an animal's typical behavior and/or avoidance of the affected area. These behavioral changes may include (Richardson *et al.*, 1995): Changing durations of surfacing and dives, number of blows per surfacing, or moving direction and/or speed; reduced/increased vocal activities; changing/cessation of certain behavioral activities (such as socializing or feeding); visible startle response or aggressive behavior (such as tail/fluke slapping or jaw clapping); avoidance of areas where sound sources are located; and/or flight responses (*e.g.*, pinnipeds flushing into water from haul-outs or rookeries). Pinnipeds may increase their haul-out time, possibly to avoid in-water disturbance (Thorson and Reyff 2006). If a marine mammal responds to a stimulus by changing its behavior (*e.g.*, through relatively minor changes in locomotion direction/speed or vocalization behavior), the response may or may not constitute taking at the individual level, and is unlikely to affect the stock or the species as a whole. However, if a sound source displaces marine mammals from an important feeding or breeding area for a prolonged period, impacts on animals, and if so potentially on the stock or species, could potentially be significant (*e.g.*, Lusseau and Bejder 2007; Weilgart 2007).

The biological significance of many of these behavioral disturbances is difficult to predict, especially if the detected disturbances appear minor. However, the consequences of behavioral modification could be expected to be biologically significant if the change affects growth, survival, or reproduction. Significant behavioral modifications that could potentially lead to effects on growth, survival, or reproduction include:

- Drastic changes in diving/surfacing patterns (such as those thought to cause beaked whale stranding due to exposure to military mid-frequency tactical sonar);
- Longer-term habitat abandonment due to loss of desirable acoustic environment; and
- Longer-term cessation of feeding or social interaction.

The onset of behavioral disturbance from anthropogenic sound depends on both external factors (characteristics of sound sources and their paths) and the specific characteristics of the receiving animals (hearing, motivation, experience, demography) and is difficult to predict (Southall *et al.*, 2007).

Auditory Masking—Natural and artificial sounds can disrupt behavior by masking. The frequency range of the potentially masking sound is important in determining any potential behavioral impacts. The most intense underwater sounds in the proposed action are those produced by impact pile driving. Given that the energy distribution of pile driving covers a broad frequency spectrum, sound from these sources would likely be within the audible range of marine mammals present in the project area. Impact pile driving activity is relatively short-term, and only used for proofing, with rapid pulses occurring for only a few minutes per pile. The probability for impact pile driving resulting from this proposed action masking acoustic signals important to the behavior and survival of marine mammal species is low. Vibratory pile driving is also relatively short-term. It is possible that vibratory pile driving resulting from this proposed action may mask acoustic signals important to the behavior and survival of marine mammal species, but the short-term duration and limited affected area would result in insignificant impacts from masking. Any masking event that could possibly rise to Level B harassment under the MMPA would occur concurrently within the zones of behavioral harassment already estimated for vibratory and impact pile driving, and which have already been taken into account in the exposure analysis.

Airborne Acoustic Effects from the City's Activities—Pinnipeds that occur near the project site could be exposed to airborne sounds associated with pile driving that have the potential to cause behavioral harassment, depending on their distance from pile driving activities. Cetaceans are not expected to be exposed to airborne sounds that would result in harassment as defined under the MMPA.

Airborne noise will primarily be an issue for pinnipeds that are swimming or hauled out near the project site within the range of noise levels elevated above the acoustic criteria. We recognize that pinnipeds in the water could be exposed to airborne sound that may result in behavioral harassment when looking with heads above water. Most likely, airborne sound would cause behavioral responses similar to those discussed above in relation to underwater sound. For instance, anthropogenic sound could cause hauled-out pinnipeds to exhibit changes in their normal behavior, such as reduction in vocalizations, or cause them to temporarily abandon the area and move further from the source. However, these animals would previously have been 'taken' as a result of exposure to underwater sound above the behavioral harassment thresholds, which are in all cases larger than those associated with airborne sound. Thus, the behavioral harassment of these animals is already accounted for in these estimates of potential take. Multiple instances of exposure to sound above NMFS' thresholds for behavioral harassment are not believed to result in increased behavioral disturbance, in either nature or intensity of disturbance reaction. Therefore, we do not believe that authorization of incidental take resulting from airborne sound for pinnipeds is warranted, and airborne sound is not discussed further here.

Ambient noise—The transient float project area is frequented by fishing vessels and tenders; ferries, barges, tugboats; and other commercial and recreational vessels that use the channel to access harbors and city docks, fuel docks, processing plants where fish catches are offloaded, and other commercial facilities. At the seafood processing plant, to the southwest of the transient float, fish are offloaded by vacuum hose straight into the processing plant from the vessels' holds, and vessels raft up three and four deep to the dock during peak fishing seasons. Northeast of the processing plant is the Pier 1 Kodiak Ferry Terminal, which is an active ferry terminal and multi-use dock in Near Island Channel. Between the ferry terminal and the transient float is the Petro Marine fuel dock, which services a range of vessel sizes, including larger vessels that can be accommodated by docking at the transient float. Two boat harbors exist in Near Island Channel, which house a number of commercial and recreational marine vessels. The channel is also a primary route for local vessel traffic to access waters outside the Gulf of Alaska.

High levels of vessel traffic are known to elevate background levels of noise in the marine environment. For example, continuous sounds for tugs pulling barges have been reported to range from 145 to 166 dB re 1 µPa rms at 1 meter from the source (Miles *et al.*, 1987; Richardson *et al.*, 1995; Simmonds *et al.*, 2004). Ambient underwater sound was measured in Near Island Channel, approximately 100 m southwest and 900 m northeast of the Transient Float, in March 2016 during construction of the Pier 1 Kodiak Ferry Terminal and Dock Improvements Project. Measurements recorded highly variable sound pressure levels (SPLs), ranging from approximately 80 to 140 decibels referenced to one microPascal (dB re 1 µPa). Peaks ranging from approximately 130 to 140 dB re 1 µPa were produced by vessels passing near acoustic recorders (Warner and Austin 2016). Ambient underwater noise levels in the transient float project area are both variable and relatively high, and are expected to mask some sounds of drilling, pile installation, and pile extraction.

Potential Effects on Marine Mammal Habitat

The primary potential impacts to marine mammal habitat are associated with elevated sound levels produced by vibratory and impact pile driving and removal in the area, and down-hole drilling. However, other potential impacts to the surrounding habitat from physical disturbance are also possible.

Potential Pile Driving Effects on Prey—Construction activities would produce continuous (*i.e.,* vibratory pile driving, down-hole drilling) sounds and pulsed (*i.e.* impact driving) sounds. Essential Fish Habitat (EFH) has been designated within the project area for the Alaska stocks of Pacific salmon, walleye pollock, Pacific cod, yellowfin sole (*Limanda aspera*), arrowtooth flounder (*Atheresthes stomias*), rock sole (*Lepidopsetta spp.*), flathead sole (*Hippoglossoides elassodon*), sculpin (Cottidae), skate (Rajidae), and squid (Teuthoidea). In accordance with the EFH requirements of the Magnuson-Stevens Fishery Conservation and Management Act, NMFS notified the Alaska regional office about this activity, and EFH consultation was not considered necessary for issuance of this IHA.

Fish react to sounds that are especially strong and/or intermittent low-frequency sounds. Short duration, sharp sounds can cause overt or subtle changes in fish behavior and local distribution. Hastings and Popper (2005) identified several studies that suggest fish may relocate to avoid certain areas of sound energy. Additional studies have documented effects of pile driving on fish, although several are based on studies in support of large, multiyear bridge construction projects (*e.g.,* Scholik and Yan 2001, 2002; Popper and Hastings 2009). Sound pulses at received levels of 160 dB may cause subtle changes in fish behavior. SPLs of 180 dB may cause noticeable changes in behavior (Pearson *et al.,* 1992; Skalski *et al.,* 1992). SPLs of sufficient strength have been known to cause injury to fish and fish mortality.

The most likely impact to fish from pile driving activities at the project area would be temporary behavioral avoidance of the area since the majority of the construction activities will be at SLs lower than 160 dB. The duration of fish avoidance of this area after pile driving stops is unknown, but a rapid return to normal recruitment, distribution and behavior is anticipated. In general, because the majority of SLs will be 160 dB or lower, and the duration of the project is short (*e.g.,* 12 days), impacts to marine mammal prey species are expected to be minor and temporary.

Effects to Foraging Habitat—Pile installation may temporarily increase turbidity resulting from suspended sediments. Any increases would be temporary, localized, and minimal. The City must comply with state water quality standards during these operations by limiting the extent of turbidity to the immediate project area. In general, turbidity associated with pile installation is localized to about a 25-foot radius around the pile (Everitt *et al.,* 1980). Cetaceans are not expected to be close enough to the project pile driving areas to experience effects of turbidity, and any pinnipeds will be transiting the area and could avoid localized areas of turbidity. Therefore, the impact from increased turbidity levels is expected to be discountable to marine mammals. Furthermore, pile driving and removal at the project site will not obstruct movements or migration of marine mammals.

Proposed Mitigation

In order to issue an IHA under section 101(a)(5)(D) of the MMPA, NMFS must

set forth the permissible methods of taking pursuant to such activity, ''and other means of effecting the least practicable impact on such species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of such species or stock for taking'' for certain subsistence uses.

For the proposed project, the City worked with NMFS and proposed the following mitigation measures to minimize the potential impacts to marine mammals in the project vicinity. The primary purposes of these mitigation measures are to minimize sound levels from the activities, and to monitor marine mammals within designated zones of influence corresponding to NMFS' current Level A and B harassment thresholds. The Level B zones are depicted in Table 5 found later in the *Estimated Take by Incidental Harassment* section.

Observer Qualifications—Monitoring would be conducted before, during, and after pile driving and removal activities. Monitoring will be conducted by a minimum of two qualified marine mammal observers (MMOs), who will be placed at the best vantage point(s) practicable to monitor for marine mammals and implement shutdown/delay procedures when applicable by calling for the shutdown to the hammer operator. NMFS has minimum requirements for MMOs at the construction site, as well as specific qualifications (*e.g.,* experience) needed of each MMO. MMO requirements for construction actions are as follows:

1. Independent observers (*i.e.,* not construction personnel) are required.

2. At least one observer must have prior experience working as an observer.

3. Other observers (that do not have prior experience) may substitute education (undergraduate degree in biological science or related field) or training for experience.

4. Where a team of three or more observers are required, one observer should be designated as lead observer or monitoring coordinator. The lead observer must have prior experience working as an observer.

5. NMFS will require submission and approval of observer CVs.

Qualified MMOs are trained biologists, and need the following additional minimum qualifications:

(a) Visual acuity in both eyes (correction is permissible) sufficient for discernment of moving targets at the water's surface with ability to estimate target size and distance; use of binoculars may be necessary to correctly identify the target;

(b) Ability to conduct field observations and collect data according to assigned protocols

(c) Experience or training in the field identification of marine mammals, including the identification of behaviors

(d) Sufficient training, orientation, or experience with the construction operation to provide for personal safety during observations

(e) Writing skills sufficient to prepare a report of observations including but not limited to the number and species of marine mammals observed; dates and times when in-water construction activities were conducted; dates and times when in-water construction activities were suspended to avoid potential incidental injury from construction sound of marine mammals observed within a defined shutdown zone; and marine mammal behavior

(f) Ability to communicate orally, by radio or in person, with project personnel to provide real-time information on marine mammals observed in the area as necessary

Monitoring Protocols—The City will conduct briefings between construction supervisors and crews, marine mammal monitoring team, and City staff prior to the start of all pile driving activity, and when new personnel join the work, in order to explain responsibilities, communication procedures, marine mammal monitoring protocol, and operational procedures.

Prior to the start of pile driving activity, the shutdown zone will be monitored for 30 minutes to ensure that it is clear of marine mammals. Pile driving will only commence once observers have declared the shutdown zone clear of marine mammals; animals will be allowed to remain in the shutdown zone (*i.e.,* must leave of their own volition) and their behavior will be monitored and documented. The shutdown zone may only be declared clear, and pile driving started, when the entire shutdown zone is visible (*i.e.,* when not obscured by dark, rain, fog, etc.).

If a marine mammal approaches or enters the shutdown zone during the course of pile driving operations, activity will be halted and delayed until either the animal has voluntarily left and been visually confirmed beyond the shutdown zone or 30 minutes have passed without re-detection of the animal. Monitoring will be conducted throughout the time required to drive a pile, through 30 minutes post-completion of pile driving activities. Pile driving activities include the time to remove a single pile or series of piles, as long as the time elapsed between uses of the pile driving equipment is no more than 30 minutes.

Observers shall record all incidents of marine mammal occurrence, regardless of distance from activity, and shall document any behavioral reactions in concert with distance from piles being driven. Observations made outside the shutdown zone will not result in shutdown; that pile segment would be completed without cessation, unless the animal approaches or enters the shutdown zone, at which point all pile driving activities would be halted, as described below. Please see Appendix B of the City's application for details on the marine mammal monitoring plan developed by the City with NMFS' cooperation.

Ramp Up or Soft Start—The use of a soft start procedure is believed to provide additional protection to marine mammals by warning or providing a chance to leave the area prior to the impact hammer operating at full capacity, and typically involves a requirement to initiate sound from the hammer at reduced energy followed by a waiting period. This procedure is repeated two additional times. It is difficult to specify the reduction in energy for any given hammer because of variation across drivers. The project will utilize soft start techniques for all impact pile driving. NMFS will require the City to initiate sound from impact driving with an initial set of three strikes from the impact hammer at reduced energy, followed by a 1-minute waiting period, then two subsequent three strike sets. Soft start will be required at the beginning of each day's impact pile driving work and at any time following a cessation of pile driving of 30 minutes or longer.

If a marine mammal is present within the Level A harassment zone, ramping up will be delayed until the animal(s) leaves the Level A harassment zone. Activity will begin only after the MMO has determined, through sighting, that the animal(s) has moved outside the Level A harassment zone.

If a Steller sea lion, harbor seal, harbor porpoise, Dall's porpoise, humpback whale, or killer whale is present in the Level B harassment zone, ramping up will begin and a Level B take will be documented. Ramping up will occur when these species are in the Level B harassment zone whether they entered the Level B zone from the Level A zone, or from outside the project area.

If any marine mammal other than Steller sea lions, harbor seals, harbor porpoises, Dall's porpoise, humpback whale, or killer whales is present in the Level B harassment zone, ramping up will be delayed until the animal(s)

leaves the zone. Ramping up will begin only after the MMO has determined, through sighting, that the animal(s) has moved outside the harassment zone.

Pile Caps—Pile caps or cushions will be used during all impact pile-driving activities.

Shutdown Zone—For all pile driving activities, the City will establish a shutdown zone. Shutdown zones are intended to contain the area in which SPLs equal or exceed acoustic injury criteria, with the purpose being to define an area within which shutdown of activity would occur upon sighting of a marine mammal (or in anticipation of an animal entering the defined area), thus preventing injury of marine mammals. Using the user spreadsheet for the new acoustic guidance, injury zones were determined for each of the hearing groups. These zones would be rounded to the nearest 10 or 100 m to be more conservative (Table 3). As a precautionary measure, intended to reduce the unlikely possibility of injury from direct physical interaction with construction operations, the City would implement a minimum shutdown zone of 10 m radius around each pile for all construction methods for all marine mammals. Additionally, to avoid acoustic injury, the following shutdown zones will be in place for all construction methods (vibratory extraction and installation, down-hole drilling, and impact driving): 100 m for humpback whales, harbor porpoise, and Dall's porpoise, 50 m for harbor seals, and 10 m for killer whales and Steller sea lions (Table 3).

TABLE 3—INJURY ZONES AND SHUTDOWN ZONES FOR HEARING GROUPS FOR EACH CONSTRUCTION METHOD

Hearing group	Low-frequency cetaceans	Mid-frequency cetaceans	High-frequency cetaceans	Phocid pinnipeds	Otariid pinnipeds
Vibratory installation/extraction [1]					
PTS Isopleth to threshold (m)	7.1 (8)	1.4 (2)	9.3 (10)	5.1 (6)	0.8 (1)
Down-hole drilling [2]					
PTS Isopleth to threshold (m)	71.7 (100)	7.3 (8)	64.6 (100)	43.7 (100)	5.5 (6)
Impact driving [3]					
PTS Isopleth to threshold (m)	3.7 (4)	0.3 (1)	4.3 (5)	2.4 (3)	0.3 (1)
Shutdown zone (m)	100	*10	100	50	*10

Note: Numbers in parentheses are the rounded zones (to the nearest 1 if under 10 m, and 10 or 100 m)
*The minimum 10 m shutdown in place for all construction projects would cover the injury zones for these hearing groups.
[1] For vibratory driving, SL is 183.8, TL is 21.9logR, weighting function is 2.5, duration is 0.69 hours, and distance from the source is one m.
[2] For down-hole drilling, SL is 192.5, TL is 18.9logR, weighting function is two, duration is four hours, and distance from the source is 1 m.
[3] For impact driving, SL is 205.9, weighting function is two, duration is 0.3, pulse duration is 0.05, TL is 20.3log R, strikes per pile is five, and distance from the source is 1 m.

For in-water heavy machinery work other than pile driving (using, *e.g.,* standard barges, tug boats, barge-mounted excavators, or clamshell equipment used to place or remove material), if a marine mammal comes within 10 m, operations shall cease and vessels shall reduce speed to the minimum level required to maintain steerage and safe working conditions.

Disturbance Zone—Disturbance zones are the areas in which sound pressure levels (SPLs) equal or exceed 120 dB rms (for continuous sound) and 160 dB rms (for impulsive sound) for pile driving installation and removal. Disturbance zones provide utility for monitoring conducted for mitigation purposes (*i.e.,* shutdown zone monitoring) by establishing monitoring protocols for areas adjacent to the shutdown zones. The disturbance zone will be monitored by appropriately stationed MMOs. Monitoring of disturbance zones enables observers to be aware of and communicate the presence of marine mammals in the project area but outside the shutdown zone and thus prepare for potential shutdowns of activity. However, the primary purpose of disturbance zone monitoring is for documenting incidents of Level B harassment.

Any marine mammal documented within the Level B harassment zone would constitute a Level B take (harassment), and will be recorded and reported as such. Nominal radial distances for disturbance zones are shown in Table 4. Given the size of the disturbance zone for vibratory pile driving, it is impossible to guarantee that all animals would be observed or to make comprehensive observations of fine-scale behavioral reactions to sound, and only a portion of the zone (*e.g.,* what may be reasonably observed by visual observers) would be observed.

In order to document observed incidents of harassment, monitors record all marine mammal observations, regardless of location. The observer's location, as well as the location of the pile being driven or removed, is known from a GPS. The location of the animal is estimated as a distance from the observer, which is then compared to the location from the pile. It may then be estimated whether the animal was exposed to sound levels constituting incidental harassment on the basis of predicted distances to relevant thresholds in post-processing of observational and acoustic data, and a precise accounting of observed incidences of harassment created. This information may then be used to extrapolate observed takes to reach an approximate understanding of actual total takes.

Level B take of grey whales and fin whales is not requested and will be avoided by shutting down before individuals of these species enter the Level B zones.

TABLE 4—CALCULATED THRESHOLD DISTANCES (m) FROM AN ACOUSTIC MONITORING STUDY CONDUCTED AT THE PIER 1 IN MARCH 2016

Source	Threshold distances (m)	
	160 dB	120 dB
Vibratory pile driving/extraction	n/a	821 (900)
Down-hole drilling	n/a	6846 (7,000)
Impact pile driving	183 (200)	n/a

Note: Numbers in parentheses are the rounded zones (to the nearest 100 or 1,000 m).

In order to document observed incidents of harassment, MMOs record all marine mammal observations, regardless of location. The observer's location, as well as the location of the pile being driven, is known from a GPS. The location of the animal is estimated as a distance from the observer, which is then compared to the location from the pile and the estimated zone of influence (ZOI) for relevant activities (*i.e.,* pile installation and removal). This information may then be used to extrapolate observed takes to reach an approximate understanding of actual total takes.

Time Restrictions—Work would occur only during daylight hours, when visual monitoring of marine mammals can be conducted. To minimize impacts to pink salmon (*Oncorhynchus gorbuscha*) fry and coho salmon (*O. kisutch*) smolt, the City will refrain from impact pile driving from May 1, 2017 through June 30, 2017. If impact pile-driving occurs from May 1 through June 30, it will occur in the evenings during daylight hours, after the 12-hour period that begins at civil dawn.

Proposed measures to ensure availability of such species or stock for taking for certain subsistence uses are discussed later in this document (see *Impact on Availability of Affected Species or Stock for Taking for Subsistence Uses* section).

Mitigation Conclusions

NMFS has carefully evaluated the applicant's proposed mitigation measures and considered a range of other measures in the context of ensuring that NMFS prescribes the means of affecting the least practicable impact on the affected marine mammal species and stocks and their habitat. Our evaluation of potential measures included consideration of the following factors in relation to one another:

- The manner in which, and the degree to which, the successful implementation of the measure is expected to minimize adverse impacts to marine mammal species or stocks;
- The proven or likely efficacy of the specific measure to minimize adverse impacts as planned; and
- The practicability of the measure for applicant implementation.

Any mitigation measure(s) prescribed by NMFS should be able to accomplish, have a reasonable likelihood of accomplishing (based on current science), or contribute to the accomplishment of one or more of the general goals listed below:

1. Avoidance or minimization of injury or death of marine mammals wherever possible (goals 2, 3, and 4 may contribute to this goal).

2. A reduction in the numbers of marine mammals (total number or number at biologically important time or location) exposed to received levels of pile driving and down-hole drilling, or other activities expected to result in the take of marine mammals (this goal may contribute to 1, above, or to reducing harassment takes only).

3. A reduction in the number of times (total number or number at biologically important time or location) individuals would be exposed to received levels of pile driving and down-hole drilling, or other activities expected to result in the take of marine mammals (this goal may contribute to 1, above, or to reducing harassment takes only).

4. A reduction in the intensity of exposures (either total number or number at biologically important time or location) to received levels of pile driving and down-hole drilling, or other activities expected to result in the take of marine mammals (this goal may contribute to a, above, or to reducing the severity of harassment takes only).

5. Avoidance or minimization of adverse effects to marine mammal habitat, paying special attention to the food base, activities that block or limit passage to or from biologically important areas, permanent destruction of habitat, or temporary destruction/disturbance of habitat during a biologically important time.

6. For monitoring directly related to mitigation—an increase in the probability of detecting marine mammals, thus allowing for more effective implementation of the mitigation.

Based on our evaluation of the applicant's proposed measures, as well as other measures considered by NMFS, NMFS has preliminarily determined that the proposed mitigation measures provide the means of effecting the least practicable impact on marine mammals species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance.

Proposed Monitoring and Reporting

In order to issue an ITA for an activity, section 101(a)(5)(D) of the MMPA states that NMFS must set forth, ''requirements pertaining to the monitoring and reporting of such taking.'' The MMPA implementing regulations at 50 CFR 216.104 (a)(13) indicate that requests for ITAs must include the suggested means of accomplishing the necessary monitoring and reporting that will result in increased knowledge of the species and of the level of taking or impacts on populations of marine mammals that are expected to be present in the proposed action area. The City submitted a marine mammal monitoring plan as part of the IHA application. It can be found in Appendix B of their application. The plan may be modified or supplemented based on comments or new information received from the public during the public comment period.

Monitoring measures prescribed by NMFS should accomplish one or more of the following general goals:

1. An increase in the probability of detecting marine mammals, both within the mitigation zone (thus allowing for more effective implementation of the mitigation) and in general to generate more data to contribute to the analyses mentioned below;

2. An increase in our understanding of how many marine mammals are likely to be exposed to levels of pile driving and down-hole drilling that we associate with specific adverse effects, such as behavioral harassment, TTS, or PTS;

3. An increase in our understanding of how marine mammals respond to stimuli expected to result in take and how anticipated adverse effects on individuals (in different ways and to varying degrees) may impact the population, species, or stock (specifically through effects on annual rates of recruitment or survival) through any of the following methods:

- Behavioral observations in the presence of stimuli compared to observations in the absence of stimuli (need to be able to accurately predict received level, distance from source, and other pertinent information);
- Physiological measurements in the presence of stimuli compared to observations in the absence of stimuli (need to be able to accurately predict received level, distance from source, and other pertinent information);
- Distribution and/or abundance comparisons in times or areas with concentrated stimuli versus times or areas without stimuli;

4. An increased knowledge of the affected species; and

5. An increase in our understanding of the effectiveness of certain mitigation and monitoring measures.

Visual Marine Mammal Observation

The City will collect sighting data and behavioral responses to construction for marine mammal species observed in the region of activity during the period of activity. All observers will be trained in marine mammal identification and behaviors and are required to have no other construction-related tasks while conducting monitoring. As discussed previously, the City will monitor the shutdown zone and disturbance zone before, during, and after pile driving. The MMOs and the City authorities will meet to determine the most appropriate observation platform(s) for monitoring during pile installation and extraction.

Based on our MMO requirements, the Marine Mammal Monitoring Plan would implement similar procedures as those described in the *Proposed Mitigation section.*

Data Collection

We require that observers use approved data forms. Among other pieces of information, the City will record detailed information about any implementation of shutdowns, including the distance of animals to the pile and description of specific actions that ensued and resulting behavior of the animal, if any. In addition, the City will attempt to distinguish between the number of individual animals taken and the number of incidents of take. We require that, at a minimum, the following information be collected on the sighting forms:

- Date and time that monitored activity begins or ends;
- Construction activities occurring during each observation period;
- Weather parameters (*e.g.,* percent cover, visibility);
- Water conditions (*e.g.,* sea state, tide state);
- Species, numbers, and, if possible, sex and age class of marine mammals;
- Description of any observable marine mammal behavior patterns, including bearing and direction of travel and distance from pile driving activity;
- Distance from pile driving activities to marine mammals and distance from the marine mammals to the observation point;
- Locations of all marine mammal observations; and
- Other human activity in the area.

Proposed Reporting Measures

The City would provide NMFS with a draft monitoring report within 90 days of the conclusion of the proposed construction work. The report will include marine mammal observations pre-activity, during-activity, and post-activity during pile driving days, and will also provide descriptions of any behavioral responses to construction activities by marine mammals and a complete description of all mitigation shutdowns and the results of those actions and an extrapolated total take estimate based on the number of marine mammals observed during the course of construction. A final report must be submitted within thirty days following resolution of comments on the draft report. If no comments are received from NMFS within 30 days, the draft final report will constitute the final report. If comments are received, a final report must be submitted within 30 days after receipt of comments.

In the unanticipated event that the specified activity clearly causes the take of a marine mammal in a manner prohibited by the IHA (if issued), such as serious injury or mortality (*e.g.,* ship-strike, gear interaction, and/or entanglement), the City would immediately cease the specified activities and immediately report the incident to the Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, and the Alaska Stranding Coordinator. The report would include the following information:

- Time, date, and location (latitude/longitude) of the incident;
- Name and type of vessel involved;
- Vessel's speed during and leading up to the incident;
- Description of the incident;
- Status of all sound source use in the 24 hours preceding the incident;
- Water depth;
- Environmental conditions (*e.g.,* wind speed and direction, Beaufort sea state, cloud cover, and visibility);
- Description of all marine mammal observations in the 24 hours preceding the incident;
- Species identification or description of the animal(s) involved;
- Fate of the animal(s); and
- Photographs or video footage of the animal(s) (if equipment is available).

Activities would not resume until NMFS is able to review the circumstances of the prohibited take. NMFS would work with the City to determine what is necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. The City would not be able to resume their activities until notified by NMFS via letter, email, or telephone.

In the event that the City discovers an injured or dead marine mammal, and the lead MMO determines that the cause of the injury or death is unknown and the death is relatively recent (*i.e.,* in less than a moderate state of decomposition as described in the next paragraph), the City would immediately report the incident to the Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, and the Alaska Stranding Coordinator.

The report would include the same information identified in the paragraph above. Activities would be able to continue while NMFS reviews the circumstances of the incident. NMFS would work with the City to determine whether modifications in the activities are appropriate.

In the event that the City discovers an injured or dead marine mammal, and the lead MMO determines that the injury or death is not associated with or related to the activities authorized in the IHA (*e.g.,* previously wounded animal, carcass with moderate to advanced decomposition, or scavenger damage), the City would report the incident to the Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, and the NMFS West Coast Stranding Hotline and/or by email to the Alaska Stranding Coordinator, within 24 hours of the discovery. The City would provide photographs or video footage (if available) or other documentation of the stranded animal sighting to NMFS and the Marine Mammal Stranding Network.

Estimated Take by Incidental Harassment

Except with respect to certain activities not pertinent here, the MMPA

defines ''harassment'' as: Any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild [Level A harassment]; or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering [Level B harassment].

All anticipated takes would be by Level B harassment resulting from vibratory pile driving and removal, impact pile driving, or down-hole drilling. Level B harassment may result in temporary changes in behavior. Note that injury, serious injury, and lethal takes are not expected, and are not authorized, for these activities due to the proposed mitigation and monitoring measures that are expected to minimize the possibility of such take.

If a marine mammal responds to a stimulus by changing its behavior (*e.g.,* through relatively minor changes in locomotion direction/speed or vocalization behavior), the response may or may not constitute taking at the individual level, and is unlikely to affect the stock or the species as a whole. However, if a sound source displaces marine mammals from an important feeding or breeding area for a prolonged period, impacts on animals or on the stock or species could potentially be significant (*e.g.,* Lusseau and Bejder, 2007; Weilgart, 2007). Given the many uncertainties in predicting the quantity and types of impacts of sound on marine mammals, it is common practice to estimate how many animals are likely to be present within a particular distance of a given activity, or exposed to a particular level of sound, in order to estimate take.

Upland work can generate airborne sound and create visual disturbance that could potentially result in disturbance to marine mammals (specifically, pinnipeds) that are hauled out or at the water's surface with heads above the water. However, because there are no regular haul-outs in close proximity to the Kodiak transient float, NMFS believes that incidents of incidental take resulting from airborne sound or visual disturbance are unlikely.

The City has requested authorization for the incidental taking of small numbers, by Level B harassment, of harbor porpoise, Dall's porpoise, killer whale, humpback whale, Steller sea lion, and harbor seal near the project area that may result from impact and vibratory pile driving, vibratory pile removal, and down-hole drilling construction activities associated with the transient float project.

The calculation for estimating marine mammal exposures to underwater noise is:

Exposure estimate = number of animals exposed/day * number of days of activity

In order to estimate the potential incidents of take that may occur incidental to the specified activity, we must first estimate the extent of the sound field that may be produced by the activity and then consider the sound field in combination with information about marine mammal density or abundance in the project area. We first provide information on applicable sound thresholds for determining effects to marine mammals before describing the information used in estimating the sound fields, the available marine mammal density or abundance information, and the method of estimating potential incidences of take.

Sound Thresholds

We use the following generic sound exposure thresholds (Table 5) to determine when an activity that produces sound might result in impacts to a marine mammal such that a take by behavioral harassment (Level B) might occur.

TABLE 5—UNDERWATER DISTURBANCE THRESHOLD DECIBEL LEVELS FOR MARINE MAMMALS

Criterion	Criterion definition	Threshold *
Level B harassment	Behavioral disruption for impulse noise (*e.g.,* impact pile driving)	160 dB RMS.
Level B harassment	Behavioral disruption for non-pulse noise (*e.g.,* vibratory pile driving, drilling)	120 dB RMS.

* All decibel levels referenced to 1 micropascal (re: 1 μPa). Note all thresholds are based off root mean square (RMS) levels.

We use NMFS' new acoustic criteria (NMFS 2016a, 81 FR 51694; August 4, 2016) to determine sound exposure thresholds to determine when an activity that produces sound might result in impacts to a marine mammal such that a take by injury, in the form of Permanent Threshold Shift (PTS), might occur.

Distance to Sound Thresholds

The sound field in the project area is the existing ambient noise plus additional construction noise from the proposed project. The primary components of the project expected to affect marine mammals is the sound generated by impact pile driving, vibratory pile driving, vibratory pile removal, and down-hole drilling.

After vibratory hammering has installed the pile through the overburden to the top of the bedrock layer, the vibratory hammer will be removed, and the down-hole drill will be inserted through the pile. The head extends below the pile and the drill rotates through soils and rock. The drilling/hammering takes place below the sediment layer and, as the drill advances, below the bedrock layer as well. Underwater noise levels are relatively low because the impact is taking place below the substrate rather than at the top of the piling, which limits transmission of noise through the water column. Additionally, there is a drive shoe welded on the bottom of the pile, and the upper portion of the bit rests on the shoe, which aids in advancement of the pile as drilling progresses. When the proper depth is achieved, the drill is retracted and the pile is left in place. Impact hammering typically generates the loudest noise associated with pile driving, but for the transient float project, use will be limited to a few blows per 24-inch steel pile.

Several factors are expected to minimize the potential impacts of pile-driving and drilling noise associated with the project:

- The soft sediment marine seafloor and shallow waters in the proposed project area;
- Land forms across the channel that will block the noise from spreading; and
- The relatively high background noise level in the project area.

Sound will dissipate relatively rapidly in the shallow waters over soft seafloors in the project area (NMFS 2013). St. Herman Harbor (Figure 2 in the application), where the Dog Bay float is located, is protected from the transient float construction noise by land projections and islands, which will block and redirect sound. Near Island and Kodiak Island, on either side of Near Island Channel, prevent the sound

from travelling underwater to the north, south, and southeast, restricting the noise to most of the channel; however a narrow band of noise may extend to Woody Island, approximately 3.75 km to the East.

The project includes vibratory removal of 12-inch timber and steel piles; and vibratory installation and down-hole drilling of permanent 24-inch steel piles. Each 24-inch pile may also be subject to a few blows from an impact hammer for proofing. No data are available for vibratory removal of piles, so it will be conservatively assumed that vibratory removal of piles will produce the same source level as vibratory installation.

SPLs for this project were used from the nearby Pier 1 Kodiak ferry terminal measurements of 24-in steel piles from JASCO 2016 (Warner and Austin 2016). The ferry terminal is approximately 100 m from the transient float, and therefore has similar environmental conditions, and the project used the same installation methods and same size piles, making this a good proxy. Vibratory driving had a measured SL of 183.8 dB rms at 1 m. Down-hole drilling had a measured SL of 192.5 dB at 1 m. Impact pile driving had a measured SL of 205.9 at 1 m.

Underwater Sound Propagation Formula—Pile driving generates underwater noise that can potentially result in disturbance to marine mammals in the project area. Transmission loss (TL) is the decrease in acoustic intensity as an acoustic pressure wave propagates out from a source. TL parameters vary with frequency, temperature, sea conditions, current, source and receiver depth, water depth, water chemistry, and bottom composition and topography. The general formula for underwater TL is:

$$TL = B * \log_{10}(R_1/R_2),$$

Where

TL = transmission loss in dB

R_1 = the distance of the modeled SPL from the driven pile, and

R_2 = the distance from the driven pile of the initial measurement

NMFS typically recommends a default practical spreading loss of 15 dB per tenfold increase in distance. However, for this analysis for the transient float project area, a TL of 21.9Log(R/10) (*i.e.,* 21.9-dB loss per tenfold increase in distance) was used for vibratory pile driving, 18.9Log(R/10) was used for down-hole drilling, and a 20.3Log TL(R/10) function was used for impact driving (Warner and Austin 2016). TL values were based on measured attenuation rates at the Pier 1, Kodiak Ferry Terminal, located approximately 100m away from the transient float project area.

Distances to the harassment isopleths vary by marine mammal type and pile extraction/driving tool. The isopleth for Level A harassment are summarized in Table 3, and the isopleths for Level B harassment are summarized in Table 4. The ZOIs will be rounded up to the nearest 10, 100, or 1,000 m for the transient float project.

Note that the actual area ensonified by pile driving activities is significantly constrained by local topography relative to the total threshold radius. The actual ensonified area was determined using a straight line-of-sight projection from the anticipated pile driving locations. Distances to the underwater sound isopleths for Level B and Level A are illustrated respectively in Figures 15–17 in the City's application.

The method used for calculating potential exposures to impact and vibratory pile driving noise for each threshold was estimated using local marine mammal data sets, monitoring reports from previous projects in the same vicinity, best professional judgment from state and federal agencies, and data from take estimates on similar projects with similar actions. All estimates are conservative and include the following assumptions:

- All pilings installed at each site would have an underwater noise disturbance equal to the piling that causes the greatest noise disturbance (*i.e.,* the piling farthest from shore) installed with the method that has the largest ZOI. The largest underwater disturbance ZOI would be produced by down-hole drilling. The ZOIs for each threshold are not spherical and are truncated by land masses on either side of the channel which would dissipate sound pressure waves;
- Exposures were based on estimated work hours. Numbers of days were based on an average production rate of eight hours of vibratory driving/extraction, 48 hours of down-hole drilling, and less than one hour of impact driving and. Note that impact driving is likely to occur only on days when vibratory driving occurs; and
- In absence of site specific underwater acoustic propagation modeling, the practical spreading loss model was used to determine the ZOI.

Steller Sea Lion

Steller sea lions are common in the project area and may be encountered daily. Pinniped population estimates are typically made when the animals are hauled out and available to be counted. There have been numerous counts of Steller sea lions in this area over the past few years. Aerial surveys from 2004 through 2006 indicated peak winter (October–April) counts at the Dog Bay float ranging from 27 to 33 animals (Wynne *et al.,* 2011). More than 100 Steller sea lions were counted on the Dog Bay float at times in spring 2015, although the mean number was much smaller (Wynne 2015b). Counts in February 2015 during a site visit by HDR biologists ranged from approximately 28 to 45 Steller sea lions.

According to ABR (2016), however, maximal weekly counts of sea lions at Dog Bay float were only loosely correlated with weekly average-hourly rates of sea lion observations within the construction area. Near Island Channel counts of Steller sea lions adjacent to Pier 1 have ranged from zero to approximately 25 sea lions at one time (FHWA and DOT&PF 2015). More recent counts completed between November 2015 and June 2016 by protected species observers (PSOs) working on the Kodiak Ferry Terminal and Dock Improvements Project (approximately 100 m from the transient float) ranged from approximately 6 to 114 Steller sea lions, with an average of 33 (ABR 2016). It has been estimated that about 40 unique individual sea lions likely pass by the project site each day (Speckman 2015, Ward 2015, Wynne 2015a). Incidental take was estimated for Steller sea lions by conservatively assuming that, within any given day, approximately 40 unique individual Steller sea lions may be present at some time during that day within the Level B harassment zones during active pile extraction or installation.

It is assumed that Steller sea lions may be present every day, and also that take will include multiple harassments of the same individual(s) both within and among days, which means that these estimates are likely an overestimate of the number of individuals.

An estimated total of 480 Steller sea lions (40 sea lions/day * 12 days of pile installation or extraction) could be exposed to noise at the Level B harassment level during vibratory and impact pile driving (Table 6).

The attraction of sea lions to the seafood processing plant increases the possibility of individual Steller sea lions occasionally entering the Level A harassment zone (the largest injury zone is 5.5 m during down-hole drilling); however a minimum 10 m shutdown would be in effect for all construction methods, thereby eliminating the potential for Level A harassment. No

level A take is authorized for Steller sea lions.

Harbor Seal

Harbor seals are expected to be encountered in low numbers within the project area. However, based on the known range of the South Kodiak stock, 13 single sightings during 110 days of monitoring of the Kodiak Ferry Terminal and Dock Improvements Project, and occasional sightings during monitoring of projects at other locations on Kodiak Island, it is assumed that harbor seals could be present every day. This analysis conservatively assumes that harbor seals could be present on any one day during the 12 days of pile installation and removal. Using this number, it is estimated that 48 harbor seals could be exposed to noise at the level B harassment level during in-water construction activities (Table 6). We assumed three harbor seals (the maximum number of seals observed during the Kodiak Ferry Terminal and Dock Improvements Project over 110 days of monitoring) may be seen in Near Island Channel for 36 takes, and included an additional one seal per day that may be present in the larger 120 dB zone for an additional 12 seals.

The shutdown zone for harbor seals is 50 m for all construction methods. Because this shutdown zone covers the entire injury zone (10 m for impact and vibratory, and 50 m for down-hole drilling), Level A harassment can be avoided. No level A take is authorized for harbor seals.

Harbor Porpoise

Harbor porpoises are expected to be encountered in low numbers within the project area. Based on the known range of the Gulf of Alaska stock, six sightings of singles or pairs only during 110 days of monitoring of the Kodiak Ferry Terminal and Dock Improvements project, and occasional sightings during monitoring of projects at other locations on Kodiak Island, it is assumed that harbor porpoises could be present every day. Dahlheim (2009, 2015) states that the average group size of harbor porpoise is between one and two individuals. To be conservative, we assumed groups of two animals may be seen on any given day. NMFS proposes 24 Level B takes (two animals on 12 days) of harbor porpoises by exposure to underwater noise over the duration of construction activities (Table 6).

A shutdown zone of 100 m would be established for all construction methods for harbor porpoise. The largest injury zone is 64.6 m (rounded to 100 m) for this species; therefore, level A take can be avoided. No Level A take is authorized for harbor porpoise.

Dall's Porpoise

Dall's porpoises are expected to be encountered within the project area rarely. Although no sightings of Dall's porpoise occurred during 110 days monitoring of the Kodiak Ferry Terminal and Dock Improvements Project, the project area is within the known range of the Gulf of Alaska stock and they have been observed at other locations on Kodiak Island. This project also includes a narrow band that will be ensonified extending to Woody Island, where Dall's porpoise may be present. There is minimal information on group sizes of this species in the Kodiak area. Dahlheim (2009) noted mean group size of Dall's porpoise in Southeast Alaska between the Spring and Fall of 1991–2007 ranged from 2.51 to 5.46 animals, with average group sizes between 2.77 and 3.55. OBIS SEAMAP states that Dall's porpoise usually form small groups between two and 12 individuals, and had two observations of Dall's porpoise near Kodiak Island with group sizes of one and two individuals (Halpin 2009 at OBIS–SEAMAP 2016). We therefore, conservatively, assume that Dall's porpoises with an average group size of seven individuals could be present in the area every other day of in-water construction. NMFS proposes 42 Dall's porpoise level B takes (7 animal/day * 6 days of pile activity).

No Level A takes are requested for this species. No Level A take is expected since Dall's porpoise are uncommon in the area, preferring deeper waters, and there would be a 100 m shutdown for all construction methods for Dall's porpoise to further reduce the likelihood of injury.

Killer Whale

Killer whales are expected to be in the Kodiak harbor area sporadically from January through April and to enter the project area in low numbers. Four killer whale pods were observed during 110 days of monitoring for the Kodiak Ferry Terminal and Dock Improvements Project with the largest pod size of seven individuals. NMFS estimates that pod of seven individual whales may enter the project area twice during the 12 days of pile installation and removal. NMFS therefore proposes 14 Level B takes (7 killer whales/visit * 2 days) of killer whales by exposure to underwater noise over the duration of construction activities. No Level A take is requested under this authorization, since the injury zones are very small (10 m for all methods), and it is unlikely a killer whale would come that close to the piles. NMFS also expects that construction could be shut down before the whales enter the Level A harassment area.

Humpback Whale

Humpback whales are rare in the action area. One solitary animal was observed in March 2016 during 110 days monitoring of the Kodiak Ferry Terminal and Dock Improvements Project. Conservatively, it assumed that one individual could be present in the area on half of the days of in-water construction. NMFS therefore proposes six Level B takes (Table 6). Because humpback whales are rare in the area, and there would be a 100 m shutdown in place that covers the injury zones (10 m for impact and vibratory, and 100 m for down-hole drilling), no Level A takes are authorized for this species.

Based on Wade *et al.* (2016), the probability is that five of the humpback whales that would be taken through Level B acoustic harassment would be from the Hawaii DPS (not listed under ESA), one humpback whale would be from threatened Mexico DPS, and no humpback whales would be from the endangered Western North Pacific DPS.

TABLE 6—SUMMARY OF THE ESTIMATED NUMBERS OF MARINE MAMMALS POTENTIALLY EXPOSED TO LEVEL A AND LEVEL B HARASSMENT NOISE LEVELS

Species	Level A injury takes	Level B harassment takes	Total
Steller sea lion	0	480	480
Harbor seal	0	48	48
Harbor porpoise	0	24	24
Dall's porpoise	0	42	42
Killer whale	0	14	14

TABLE 6—SUMMARY OF THE ESTIMATED NUMBERS OF MARINE MAMMALS POTENTIALLY EXPOSED TO LEVEL A AND LEVEL B HARASSMENT NOISE LEVELS—Continued

Species	Level A injury takes	Level B harassment takes	Total
Humpback whale	0	6	6
Total	0	614	614

Analysis and Preliminary Determinations

Negligible Impact

Negligible impact is ''an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival'' (50 CFR 216.103). A negligible impact finding is based on the lack of likely adverse effects on annual rates of recruitment or survival (*i.e.,* population-level effects). An estimate of the number of takes, alone, is not enough information on which to base an impact determination. In addition to considering estimates of the number of marine mammals that might be ''taken,'' NMFS must consider other factors, such as the likely nature of any responses (their intensity, duration, etc.), the context of any responses (critical reproductive time or location, migration, etc.), as well as the number and nature of estimated Level A harassment takes, the number of estimated mortalities, effects on habitat, and the status of the species.

To avoid repetition, the discussion of our analyses applies to all the species listed in Table 6, given that the anticipated effects of this pile driving project on marine mammals are expected to be relatively similar in nature. There is no information about the size, status, or structure of any species or stock that would lead to a different analysis for this activity, else species-specific factors would be identified and analyzed.

Pile extraction, pile driving, and down-hole drilling activities associated with the reconstruction of the transient float, as outlined previously, have the potential to disturb or displace marine mammals. Specifically, the specified activities may result in take, in the form of Level B harassment (behavioral disturbance) from underwater sounds generated from pile driving and drilling. Potential takes could occur if individuals of these species are present in the ensonified zone when in-water construction is under way.

The takes from Level B harassment will be due to potential behavioral disturbance. No injury, serious injury, or mortality is anticipated given the nature of the activity and measures designed to minimize the possibility of serious injury to marine mammals. These noise exposures may cause behavioral modification to a small number of each affected marine mammal species. However, the City's proposed activities are fairly localized and of short duration, and the noise exposures are therefore expected to be localized and short-term. The entire project area is limited to the transient float area and its immediate surroundings with only a small band extending out to Woody Island. Actions covered under the Authorization would include extracting 19 12-inch steel piles and installing 12 24-inch steel piles to support the replacement float and gangway. Specifically, the use of impact driving will be limited to an estimated maximum of one hour over the course of 12 days of construction, and will likely require less time. Each 24-inch pile will require about two to five blows of an impact hammer to confirm that piles are set into bedrock for a maximum time expected of three minutes of impact hammering per pile. Vibratory driving will be necessary for an estimated maximum of eight hours and down-hole drilling will require a maximum of 48 hours. The likelihood that marine mammals will be detected by trained observers is high under the environmental conditions described for the reconstruction of the transient float. Therefore, the proposed mitigation and monitoring measures are expected to reduce the likelihood of injury and behavior exposures.

No important feeding and/or reproductive areas for marine mammals are known to be near the proposed action area. The project also is not expected to have significant adverse effects on affected marine mammals' habitat, including Steller sea lion critical habitat. The project activities would not modify existing marine mammal habitat. The activities may cause some fish to leave the area of disturbance, thus temporarily impacting marine mammals' foraging opportunities in a limited portion of the foraging range; but, because of the short duration of the activities and the relatively small area of the habitat that may be affected, the impacts to marine mammal habitat are not expected to cause significant or long-term negative consequences.

Sea lions are common in the Kodiak harbor area the possibility exists that some of these sea lions are already hearing-impaired or deaf (Wynne 2014). Fishermen have been known to protect their gear and catches by using ''seal bombs'' in an effort to disperse sea lions away from fishing gear. Sound levels produced by seal bombs are well above levels that are known to cause TTS (temporary loss of hearing), and Permanent Threshold Shift (PTS, partial or full loss of hearing) in marine mammals (Wynne 2014). The use of seal bombs requires appropriate permits from the Bureau of Alcohol, Tobacco, Firearms and Explosives. Although no studies have been published that document hearing-impaired sea lions in the area, this possibility is important to note as it pertains to mitigation measures that will be effective for this project.

Sea lions in the Kodiak harbor area are habituated to fishing vessels and are skilled at gaining access to fish. It is likely that some of the same animals follow local vessels to the nearby fishing grounds and back to town. It is also likely that hearing-impaired or deaf sea lions are among the sea lions that attend the seafood processing facility nearby the transient float construction site. It is not known how a hearing-impaired or deaf sea lion would respond to typical mitigation efforts at a construction site such as ramping up of pile-driving equipment. It is also unknown whether a hearing-impaired or deaf sea lion would avoid pile-driving activity, or whether such an animal might approach closely, without responding to or being impacted by the noise level. Therefore, any additional auditory injury associated with the transient float project would be unlikely.

Effects on individuals that are taken by Level B harassment, on the basis of

reports in the literature as well as monitoring from other similar activities, will likely be limited to reactions such as increased swimming speeds, increased surfacing time, or decreased foraging (if such activity were occurring) (*e.g.,* Thorson and Reyff 2006; Lerma 2014). Most likely, individuals will simply move away from the sound source and be temporarily displaced from the areas of pile driving, although even this reaction has been observed primarily only in association with impact pile driving. In response to vibratory driving, pinnipeds (which may become somewhat habituated to human activity in industrial or urban waterways) have been observed to orient towards and sometimes move towards the sound. The pile extraction and driving activities analyzed here are similar to, or less impactful than, numerous construction activities conducted in other similar locations, including the nearby Pier 1 Kodiak ferry terminal (approximately 100 m away), which have taken place with no reported injuries or mortality to marine mammals, and no known long-term adverse consequences from behavioral harassment. Repeated exposures of individuals to levels of sound that may cause Level B harassment are unlikely to result in hearing impairment or to significantly disrupt foraging behavior. Thus, even repeated Level B harassment of some small subset of the overall stock is unlikely to result in any significant realized decrease in fitness for the affected individuals, and thus would not result in any adverse impact to the stock as a whole.

In summary, this negligible impact analysis is founded on the following factors: (1) The possibility of non-auditory injury, serious injury, or mortality may reasonably be considered discountable; (2) the anticipated incidents of Level B harassment consist of, at worst, temporary modifications in behavior; (3) the short duration of in-water construction activities (12 days), and; (4) the presumed efficacy of the proposed mitigation measures in reducing the effects of the specified activity to the level of least practicable impact. In combination, we believe that these factors, as well as the available body of evidence from other similar activities, demonstrate that the potential effects of the specified activity will have only short-term effects on individuals. The specified activity is not expected to impact rates of recruitment or survival and will therefore not result in population-level impacts.

Based on the analysis contained herein of the likely effects of the specified activity on marine mammals and their habitat, and taking into consideration the implementation of the proposed monitoring and mitigation measures, NMFS preliminarily finds that the total marine mammal take from the City's Kodiak transient float replacement project will have a negligible impact on the affected marine mammal species or stocks.

Small Numbers Analysis

Table 7 presents the number of animals that could be exposed to received noise levels that could cause Level A and Level B harassment for the proposed work at the transient float project site. Our analysis shows that between <1 percent—2.39 percent of the populations of affected stocks that could be taken by harassment. Therefore, the numbers of animals authorized to be taken for all species would be considered small relative to the relevant stocks or populations even if each estimated taking occurred to a new individual—an extremely unlikely scenario. For pinnipeds, especially Steller sea lions, occurring in the vicinity of the transient float, there will almost certainly be some overlap in individuals present day-to-day, and these takes are likely to occur only within some small portion of the overall regional stock.

TABLE 7—ESTIMATED NUMBERS AND PERCENTAGE OF STOCK THAT MAY BE EXPOSED TO LEVEL A AND B HARASSMENT

Species	Proposed authorized Level A and Level B takes	Stock abundance estimate	Percentage of total stock (%)
Steller sea lion (*Eumatopias jubatus*)			
wDPS	480	49,497	0.97
Harbor seal (*Phoca vitulina*)			
South Kodiak stock	48	19,199	0.25
Harbor porpoise (*Phocoena phocoena*)			
Gulf of Alaska stock	24	31,046	0.08
Dall's porpoise (*Phocoenoides dalli*)			
Alaska stock	42	83,400	0.05
Killer whale (*Orcinus orca*)			
Eastern North Pacific Alaska Resident stock	14	2,347	0.6
Eastern North Pacific Gulf of Alaska, Aleutian Islands, and Bering Sea stock		587	2.39
Humpback whale (*Megaptera novaeangliae*)			
Central North Pacific Stock	6	10,103	0.06
Western North Pacific Stock		1,107	0.54

Based on the analysis contained herein NMFS preliminarily finds that small numbers of marine mammals will be taken relative to the populations of the affected species or stocks.

Impact on Availability of Affected Species for Taking for Subsistence Uses

Alaska Natives have traditionally harvested subsistence resources in the Kodiak area for many hundreds of years, particularly Steller sea lions and harbor seals. No traditional subsistence hunting areas are within the project vicinity, however; the nearest haulouts and rookeries for Steller sea lions and harbor seals are the Long Island, Cape Chiniak, and Ugak Island haul-outs and the Marmot Island rookery, many miles away. These locations are, respectively 4, 13, 25 and 28 nmi distant from the project area. Since all project activities will take place within the immediate vicinity of the transient float site, the project will not have an adverse impact on the availability of marine mammals for subsistence use at locations farther away. No disturbance or displacement of sea lions or harbor seals from traditional hunting areas by activities associated with the transient project is expected. No changes to availability of subsistence resources will result from

transient float replacement project activities.

Endangered Species Act (ESA)

There are two marine mammal species that are listed as endangered under the ESA with confirmed or possible occurrence in the study area: the WNP DPS and Mexico DPS of humpback whale and the western DPS of Steller sea lion. The project location is also within critical habitat of two major haulouts closest to the project area: Long Island and Cape Chiniak, which are approximately 4.6 nmi (8.5 km) and 13.8 nmi (25.6 km) away from the project site, respectively. There are no rookeries within 20 mi of the project location. In October 2016, NMFS initiated formal consultation under Section 7 of the ESA. The Biological Opinion will analyze the effects to ESA listed species, including Steller sea lions and humpback whales, as well as critical habitat.

National Environmental Policy Act (NEPA)

NMFS is preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) and will consider comments submitted in response to this notice as part of that process. The EA will be posted at *http://www.nmfs.noaa.gov/pr/permits/incidental/construction.htm* once it is finalized.

Proposed Incidental Harassment Authorization

As a result of these preliminary determinations, NMFS proposes to issue an IHA to the City of Kodiak for the Kodiak Transient Float Replacement Project, provided the previously mentioned mitigation, monitoring, and reporting requirements are incorporated. The proposed IHA language is provided next.

1. This Incidental Harassment Authorization (IHA) is valid from January 1, 2017 through December 31, 2017.

2. This Authorization is valid only for in-water construction work associated with the Kodiak Transient Float Replacement Project.

3. General Conditions

(a) A copy of this IHA must be in the possession of the City, its designees, and work crew personnel operating under the authority of this IHA.

(b) The species authorized for taking include harbor porpoise (*Phocoena phocoena*), Dall's porpoise (*Phocoenoides dalli*), killer whale (*Orcinus orca*), Humpback whale (*Megaptera novaeangliae*), Steller sea lion (*Eumatopius jubatus),* and harbor seal (*Phoca vitulina richardii*).

(c) The taking, by Level B harassment only, is limited to the species listed in condition 3(b).

(d) The taking by injury (Level A harassment), serious injury, or death of any of the species listed in condition 3(b) or any taking of any other species of marine mammal is prohibited and may result in the modification, suspension, or revocation of this IHA.

(e) The City shall conduct briefings between construction supervisors and crews, marine mammal monitoring team, and staff prior to the start of all in-water pile driving, and when new personnel join the work.

4. Mitigation Measures

The holder of this Authorization is required to implement the following mitigation measures:

(a) *Time Restriction:* For all in-water pile driving activities, the City shall operate only during daylight hours when visual monitoring of marine mammals can be conducted. To minimize impacts to pink salmon (*Oncorhynchus gorbuscha*) fry and coho salmon (*O. kisutch*) smolt, the City will refrain from impact pile driving from May 1, 2017 through June 30, 2017. If work occurs from May 1 through June 30, it will occur in evenings during daylight hours, after the 12-hour period that begins civil dawn.

(b) *Establishment of Level B Harassment (ZOI):* Before the commencement of in-water pile driving activities, the City shall establish Level B behavioral harassment ZOI where received underwater sound pressure levels (SPLs) are higher than 120 dB (rms) re 1 μPa for and non-pulse sources (vibratory hammer and drilling) and 160 dB (rms) for pulse sources (impact hammer). The ZOI delineates where Level B harassment would occur. The Level B harassment area extends out to 6,846 m for down-hole drilling (rounded to 7000 m), 821 m for vibratory driving (rounded to 900 m), and 183 m for impact driving (rounded to 200 m).

(c) Establishment of Shutdown Zone

(i) For all pile driving activities, the City will establish shutdown zones. Shutdown zones are intended to contain the area in which SPLs equal or exceed the acoustic injury criteria for each marine mammal hearing group, with the purpose being to define an area within which shutdown of activity would occur upon sighting of a marine mammal (or in anticipation of an animal entering the defined area), thus preventing injury of marine mammals. The shutdown zones would be 10 m for Steller sea lions and killer whales, 100 m for humpback whales, harbor porpoise, and Dall's porpoise, and 50 m harbor seals.

(d) The Level A and Level B harassment zones will be monitored throughout the time required to install or extract a pile. If a harbor seal, Steller sea lion, harbor porpoise, Dall's porpoise, killer whale, or humpback whale is observed entering the Level B harassment zone, a Level B exposure will be recorded and behaviors documented. That pile segment will be completed without cessation, unless the animal approaches the Level A shutdown zone. Pile installation or extraction will be halted immediately before the animal enters the Level A zone.

(e) If any marine mammal species other than those listed in condition 3(b) enters or approaches the Level B zone (including, but not limited to grey whales and fin whales), all activities will shut down.

(f) Use of Ramp Up/Soft Start

(i) The project will utilize soft start techniques for all impact pile driving. We require the City to initiate sound from impact hammers with an initial set of three strikes at reduced energy, followed by a 1-minute waiting period, then two subsequent three strike sets.

(ii) Soft start will be required at the beginning of each day's impact pile driving work and at any time following a cessation of pile driving of 30 minutes or longer.

(iii) If a marine mammal is present within the shutdown zone, ramping up will be delayed until the animal(s) leaves the Level A harassment zone. Activity will begin only after the MMO has determined, through sighting, that the animal(s) has moved outside the Level A harassment zone.

(iv) If a Steller sea lion, harbor seal, harbor porpoise, Dall's porpoise, killer whale, or humpback whale is present in the Level B harassment zone, ramping up will begin and a Level B take will be documented. Ramping up will occur when these species are in the Level B harassment zone whether they entered the Level B zone from the Level A zone, or from outside the project area.

(v) If any marine mammal other than Steller sea lions, harbor seal, harbor porpoise, Dall's porpoise, killer whale, or humpback whale is present in the Level B harassment zone, ramping up will be delayed until the animal(s) leaves the zone. Ramping up will begin only after the MMO has determined, through sighting, that the animal(s) has moved outside the harassment zone.

(g) *Pile Caps:* Pile caps or cushions will be used during all impact pile-driving activities.

(h) Standard Mitigation Measures

(i) For in-water heavy machinery work other than pile driving (*e.g.,* standard barges, tug boats, barge-mounted excavators, or clamshell equipment used to place or remove material), if a marine mammal comes within 10 meters, operations shall cease and vessels shall reduce speed to the minimum level required to maintain steerage and safe working conditions.

(i) The City shall establish monitoring locations as described below.

5. Monitoring and Reporting

The holder of this Authorization is required to report all monitoring conducted under the IHA within 90 calendar days of the completion of the marine mammal monitoring.

(a) Visual Marine Mammal Monitoring and Observation

(i) At least one individual meeting the minimum qualifications below will monitor the shutdown zones and Level A and Level B harassment zones during impact and vibratory pile driving, and down-hole drilling.

Requirements when choosing MMOs for construction actions are as follows:

a. Independent observers (*i.e.,* not construction personnel) are required.

b. At least one observer must have prior experience working as an observer.

c. Other observers may substitute education (undergraduate degree in biological science or related field) or training for experience.

d. Where a team of three or more observers are required, one observer should be designated as lead observer or monitoring coordinator. The lead observer must have prior experience working as an observer.

e. We will require submission and approval of observer CVs.

Qualified MMOs are trained biologists, with the following minimum qualifications:

a. Visual acuity in both eyes (correction is permissible) sufficient for discernment of moving targets at the water's surface with ability to estimate target size and distance; use of binoculars may be necessary to correctly identify the target;

b. Ability to conduct field observations and collect data according to assigned protocols

c. Experience or training in the field identification of marine mammals, including the identification of behaviors

d. Sufficient training, orientation, or experience with the construction operation to provide for personal safety during observations

e. Writing skills sufficient to prepare a report of observations including but not limited to the number and species of marine mammals observed; dates and times when in-water construction activities were conducted; dates and times when in-water construction activities were suspended to avoid potential incidental injury from construction sound of marine mammals observed within a defined shutdown zone; and marine mammal behavior

f. Ability to communicate orally, by radio or in person, with project personnel to provide real-time information on marine mammals observed in the area as necessary.

(ii) During drilling, pile driving, and extraction, the shutdown zone, as described in 4(b), will be monitored and maintained. Pile installation or extraction will not commence or will be suspended temporarily if any marine mammals are observed within or approaching the area of potential disturbance.

(iii) The area within the Level B harassment threshold for pile driving and extraction will be monitored by observers stationed to provide adequate view of the harassment zone. Marine mammal presence within this Level B harassment zone, if any, will be monitored. Pile driving activity will not be stopped if marine mammals are found to be present. Any marine mammal documented within the Level B harassment zone would constitute a Level B take (harassment), and will be recorded and reported as such.

(iv) The individuals will scan the waters within each monitoring zone activity using binoculars, spotting scopes and visual observation.

(v) If waters exceed a sea-state which restricts the observers' ability to make observations within the marine mammal shutdown zones (*e.g.* excessive wind or fog), in-water construction activities will cease until conditions allow monitoring to resume.

(vi) The waters will be scanned 30 minutes prior to commencing pile driving at the beginning of each day, and prior to commencing pile driving after any stoppage of 30 minutes or greater. If marine mammals enter or are observed within the designated marine mammal shutdown zone during or 30 minutes prior to impact pile driving, the monitors will notify the on-site construction manager to not begin until the animal has moved outside the designated radius.

(vii) The waters will continue to be scanned for at least 30 minutes after pile driving has completed each day.

(b) Data Collection

(i) Observers are required to use approved data forms. Among other pieces of information, the City will record detailed information about any implementation of shutdowns, including the distance of animals to the pile and description of specific actions that ensued and resulting behavior of the animal, if any. In addition, the City will attempt to distinguish between the number of individual animals taken and the number of incidents of take. At a minimum, the following information be collected on the sighting forms:

a. Date and time that monitored activity begins or ends;

b. Construction activities occurring during each observation period;

c. Weather parameters (*e.g.,* percent cover, visibility);

d. Water conditions (*e.g.,* sea state, tide state);

e. Species, numbers, and, if possible, sex and age class of marine mammals;

f. Description of any observable marine mammal behavior patterns, including bearing and direction of travel and distance from pile driving activity;

g. Distance from pile driving activities to marine mammals and distance from the marine mammals to the observation point;

h. Locations of all marine mammal observations; and

i. Other human activity in the area.

(c) Reporting Measures

(i) In the unanticipated event that the specified activity clearly causes the take of a marine mammal in a manner prohibited by the IHA, such as an injury (Level A harassment), serious injury or mortality (*e.g.,* ship-strike, gear interaction, and/or entanglement), the City would immediately cease the specified activities and immediately report the incident to the Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, and the Alaska Regional Stranding Coordinators. The report would include the following information:

a. Time, date, and location (latitude/longitude) of the incident;

b. Name and type of vessel involved;

c. Vessel's speed during and leading up to the incident;

d. Description of the incident;

e. Status of all sound source use in the 24 hours preceding the incident;

f. Water depth;

g. Environmental conditions (*e.g.,* wind speed and direction, Beaufort sea state, cloud cover, and visibility);

h. Description of all marine mammal observations in the 24 hours preceding the incident;

i. Species identification or description of the animal(s) involved;

j. Fate of the animal(s); and

k. Photographs or video footage of the animal(s) (if equipment is available).

Activities would not resume until NMFS is able to review the circumstances of the prohibited take. NMFS would work with the City to determine what is necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. The City would not be able to resume their activities until notified by NMFS via letter, email, or telephone.

(ii) In the event that the City discovers an injured or dead marine mammal, and the lead MMO determines that the cause of the injury or death is unknown and the death is relatively recent (*i.e.,* in less than a moderate state of decomposition as described in the next paragraph), the City would immediately report the incident to the Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, and the Alaska Stranding Hotline and/or by email to the Alaska Regional Stranding Coordinators. The report would include the same information identified in the paragraph above. Activities would be able to continue while NMFS reviews the circumstances of the incident. NMFS would work with the City to determine whether modifications in the activities are appropriate.

(iii) In the event that the City discovers an injured or dead marine mammal, and the lead MMO determines that the injury or death is not associated with or related to the activities authorized in the IHA (*e.g.,* previously wounded animal, carcass with moderate to advanced decomposition, or scavenger damage), the City would report the incident to the Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, and the NMFS Alaska Stranding Hotline and/or by email to the Alaska Regional Stranding Coordinator, within 24 hours of the discovery. The City would provide photographs or video footage (if available) or other documentation of the stranded animal sighting to NMFS and the Marine Mammal Stranding Network.

6. This Authorization may be modified, suspended or withdrawn if the holder fails to abide by the conditions prescribed herein, or if NMFS determines the authorized taking is having more than a negligible impact on the species or stock of affected marine mammals.

TABLE 1—AUTHORIZED TAKE NUMBERS

Species	Level A injury takes	Level B harassment takes	Total
Steller sea lion	0	480	480
Harbor seal	0	48	48
Harbor porpoise	0	24	24
Dall's porpoise	0	42	42
Killer whale	0	14	14
Humpback whale	0	6	6
Total	0	614	614

Request for Public Comments

NMFS requests comment on our analysis, the draft authorization, and any other aspect of the Notice of Proposed IHA for the City's Kodiak Transient Float Replacement Project. Please include with your comments any supporting data or literature citations to help inform our final decision on the City's request for an MMPA authorization.

Dated: November 4, 2016.

Donna S. Wieting,

Director, Office of Protected Resources, National Marine Fisheries Service.

[FR Doc. 2016–27126 Filed 11–9–16; 8:45 am]

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FEDERAL REGISTER

Vol. 81 Thursday,
No. 218 November 10, 2016

Part VI

The President

Notice of November 8, 2016—Continuation of the National Emergency With Respect to the Proliferation of Weapons of Mass Destruction

Federal Register
Vol. 81, No. 218
Thursday, November 10, 2016

Presidential Documents

Title 3—

The President

Notice of November 8, 2016

Continuation of the National Emergency With Respect to the Proliferation of Weapons of Mass Destruction

On November 14, 1994, by Executive Order 12938, the President declared a national emergency with respect to the unusual and extraordinary threat to the national security, foreign policy, and economy of the United States posed by the proliferation of nuclear, biological, and chemical weapons (weapons of mass destruction) and the means of delivering such weapons. On July 28, 1998, the President issued Executive Order 13094, amending Executive Order 12938, to respond more effectively to the worldwide threat of weapons of mass destruction proliferation activities. On June 28, 2005, the President issued Executive Order 13382, which, *inter alia,* further amended Executive Order 12938, to improve our ability to combat proliferation. The proliferation of weapons of mass destruction and the means of delivering them continues to pose an unusual and extraordinary threat to the national security, foreign policy, and economy of the United States; therefore, the national emergency first declared on November 14, 1994, and extended in each subsequent year, must continue. In accordance with section 202(d) of the National Emergencies Act (50 U.S.C. 1622(d)), I am continuing the national emergency declared in Executive Order 12938.

This notice shall be published in the *Federal Register* and transmitted to the Congress.

THE WHITE HOUSE,
November 8, 2016.

[FR Doc. 2016–27401
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Federal Register

Vol. 81, No. 218

Thursday, November 10, 2016

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Presidential Documents	
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FEDERAL REGISTER PAGES AND DATE, NOVEMBER

75671–76270 1
76271–76492 2
76493–76842 3
76843–78020 4
78021–78496 7
78497–78700 8
78701–78898 9
78899–79380 10

CFR PARTS AFFECTED DURING NOVEMBER

At the end of each month the Office of the Federal Register publishes separately a List of CFR Sections Affected (LSA), which lists parts and sections affected by documents published since the revision date of each title.

2 CFR

Proposed Rules:
1103 78356
1104 78356
1108 78360
1120 78369
1122 78376
1125 78356
1126 78382
1128 78382
1130 78382
1132 78382
1134 78382
1136 78382
1138 78382

3 CFR

Proclamations:
9529 76267
9530 76269
9531 76485
9532 76487
9533 76833
9534 76835
9535 76837
9536 76839
9537 76841

Executive Orders:
13745 76493
13746 78697
13747 78701

Administrative Orders:
Memorandums:
Memorandum of September 30, 2016 76483
Notices:
Notice of October 31, 2016 76491
Notice of November 3, 2016 78495
Notice of November 8, 2016 79379

5 CFR

315 78497
1820 78021
2638 76271
3501 76288

7 CFR

210 75671
220 75671
226 75671
250 75683

Proposed Rules:
56 78057
62 78057
70 78057

9 CFR

112 78499

10 CFR

72 78022
Ch. I 78021
429 ..... 79224, 79261
430 79261
431 ..... 79224, 79261

Proposed Rules:
34 78732
73 78062
430 76877
431 75742
460 78733

11 CFR

Proposed Rules:
1 76416
2 76416
4 76416
5 76416
6 76416
7 76416
100 76416
102 76416
103 76416
104 76416
105 76416
106 76416
108 76416
109 76416
110 76416
111 76416
112 76416
114 76416
116 76416
200 76416
201 76416
300 76416
9002 76416
9003 76416
9004 76416
9007 76416
9032 76416
9033 76416
9034 76416
9035 76416
9036 76416
9038 76416
9039 76416

12 CFR

708a 76495
708b 76495
747 78028
790 76495
1200 76291
1201 76291
1229 76291
1238 76291
1239 76291
1261 76291
1264 76291
1266 76291
1267 76291

1269.....76291
1270.....76291
1273.....76291
1274.....76291
1278.....76291
1281.....76291
1282.....76291
1290.....76291
1291.....76291

Proposed Rules:

Regulation H.....78063
22.....78063
208.....78063
326.....75753
339.....78063
391.....75753
614.....78063
701.....78748
760.....78063

14 CFR

29.....78707, 78708
39 .....75684, 75686, 75687, 76843, 76845, 76848, 76851, 78708, 78711, 78899
71 .....76854, 76855, 76857, 76858, 78902, 78904, 78905, 78906
73.....78029
234.....76300, 76800
241.....76300
244.....76800
250.....76800
255.....76800
256.....76800
257.....76800
259.....76800
399.....76800

Proposed Rules:

39 .....75757, 75759, 75761, 75762, 76532, 76540, 76883, 76885, 78080, 78083, 78085, 78944, 78947
71 .....76886, 76888, 78088, 78756, 78949

15 CFR

730.....78714
738.....76859
740.....76859
742.....76859
744.....78714
746.....76859

Proposed Rules:

923.....78514

17 CFR

Proposed Rules:

240.....79122

18 CFR

Proposed Rules:

33.....76542, 78756
35.....78756
40.....76542
45.....76542
153.....76542
157.....76542
340.....76542
341.....76542
342.....76315, 76542
343.....76315, 76542
344.....76542
345.....76542
346.....76542
347.....76542
357.....76315
380.....76542

20 CFR

Proposed Rules:

220.....78757

21 CFR

5.....78033
10.....78500
73.....75689
74.....75689
117.....75692
507.....75693

Proposed Rules:

1.....78526
101.....76323
573.....78528

25 CFR

170.....78456
517.....76306
584.....76306
585.....76306

26 CFR

1 .....76496, 76497, 78908

Proposed Rules:

1.....76542, 76544

31 CFR

Ch. V.....76861
501.....76861
593.....76861
1010.....76863, 78715
1020.....76863
1021.....76863
1022.....76863
1023.....76863
1024.....76863
1025.....76863
1026.....76863

32 CFR

199.....76307
635.....78911

Proposed Rules:

21.....78442
22.....78442
32.....78442
33.....78442
34.....78442
37.....78442
221.....76325
637.....78951

33 CFR

100 .....76865, 78041, 78507
117 .....76512, 76513, 76866, 78912
165 .....75694, 76513, 78722

Proposed Rules:

117.....76889, 78952
165.....76545, 78759

34 CFR

30.....75926
668.....75926
674.....75926
682.....75926
685.....75926
686.....75926

36 CFR

1.....77972
9.....77972

37 CFR

2.....78042
6.....76867
7.....78042
201.....75695

Proposed Rules:

401.....78090
404.....78090

40 CFR

49.....78043
52 .....78043, 78048, 78052, 78688, 78691, 78722
62.....75708
81.....78688, 78691
180 .....78509, 78913, 78917, 78923, 78928, 78932, 78937

Proposed Rules:

52 .....75764, 76547, 76891, 78097, 78529, 78954
62.....75780
63.....76550
79.....78966
80.....78966
81.....76891
241.....75781

42 CFR

409.....76702
413.....77834
414.....77008, 77834
484.....76702
494.....77834
495.....77008

Proposed Rules:

440.....78760
494.....76899

43 CFR

Proposed Rules:

8360.....76905

44 CFR

64.....76870, 78054

45 CFR

1370.....76446

47 CFR

10.....75710
11.....75710, 76515
73.....76220

Proposed Rules:

10.....78539
11.....78539
25.....76551

48 CFR

212.....78012
231.....78008
242.....78008
247.....78011
252.....78011

Proposed Rules:

202.....78015
215.....78014, 78015
225.....78015
252.....78014, 78015

49 CFR

395.....75727
571.....78724
800.....75729
803.....75729
804.....75729

Proposed Rules:

393.....78103
Ch. V.....78103
571.....78103

50 CFR

17.....76311
622.....78941
635.....76874
648 .....75731, 76516, 78728, 78942
679 .....75740, 76530, 76875

Proposed Rules:

17.....75801
18.....78560
622.....76908
665.....75803

LIST OF PUBLIC LAWS

Note: No public bills which have become law were received by the Office of the Federal Register for inclusion in today's **List of Public Laws**.

Last List October 19, 2016

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