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NUCLEAR REGULATORY COMMISSION

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RIN 3150–AH49

[NRC–2009–0085]

Miscellaneous Administrative Changes

AGENCY: Nuclear Regulatory Commission.

ACTION: Final rule.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC or the Commission) is amending its regulations to make miscellaneous administrative changes, including an update of the list of Agreement and Non-Agreement States, the merging of the Region II materials program with that of Region I, the correction of office titles associated with the Office of Nuclear Material Safety and Safeguards and the Office of Federal and State Materials and Environmental Management Programs, the inclusion of references to new Executive Order (E.O.) 13526, and other edits, corrections, and conforming changes. This document is necessary to inform the public of these changes to the NRC's regulations.

DATES: This rule is effective December 30, 2010.

FOR FURTHER INFORMATION CONTACT: Angella Love Blair, Rules, Announcements, and Directives Branch, Division of Administrative Services, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001, telephone: 301–492–3671, e-mail: *Angella.Love-Blair@nrc.gov.*

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Federal Rulemaking Web Site: Supporting materials related to this final rule can be found at *http://www.regulations.gov* by searching on Docket ID: NRC–2009–0085.

SUPPLEMENTARY INFORMATION:

Introduction

The NRC is amending its regulations at Title 10 of the *Code of Federal Regulations* (10 CFR) parts 2, 10, 20, 25, 26, 30, 34, 40, 50, 54, 70, 71, 72, 95, 110, and 150 to make miscellaneous administrative changes, including an update of the list of Agreement and Non-Agreement States, the merging of the Region II materials program with that of Region I, the correction of office titles associated with the Office of Nuclear Material Safety and Safeguards and the Office of Federal and State Materials and Environmental Management Programs, the inclusion of references to new E.O. 13526, and other edits, corrections, and conforming changes.

Summary of Changes

Include Electronic Watermarks to Denote Proprietary Content

In § 2.390(b)(1)(i)(A) and (b)(1)(i)(B), the language is revised to include electronic watermarks to denote proprietary content. Current regulations at § 2.390(b)(1)(i)(A) and (b)(1)(i)(B) currently require proprietary marking at the top of the first page, and on succeeding, affected pages, either adjacent to the material sought to be withheld from public disclosure, or at the top of the page, if the entire page is sought to be withheld. At the time the regulations were written, information technology alternatives, such as electronic watermarks, were not in common use, if the technology was available at all. Various alternatives such as electronic watermark, margin notation, or other suitable markings may now be available to denote proprietary content, and would be acceptable as being completely within the spirit of the regulations, since the goal of the regulations is simply to ensure that there is notice of proprietary content to whoever is handling the document and not to be unnecessarily prescriptive, either as to methodology or terminology.

Update the List of Non-Agreement States

In §§ 30.6(b)(2)(i), 40.5(b)(2)(i), and 70.5(b)(2)(i), Maine, Massachusetts, Pennsylvania and New Jersey no longer appear because they are Agreement States. In §§ 30.6(b)(2)(iii)(B), 40.5(b)(2)(iii)(B), and 70.5(b)(2)(iii)(B), Ohio, Wisconsin and Minnesota no longer appear because they are Agreement States and in §§ 30.6(b)(2)(iv)(B), 40.5(b)(2)(iv)(B), and 70.5(b)(2)(iv)(B), Oklahoma no longer appears because it is an Agreement State.

Add a List of Mining and Milling Agreement States

In §§ 30.6(b)(2)(iii)(A), 40.5(b)(2)(iii)(A), and 70.5(b)(2)(iii)(A), Illinois and Ohio are now properly identified as mining and milling Agreement States and in §§ 30.6(b)(2)(iv)(A), 40.5(b)(2)(iv)(A), and 70.5(b)(2)(iv)(A), Colorado, Utah, Texas and Washington are also identified as mining and milling Agreement States. This addition was made to highlight those Agreements States who selected oversight authority concerning this type of regulation.

Amend Relevant Sections to Identify That Region II's Materials Program Has Been Merged Into That of Region I

The contact information for material licensees has been updated in §§ 30.6(b)(2)(ii), 40.5(b)(2)(ii), 70.5(b)(2)(ii) to reflect Region I because Region II's materials program has been merged into that of Region I.

Remove Obsolete Text

Sections 30.37, 40.43, and 70.33 are revised to remove obsolete text, contained in paragraph (b) of each section, that is related to a final rule published on January 16, 1996 (61 FR

1109). The final rule provided, on a one-time basis, a five-year extension for certain licenses. Those license extensions are now expired.

Correct Office Title Associated with the Office of Nuclear Material Safety and Safeguards

The office title "Spent Fuel Project Office" is corrected to "Division of Spent Fuel Storage and Transportation" in §§ 71.1, 71.17(c)(3), 71.95(c), 71.101(c), 72.4, 72.16(a), 72.44(f), and 72.186(b).

Use the Formal Title for the Office of Federal and State Materials and Environmental Management Programs

Section 71.97(c)(3)(iii) is revised to change the office title from "Office of State Programs" to "Office of Federal and State Materials and Environmental Management Programs".

Remove Text for an Exemption that Expired on October 18, 2004

In a petition for rulemaking (PRM) submitted by the Nuclear Energy Institute on April 16, 2008 (PRM–70–8; Docket ID NRC–2009–0184), the petitioner requested removal of the exemption in the introductory text to Appendix A to 10 CFR part 70 because this exemption expired on October 18, 2004. The NRC agrees with the petitioner and the text is removed.

Correct Column Heading in Appendix B of 10 CFR Part 20

In the second table that appears in Appendix B to 10 CFR part 20, the heading for the second column of Table 1 which reads "μCi/ml" is corrected to read "μCi".

Correct to Use the Defined Term "Watchman"

In § 26.4(a)(5), the term "watchperson" is replaced with the defined term "watchman".

Correct the Spelling of the Word "Measures"

In § 50.70(b)(3), the spelling of the word "measures" is corrected.

Remove References to Information Collections

In § 34.8(b), the reference to § 34.53 is removed because it does not contain any information collections. In § 71.6(b), the reference to § 71.20 is removed because the information collection in that section has expired.

Add Missing Punctuation

In § 50.56, a comma is added after the word "contrary".

Remove Reference to Section That Does Not Exist

In § 150.10, the reference to § 150.18 is removed because that section does not exist.

Correct Name of NUREG

In § 150.17(b), the name "NUREG/BR–007" is corrected to read "NUREG/BR–0007".

Correct Executive Order Reference

Executive Order (E.O.) 12958 was revoked and replaced with E.O. 13526 in early 2010. References were corrected to E.O. 13526 in the authority citations to 10 CFR parts 25, 54, and 95; definitions in §§ 10.5, 25.5, 95.5, and 110.2; and §§ 25.37(b) and 95.59.

Make Conforming Changes for Consistency and Correct an Error in 10 CFR Part 26

Conforming changes to refer to "review procedure" are made in § 26.39. Conforming changes to refer to individuals "constructing or directing the construction of safety- or security-related SSCs" are made in §§ 26.403(b)(2)(ii), 26.403(b)(3), 26.405(c)(1), 26.406(b), 26.406(d), 26.407 and 26.409. An incorrect reference to operators licensed under 10 CFR Part 52 is removed from the introductory text of § 26.719(b)(2).

Rulemaking Procedure

Because these amendments constitute minor administrative corrections to the regulations, the Commission finds that the notice and comment provisions of the Administrative Procedure Act are unnecessary and is exercising its authority under 5 U.S.C. 553(b)(B) to publish these amendments as a final rule. The amendments are effective 30 days after publication in the **Federal Register**. These amendments do not require action by any person or entity regulated by the NRC. Also, the final rule does not change the substantive responsibilities of any person or entity regulated by the NRC.

Environmental Impact: Categorical Exclusion

The NRC has determined that this final rule is the type of action described in categorical exclusion 10 CFR 51.22(c)(2), which excludes from a major action rules which are corrective or of a minor non-policy nature and do not substantially modify existing regulations. Therefore, neither an environmental impact statement nor an environmental assessment has been prepared for this rule.

Paperwork Reduction Act Statement

This final rule does not contain information collection requirements and, therefore, is not subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*).

Public Protection Notification

The NRC may not conduct or sponsor, and a person is not required to respond to, a request for information or an information collection requirement unless the requesting document displays a currently valid Office of Management and Budget control number.

Backfit Analysis

The NRC has determined that the backfit rule does not apply to this final rule; therefore, a backfit analysis is not required for this final rule because these amendments are administrative in nature and do not involve any provisions that would impose backfits as defined in 10 CFR chapter I, or be inconsistent with the issue finality provisions in 10 CFR part 52.

Congressional Review Act (CRA)

Under the CRA of 1996, the NRC has determined that this action is not a major rule and has verified this determination with the Office of Information and Regulatory Affairs of OMB.

List of Subjects

10 CFR Part 2

Administrative practice and procedure, Antitrust, Byproduct material, Classified information, Environmental protection, Nuclear materials, Nuclear power plants and reactors, Penalties, Sex discrimination, Source material, Special nuclear material, Waste treatment and disposal.

10 CFR Part 10

Administrative practice and procedure, Classified information, Government employees, Security measures.

10 CFR Part 20

Byproduct material, Criminal penalties, Licensed material, Nuclear materials, Nuclear power plants and reactors, Occupational safety and health, Packaging and containers, Radiation protection, Reporting and recordkeeping requirements, Source material, Special nuclear material, Waste treatment and disposal.

10 CFR Part 25

Classified information, Criminal penalties, Investigations, Reporting and

recordkeeping requirements, Security measures.

10 CFR Part 26

Alcohol abuse, Alcohol testing, Appeals, Chemical testing, Drug abuse, Drug testing, Employee assistance programs, Fatigue, Fitness for duty, Management actions, Nuclear power reactors, Protection of information, Reporting and recordkeeping requirement.

10 CFR Part 30

Byproduct material, Criminal penalties, Government contracts, Intergovernmental relations, Isotopes, Nuclear materials, Radiation protection, Reporting and recordkeeping requirements.

10 CFR Part 34

Criminal penalties, Packaging and containers, Radiation protection, Radiography, Reporting and recordkeeping requirements, Scientific equipment, Security measures.

10 CFR Part 40

Criminal penalties, Government contracts, Hazardous materials transportation, Nuclear materials, Reporting and recordkeeping requirements, Source material, Uranium.

10 CFR Part 50

Antitrust, Classified information, Criminal penalties, Fire protection, Intergovernmental relations, Nuclear power plants and reactors, Radiation protection, Reactor siting criteria, Reporting and recordkeeping requirements.

10 CFR Part 54

Administrative practice and procedure, Age-related degradation, Backfitting, Classified information, Criminal penalties, Environmental protection, Nuclear power plants and reactors, Reporting and recordkeeping requirements.

10 CFR Part 70

Criminal penalties, Hazardous materials transportation, Material control and accounting, Nuclear materials, Packaging and containers, Radiation protection, Reporting and recordkeeping requirements, Scientific equipment, Security measures, Special nuclear material.

10 CFR Part 71

Criminal penalties, Hazardous materials transportation, Nuclear materials, Packaging and containers, Reporting and recordkeeping requirements.

10 CFR Part 72

Administrative practice and procedure, Criminal penalties, Manpower training programs, Nuclear materials, Occupational safety and health, Penalties, Radiation protection, Reporting and recordkeeping requirements, Security measures, Spent fuel, Whistleblowing.

10 CFR Part 95

Classified information, Criminal penalties, Reporting and recordkeeping requirements, Security measures.

10 CFR Part 110

Administrative practice and procedure, Classified information, Criminal penalties, Export, Import, Intergovernmental relations, Nuclear materials, Nuclear power plants and reactors, Reporting and recordkeeping requirements, Scientific equipment.

10 CFR Part 150

Criminal penalties, Hazardous materials transportation, Intergovernmental relations, Nuclear materials, Reporting and recordkeeping requirements, Security measures, Source material, Special nuclear material.

■ For the reasons set out in the preamble and under the authority of the Atomic Energy Act of 1954, as amended; the Energy Reorganization Act of 1974, as amended; and 5 U.S.C. 552 and 553, the NRC is adopting the following amendments to 10 CFR parts 2, 10, 20, 25, 26, 30, 34, 40, 50, 54, 70, 71, 72, 95, 110, and 150.

PART 2—RULES OF PRACTICE FOR DOMESTIC LICENSING PROCEEDINGS AND ISSUANCE OF ORDERS

■ 1. The authority citation for part 2 continues to read as follows:

Authority: Secs.161, 181, 68 Stat. 948, 953, as amended (42 U.S.C. 2201, 2231); sec. 191, as amended, Pub. L. 87–615, 76 Stat. 409 (42 U.S.C. 2241); sec. 201, 88 Stat. 1242, as amended (42 U.S.C. 5841); 5 U.S.C. 552; sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note).

Section 2.101 also issued under secs. 53, 62, 63, 81, 103, 104, 68 Stat. 930, 932, 933, 935, 936, 937, 938, as amended (42 U.S.C. 2073, 2092, 2093, 2111, 2133, 2134, 2135); sec. 114(f), Pub. L. 97–425, 96 Stat. 2213, as amended (42 U.S.C. 10143(f)); sec. 102, Pub. L. 91–190, 83 Stat. 853, as amended (42 U.S.C. 4332); sec. 301, 88 Stat. 1248 (42 U.S.C. 5871).

Sections 2.102, 2.103, 2.104, 2.105, 2.321 also issued under secs. 102, 103, 104, 105, 183i, 189, 68 Stat. 936, 937, 938, 954, 955, as amended (42 U.S.C. 2132, 2133, 2134, 2135, 2233, 2239). Section 2.105 also issued under Pub. L. 97–415, 96 Stat. 2073 (42 U.S.C. 2239). Sections 2.200–2.206 also issued under secs. 161 b, i, o, 182, 186, 234, 68 Stat. 948–951, 955, 83 Stat. 444, as amended (42 U.S.C. 2201(b), (i), (o), 2236, 2282); sec. 206, 88 Stat. 1246 (42 U.S.C. 5846). Section 2.205(j) also issued under Pub. L. 101–410, 104 Stat. 90, as amended by section 3100(s), Pub. L. 104–134, 110 Stat. 1321–373 (28 U.S.C. 2461 note). Subpart C also issued under sec. 189, 68 Stat. 955 (42 U.S.C. 2239). Section 2.301 also issued under 5 U.S.C. 554. Sections 2.343, 2.346, 2.712 also issued under 5 U.S.C. 557. Section 2.340 also issued under secs. 135, 141, Pub. L. 97–425, 96 Stat. 2232, 2241 (42 U.S.C. 10155, 10161). Section 2.390 also issued under sec. 103, 68 Stat. 936, as amended (42 U.S.C. 2133) and 5 U.S.C. 552. Sections 2.600–2.606 also issued under sec. 102, Pub. L. 91–190, 83 Stat. 853, as amended (42 U.S.C. 4332). Sections 2.800 and 2.808 also issued under 5 U.S.C. 553. Section 2.809 also issued under 5 U.S.C. 553, and sec. 29, Pub. L. 85–256, 71 Stat. 579, as amended (42 U.S.C. 2039). Subpart K also issued under sec. 189, 68 Stat. 955 (42 U.S.C. 2239); sec. 134, Pub. L. 97–425, 96 Stat. 2230 (42 U.S.C. 10154). Subpart L also issued under sec. 189, 68 Stat. 955 (42 U.S.C. 2239). Subpart M also issued under sec. 184 (42 U.S.C. 2234) and sec. 189, 68 Stat. 955 (42 U.S.C. 2239). Subpart N also issued under sec. 189, 68 Stat. 955 (42 U.S.C. 2239. Appendix A also issued under sec. 6, Pub. L. 91–550, 84 Stat. 1473 (42 U.S.C. 2135).

■ 2. In § 2.390, revise paragraphs (b)(1)(i)(A) and (b)(1)(i)(B) to read as follows:

§ 2.390 Public inspections, exemptions, requests for withholding.

* * * * *

(b) * * *

(1) * * *

(i) * * *

(A) The first page of the document, and each successive page containing such information, must be marked so as to be readily visible, at the top, or by electronic watermark or other suitable marking on the body of the page, with language substantially similar to: "confidential information submitted under 10 CFR 2.390," "withhold from public disclosure under 10 CFR 2.390," or "proprietary," to indicate that it contains information the submitter seeks to have withheld.

(B) Each document or page, as appropriate, containing information sought to be withheld from public disclosure must indicate, adjacent to the information, or as specified in paragraph (b)(1)(i)(A) of this section if the entire page is affected, the basis (*i.e.,* trade secret, personal privacy, etc.) for proposing that the information be withheld from public disclosure under paragraph (a) of this section.

* * * * *

PART 10—CRITERIA AND PROCEDURES FOR DETERMINING ELIGIBILITY FOR ACCESS TO RESTRICTED DATA OR NATIONAL SECURITY INFORMATION OR AN EMPLOYMENT CLEARANCE

■ 3. The authority citation for part 10 continues to read as follows:

Authority: Secs. 145, 161, 68 Stat. 942, 948, as amended (42 U.S.C. 2165, 2201); sec. 201, 88 Stat. 1242, as amended (42 U.S.C. 5841); E.O. 10450, 3 CFR parts 1949–1953 Comp., p. 936, as amended; E.O. 10865, 3 CFR 1959–1963 Comp., p. 398, as amended; 3 CFR Table 4; E.O. 12968, 3 CFR 1995 COM., p.396.

■ 4. In § 10.5, revise the definition of *National Security Information* to read as follows:

§ 10.5 Definitions.

* * * * *

National Security Information means information that has been determined under Executive Order 13526 or any predecessor or successor order to require protection against unauthorized disclosure and that is so designated.

* * * * *

PART 20—STANDARDS FOR PROTECTION AGAINST RADIATION

■ 5. The authority citation for part 20 continues to read as follows:

Authority: Secs. 53, 63, 65, 81, 103, 104, 161, 182, 186, 68 Stat. 930, 933, 935, 936, 937, 948, 953, 955, as amended, sec. 1701, 106 Stat. 2951, 2952, 2953 (42 U.S.C. 2073, 2093, 2095, 2111, 2133, 2134, 2201, 2232, 2236, 2297f), secs. 201, as amended, 202, 206, 88 Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5846); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note); Energy Policy Act of 2005, Pub. L. 109–58, 119 stat. 594 (2005).

■ 6. In Appendix B to part 20, revise the first page of the second table that appears to read as follows:

Appendix B to Part 20—Annual Limits on Intake (ALIs) and Derived Air Concentrations (DACs) of Radionuclides for Occupational Exposure; Effluent Concentrations; Concentrations for Release to Sewerage

* * * * *

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			Table 1 Occupational Values			Table 2 Effluent Concentration		Table 3 Releases to Sewers
			Col. 1	Col. 2	Col. 3	Col. 1	Col.2	
			Oral Ingestion	Inhalation				Monthly Average Concentration (μCi/ml)
Atomic No.	Radionuclide	Class	ALI (μCi)	ALI (μCi)	DAC (μCi/ml)	Air (μCi/ml)	Water (μCi/ml)	
1	Hydrogen-3	Water, DAC includes skin absorption	8E+4	8E+4	2E-5	1E-7	1E-3	1E-2
		Gas (HT or T_2) Submersion[1]: Use above values as HT and T_2 oxidize in air and in the body to HTO						
4	Beryllium-7	W, all compounds except those given for Y	4E+4	2E+4	9E-6	3E-8	6E-4	6E-3
		Y, oxides, halides, and nitrates	-	2E+4	8E-6	3E-8	-	-
4	Beryllium-10	W, see 7Be	1E+3	2E+2	6E-8	2E-10	-	-
			LLI wall					
			(1E+3)	-	-	-	2E-5	2E-4
		Y, see 7Be	-	1E+1	6E-9	2E-11	-	-
6	Carbon-11[2]	Monoxide	-	1E+6	5E-4	2E-6	-	-
		Dioxide	-	6E+5	3E-4	9E-7	-	-
		Compounds	4E+5	4E+5	2E-4	6E-7	6E-3	6E-2
6	Carbon-14	Monoxide	-	2E+6	7E-4	2E-6	-	-
		Dioxide	-	2E+5	9E-5	3E-7	-	-
		Compounds	2E+3	2E+3	1E-6	3E-9	3E-5	3E-4

			Table 1 Occupational Values			Table 2 Effluent Concentration		Table 3 Releases to Sewers
			Col. 1	Col. 2	Col. 3	Col. 1	Col.2	
			Oral Ingestion	Inhalation				
Atomic No.	Radionuclide	Class	ALI (μCi)	ALI (μCi)	DAC (μCi/ml)	Air (μCi/ml)	Water (μCi/ml)	Monthly Average Concentration (μCi/ml)
7	Nitrogen-13 [2]	Submersion[1]	-	4E-6	2E-8	-	-	-
8	Oxygen-15[2]	Submersion[1]	-	4E-6	2E-8	-	-	-
9	Fluorine-18[2]	D, fluorides of H, Li, Na, K, Rb, Cs, and Fr	5e+4 St wall (5E+4)	7E+4 -	3E-5 -	1E-7 -	- 7E-4	- 7E3
		W, fluorides of Be, Mg Ca, Sr, Ba, Ra, Al, Ga, In, Ti, As, Sb, Bi, Fe, Ru, Os, Co, Ni, Pd, Pt, Cu, Ag, Au, Zn, Cd, Hg, Sc, Y, Ti, Zr, V, Nb, Ta, Nm, Tc, and Re	-	9e+4	4e-5	1e-7	-	-
		y, LANTHANUM FLUORIDE	-	8e+4	3e-5	1e-7	-	-
11	Sodium-22	D, all compounds	4E+2	6E+2	3E-7	9E-10	6E-6	6E-5
11	Sodium-24	D, all compounds	4E+3	5E+3	2E-6	7E-9	5E-5	5E-4
12	Magnesium-28	D, all compounds except those given for W	7E+2	2E+3	7E-7	2E-9	9E-6	9E-5
		W, oxides, hydroxides, carbides, halides, and nitrates	-	1E+3	5E-7	2E-9	-	-
13	Aluminum-26	D, all compounds except those given for W	4E+2	6E+1	3E-8	9E-11	6E-6	6E-5
		W, oxides, hydroxides, carbides, halides, and nitrates	-	9E+1	4E-8	1E-10	-	-

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* * * * *

PART 25—ACCESS AUTHORIZATION FOR LICENSEE PERSONNEL

■ 7. Revise the authority citation for part 25 to read as follows:

Authority: Secs. 145, 161, 68 Stat. 942, 948, as amended (42 U.S.C. 2165, 2201); sec. 201, 88 Stat. 1242, as amended (42 U.S.C. 5841); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note); E.O. 10865, as amended, 3 CFR 1959–1963 Comp., p. 398 (50 U.S.C. 401, note); E.O. 12829, 3 CFR, 1993 Comp., p. 570; E.O. 13526, as amended, 3 CFR, 1995 Comp., p. 333, as amended by E.O. 13292, 3 CFR 2004 Comp., p. 196; E.O. 12968, 3 CFR, 1995 Comp, p. 396;

Appendix A also issued under 96 Stat. 1051 (31 U.S.C. 9701).

■ 8. In § 25.5, revise the definition of *Classified National Security Information* to read as follows:

§ 25.5 Definitions.

* * * * *

Classified National Security Information means information that has been determined under E.O. 13526, as amended, or any predecessor or successor order to require protection against unauthorized disclosure and that is so designated.

* * * * *

■ 9. In § 25.37, revise paragraph (b) to read as follows:

§ 25.37 Violations.

* * * * *

(b) National Security Information is protected under the requirements and sanctions of Executive Order 13526, as amended, or any predecessor or successor orders.

PART 26—FITNESS FOR DUTY PROGRAMS

■ 10. The authority citation for part 26 continues to read as follows:

Authority: Secs. 53, 81, 103, 104, 107, 161, 68 Stat. 930, 935, 936, 937, 948, as amended, sec. 1701, 106 Stat. 2951, 2952, 2953 (42 U.S.C. 2073, 2111, 2112, 2133, 2134, 2137, 2201, 2297f); secs. 201, 202, 206, 88 Stat. 1242, 1244, 1246, as amended (42 U.S.C. 5841, 5842, 5846).

§ 26.4 [Amended]

■ 11. In § 26.4, paragraph (a)(5), remove the word "watchperson" and add in its place the word "watchman".

■ 12. Revise § 26.39 to read as follows:

§ 26.39 Review process for fitness-for-duty policy violations.

(a) Each licensee and other entity who is subject to this subpart shall establish procedures for the review of a determination that an individual who they employ or who has applied for authorization has violated the FFD policy. The review procedure must provide for an objective and impartial review of the facts related to the determination that the individual has violated the FFD policy.

(b) The review procedure must provide notice to the individual of the grounds for the determination that the individual has violated the FFD policy, and must provide an opportunity for the individual to respond and submit additional relevant information.

(c) The review procedure must ensure that the individual who conducts the review is not associated with the administration of the FFD program [*see* the description of FFD program personnel in § 26.4(g)]. Individuals who conduct the review may be management personnel.

(d) If the review finds in favor of the individual, the licensee or other entity shall update the relevant records to reflect the outcome of the review and delete or correct all information the review found to be inaccurate.

(e) When a C/V is administering an FFD program on which licensees and other entities rely, and the C/V determines that its employee, subcontractor, or applicant has violated its FFD policy, the C/V shall ensure that the review procedure required in this section is provided to the individual. Licensees and other entities who rely on a C/V's FFD program need not provide the review procedure required in this section to a C/V's employee, subcontractor, or applicant when the C/V is administering its own FFD program and the FFD policy violation was determined under the C/V's program.

■ 13. In § 26.403, revise paragraphs (b)(2)(ii) and (b)(3) to read as follows:

§ 26.403 Written policy and procedures.

* * * * *

(b) * * *

(2) * * *

(ii) Consumed alcohol to excess before or while constructing or directing the construction of safety- or security-related SSCs, as determined by a test that accurately measures BAC;

* * * * *

(3) The process to be followed if an individual's behavior or condition raises a concern regarding the possible use, sale, or possession of illegal drugs on or off site; the possible use or possession of alcohol while constructing or directing the construction of safety- or security-related SSCs; or impairment from any cause which in any way could adversely affect the individual's ability to safely and competently perform his or her duties.

■ 14. In § 26.405, revise paragraph (c)(1) to read as follows:

26.405 Drug and alcohol testing.

* * * * *

(c) * * *

(1) Pre-assignment. Before assignment to construct or direct the construction of safety- or security-related SSCs;

* * * * *

■ 15. In § 26.406, revise paragraphs (b) and (d) to read as follows:

§ 26.406 Fitness monitoring.

* * * * *

(b) Licensees and other entities shall implement a fitness monitoring program to deter substance abuse and detect indications of possible use, sale, or possession of illegal drugs; use or possession of alcohol while constructing or directing the construction of safety- or security-related SSCs; or impairment from any cause that if left unattended may result in a risk to public health and safety or the common defense and security.

* * * * *

(d) Licensees and other entities shall ensure that the fitness of individuals specified in § 26.4(f) is monitored effectively while the individuals are constructing or directing the construction of safety- and security-related SSCs, commensurate with the potential risk to public health and safety and the common defense and security imposed by the construction activity. To achieve this objective, licensees and other entities shall consider the number and placement of monitors required, the necessary ratio of monitors to individuals specified in § 26.4(f), and the frequency with which the individuals specified in § 26.4(f) shall be monitored while constructing or directing the construction of each safety- or security-related SSC.

■ 16. Revise § 26.407 to read as follows:

§ 26.407 Behavioral observation.

While the individuals specified in § 26.4(f) are constructing or directing the construction of safety- or security-related SSCs, licensees and other entities shall ensure that these individuals are subject to behavioral observation, except if the licensee or other entity has implemented a fitness monitoring program under § 26.406.

■ 17. Revise § 26.409 to read as follows:

§ 26.409 Sanctions.

Licensees and other entities who implement an FFD program under this

subpart shall establish sanctions for FFD policy violations that, at a minimum, prohibit the individuals specified in § 26.4(f) from being assigned to construct or direct the construction of safety- or security-related SSCs unless or until the licensee or other entity determines that the individual's condition or behavior does not pose a potential risk to public health and safety or the common defense and security.

■ 18. In § 26.719, revise the introductory text of paragraph (b)(2) to read as follows:

§ 26.719 Reporting requirements.

* * * * *

(b) * * *

(2) Any acts by any person licensed under 10 CFR part 55 to operate a power reactor, as well as any acts by SSNM transporters, FFD program personnel, or any supervisory personnel who are authorized under this part, if such acts—

* * * * *

PART 30—RULES OF GENERAL APPLICABILITY TO DOMESTIC LICENSING OF BYPRODUCT MATERIAL

■ 19. The authority citation for part 30 continues to read as follows:

Authority: Secs. 81, 82, 161, 182, 183, 186, 68 Stat. 935, 948, 953, 954, 955, as amended, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2111, 2112, 2201, 2232, 2233, 2236, 2282); secs. 201, as amended, 202, 206, 88 Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5846); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note); Energy Policy Act of 2005, Pub. L. No. 109–58, 119 Stat. 549 (2005).

Section 30.7 also issued under Pub. L. 95–601, sec. 10, 92 Stat. 2951 as amended by Pub. L. 102–486, sec. 2902, 106 Stat. 3123 (42 U.S.C. 5851). Section 30.34(b) also issued under sec. 184, 68 Stat. 954, as amended (42 U.S.C. 2234). Section 30.61 also issued under sec. 187, 68 Stat. 955 (42 U.S.C. 2237).

■ 20. In § 30.6, revise paragraph (b)(2) to read as follows:

§ 30.6 Communications.

* * * * *

(b) * * *

(2) *Submissions.* (i) *Region I.* The regional licensing program involves all Federal facilities in the region and non-Federal licensees in the following Region I non-Agreement States and the District of Columbia: Connecticut, Delaware, and Vermont. All mailed or hand-delivered inquiries, communications, and applications for a new license or an amendment, renewal, or termination request of an existing license specified in paragraph (b)(1) of this section must use the following address: U.S. Nuclear Regulatory Commission, Region I, Nuclear Material Section B, 475 Allendale Road, King of Prussia, PA 19406–1415; where e-mail is appropriate it should be addressed to *RidsRgn1MailCenter.Resource@nrc.gov*.

(ii) *Region II.* The regional licensing program involves all Federal facilities in the region and non-Federal licensees in the following Region II non-Agreement States and territories: West Virginia, Puerto Rico, and the Virgin Islands. All mailed or hand-delivered inquiries, communications, and applications for a new license or an amendment, renewal, or termination request of an existing license specified in paragraph (b)(1) of this section must use the following address: U.S. Nuclear Regulatory Commission, Region I, Nuclear Material Section B, 475 Allendale Road, King of Prussia, PA 19406–1415; where e-mail is appropriate it should be addressed to *RidsRgn1MailCenter.Resource@nrc.gov*.

(iii) *Region III.* (A) The regional licensing program for mining and milling involves all Federal facilities in the region, and non-Federal licensees in the Region III non-Agreement States of Indiana, Michigan, Missouri and the Region III Agreement States of Minnesota, Wisconsin, and Iowa. All mailed or hand-delivered inquiries, communications, and applications for a new license or an amendment, renewal, or termination request of an existing license specified in paragraph (b)(1) of this section must use the following address: U.S. Nuclear Regulatory Commission, Region III, Material Licensing Section, 2443 Warrenville Road, Suite 210, Lisle, IL 60532–4352; where e-mail is appropriate it should be addressed to *RidsRgn3MailCenter.Resource@nrc.gov.*

(B) Otherwise, the regional licensing program involves all Federal facilities in the region and non-Federal licensees in the Region III non-Agreement States of Indiana, Michigan, and Missouri. All mailed or hand-delivered inquiries, communications, and applications for a new license or an amendment, renewal, or termination request of an existing license specified in paragraph (b)(1) of this section must use the following address: U.S. Nuclear Regulatory Commission, Region III, Material Licensing Section, 2443 Warrenville Road, Suite 210, Lisle, IL 60532–4352; where e-mail is appropriate it should be addressed to *RidsRgn3MailCenter.Resource@nrc.gov.*

(iv) *Region IV.* (A) The regional licensing program for mining and milling involves all Federal facilities in the region, and non-Federal licensees in the Region IV non-Agreement States and territory of Alaska, Hawaii, Idaho, Montana, South Dakota, Wyoming and Guam and Region IV Agreement States of Oregon, California, Nevada, New Mexico, Louisiana, Mississippi, Arkansas, Oklahoma, Kansas, Nebraska, and North Dakota. All mailed or hand-delivered inquiries, communications, and applications for a new license or an amendment, renewal, or termination request of an existing license specified in paragraph (b)(1) of this section must use the following address: U.S. Nuclear Regulatory Commission, Region IV, Division of Nuclear Materials Safety, 612 E. Lamar Blvd., Suite 400, Arlington, TX 76011–4125; where e-mail is appropriate it should be addressed to *RidsRgn4MailCenter.Resource@nrc.gov.*

(B) Otherwise, the regional licensing program involves all Federal facilities in the region and non-Federal licensees in the following Region IV non-Agreement States and territory: Alaska, Hawaii, Idaho, Montana, South Dakota, Wyoming, and Guam. All mailed or hand-delivered inquiries, communications, and applications for a new license or an amendment, renewal, or termination request of an existing license specified in paragraph (b)(1) of this section must use the following address: U.S. Nuclear Regulatory Commission, Region IV, Division of Nuclear Materials Safety, 612 E. Lamar Blvd., Suite 400, Arlington, TX 76011–4125; where e-mail is appropriate it should be addressed to *RidsRgn4MailCenter.Resource@nrc.gov.*

■ 21. Revise § 30.37 to read as follows:

§ 30.37 Application for renewal of licenses.

Application for renewal of a specific license must be filed on NRC Form 313 and in accordance with § 30.32.

PART 34—LICENSES FOR INDUSTRIAL RADIOGRAPHY AND RADIATION SAFETY REQUIREMENTS FOR INDUSTRIAL RADIOGRAPHIC OPERATIONS

■ 22. The authority citation for part 34 continues to read as follows:

Authority: Secs. 81, 161, 182, 183, 68 Stat. 935, 948, 953, 954, as amended (42 U.S.C. 2111, 2201, 2232, 2233); sec. 201, 88 Stat. 1242, as amended (42 U.S.C. 5841); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note). Section 34.45 also issued under sec. 206, 88 Stat. 1246, (42 U.S.C. 5846).

§ 34.8 [Amended]

■ 23. In § 34.8, paragraph (b), to remove the reference "34.53,".

PART 40—DOMESTIC LICENSING OF SOURCE MATERIAL

■ 24. The authority citation for part 40 continues to read as follows:

Authority: Secs. 62, 63, 64, 65, 81, 161, 182, 183, 186, 68 Stat. 932, 933, 935, 948, 953, 954, 955, as amended, secs. 11e(2), 83, 84, Pub. L. 95–604, 92 Stat. 3033, as amended, 3039, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2014(e)(2), 2092, 2093, 2094, 2095, 2111, 2113, 2114, 2201, 2232, 2233, 2236, 2282); sec. 274, Pub. L. 86–373, 73 Stat. 688 (42 U.S.C. 2021); secs. 201, as amended, 202, 206, 88 Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5846); sec. 275, 92 Stat. 3021, as amended by Pub. L. 97–415, 96 Stat. 2067 (42 U.S.C. 2022); sec. 193, 104 Stat. 2835, as amended by Pub. L. 104–134, 110 Stat. 1321, 1321–349 (42 U.S.C. 2243); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note); Energy Policy Act of 2005, Pub. L. No. 109–59, 119 Stat. 594 (2005).

Section 40.7 also issued under Pub. L. 95–601, sec. 10, 92 Stat. 2951 as amended by Pub. L. 102–486, sec. 2902, 106 Stat. 3123 (42 U.S.C. 5851). Section 40.31(g) also issued under sec. 122, 68 Stat. 939 (42 U.S.C. 2152). Section 40.46 also issued under sec. 184, 68 Stat. 954, as amended (42 U.S.C. 2234). Section 40.71 also issued under sec. 187, 68 Stat. 955 (42 U.S.C. 2237).

■ 25. In § 40.5, revise paragraph (b)(2) to read as follows:

§ 40.5 Communications.

* * * * *

(b) * * *

(2) *Submissions.* (i) *Region I.* The regional licensing program involves all Federal facilities in the region and non-Federal licensees in the following Region I non-Agreement States and the District of Columbia: Connecticut, Delaware, and Vermont. All mailed or hand-delivered inquiries, communications, and applications for a new license or an amendment or renewal of an existing license specified in paragraph (b)(1) of this section must use the following address: U.S. Nuclear Regulatory Commission, Region I, Nuclear Material Section B, 475 Allendale Road, King of Prussia, PA 19406–1415; where e-mail is appropriate it should be addressed to *RidsRgn1MailCenter.Resource@nrc.gov.*

(ii) *Region II.* The regional licensing program involves all Federal facilities in the region and non-Federal licensees in the following Region II non-Agreement States and territories: West Virginia, Puerto Rico, and the Virgin Islands. All mailed or hand-delivered inquiries, communications, and applications for a new license or an amendment, renewal, or termination request of an existing license specified in paragraph (b)(1) of this section must use the following address: U.S. Nuclear Regulatory Commission, Region I, Nuclear Material Section B, 475 Allendale Road, King of Prussia, PA 19406–1415; where e-mail is appropriate it should be addressed to *RidsRgn1MailCenter.Resource@nrc.gov.*

(iii) *Region III.* (A) The regional licensing program for mining and milling involves all Federal facilities in the region, and non-Federal licensees in the Region III non-Agreement States of Indiana, Michigan, Missouri and Region III Agreement States of Minnesota, Wisconsin, and Iowa. All mailed or hand-delivered inquiries, communications, and applications for a new license or an amendment, renewal, or termination request of an existing license specified in paragraph (b)(1) of this section must use the following address: U.S. Nuclear Regulatory Commission, Region III, Material Licensing Section, 2443 Warrenville Road, Suite 210, Lisle, IL 60532–4352; where e-mail is appropriate it should be addressed to *RidsRgn3MailCenter.Resource@nrc.gov.*

(B) Otherwise, the regional licensing program involves all Federal facilities in the region and non-Federal licensees in the following Region III non-Agreement States: Indiana, Michigan, and Missouri. All mailed or hand-delivered inquiries, communications, and applications for a new license or an amendment, or renewal of an existing license specified in paragraph (b)(1) of this section must use the following address: U.S. Nuclear Regulatory Commission, Region III, Material Licensing Section, 2443 Warrenville Road, Suite 210, Lisle, IL 60532–4352; where e-mail is appropriate it should be addressed to *RidsRgn3MailCenter.Resource@nrc.gov.* Outside of this jurisdiction, concerning the licensing program involving mining and milling, the Agreement States of Illinois and Ohio should be contacted.

(iv) *Region IV.* (A) The regional licensing program for mining and milling involves all Federal facilities in the region, and non-Federal licensees in the Region IV non-Agreement States and territory of Alaska, Hawaii, Idaho, Montana, South Dakota, Wyoming and Guam and Region IV Agreement States of Oregon, California, Nevada, New Mexico, Louisiana, Mississippi, Arkansas, Oklahoma, Kansas, Nebraska, and North Dakota. All mailed or hand-delivered inquiries, communications, and applications for a new license or an amendment, renewal, or termination, request of an existing license specified in paragraph (b)(1) of this section must use the following address: U.S. Nuclear Regulatory Commission, Region IV, Division of Nuclear Materials Safety, 612 E. Lamar Blvd., Suite 400, Arlington, TX 76011–4125; where e-mail is appropriate it should be addressed to *mail to: RidsRgn4MailCenter.Resource@nrc.gov.*

(B) Otherwise, the regional licensing program involves all Federal facilities in the region and non-Federal licensees in the following Region IV non-Agreement States and territory: Alaska, Hawaii, Idaho, Montana, South Dakota, Wyoming, and Guam. All mailed or hand-delivered inquiries, communications, and applications for a new license or an amendment or renewal of an existing license specified in paragraph (b)(1) of this section must use the following address: U.S. Nuclear Regulatory Commission, Region IV, Division of Nuclear Materials Safety, 612 E. Lamar Blvd., Suite 400, Arlington, TX 76011–4125; where e-mail is appropriate it should be addressed to *RidsRgn4MailCenter.Resource@nrc.gov.*

■ 26. Revise § 40.43 to read as follows:

§ 40.43 Renewal of licenses.

Application for renewal of a specific license must be filed on NRC Form 313 and in accordance with § 40.31.

PART 50—DOMESTIC LICENSING OF PRODUCTION AND UTILIZATION FACILITIES

■ 27. The authority citation for part 50 continues to read as follows:

Authority: Secs. 102, 103, 104, 105, 161, 182, 183, 186, 189, 68 Stat. 936, 937, 938, 948, 953, 954, 955, 956, as amended, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2132, 2133, 2134, 2135, 2201, 2232, 2233, 2236, 2239, 2282); secs. 201, as amended, 202, 206, 88 Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5846); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note); Energy Policy Act of 2005, Pub. L. No. 109–58, 119 Stat. 194 (2005). Section 50.7 also issued under Pub. L. 95–601, sec. 10, 92 Stat. 2951 as amended by Pub. L. 102–486, sec. 2902, 106 Stat. 3123 (42 U.S.C. 5841). Section 50.10 also issued under secs. 101, 185, 68 Stat. 955, as amended (42 U.S.C. 2131, 2235); sec. 102, Pub. L. 91–190, 83 Stat. 853 (42 U.S.C. 4332). Sections 50.13, 50.54(dd), and 50.103 also issued under sec. 108, 68 Stat. 939, as amended (42 U.S.C. 2138).

Sections 50.23, 50.35, 50.55, and 50.56 also issued under sec. 185, 68 Stat. 955 (42 U.S.C. 2235). Sections 50.33a, 50.55a and Appendix Q also issued under sec. 102, Pub. L. 91–190, 83 Stat. 853 (42 U.S.C. 4332). Sections 50.34 and 50.54 also issued under sec. 204, 88 Stat. 1245 (42 U.S.C. 5844). Sections 50.58, 50.91, and 50.92 also issued under Pub. L. 97–415, 96 Stat. 2073 (42 U.S.C. 2239). Section 50.78 also issued under sec. 122, 68 Stat. 939 (42 U.S.C. 2152). Sections 50.80–50.81 also issued under sec. 184, 68 Stat. 954, as amended (42 U.S.C. 2234). Appendix F also issued under sec. 187, 68 Stat. 955 (42 U.S.C. 2237).

§ 50.56 [Amended]

■ 28. In § 50.56, add a comma after the word "contrary".

§ 50.70 [Amended]

■ 29. In § 50.70, paragraph (b)(3), remove the word "meaures" and add in its place the word "measures".

PART 54—REQUIREMENTS FOR RENEWAL OF OPERATING LICENSES FOR NUCLEAR POWER PLANTS

■ 30. Revise the authority citation for part 54 to read as follows:

Authority: Secs. 102, 103, 104, 161, 181, 182, 183, 186, 189, 68 Stat. 936, 937, 938, 948, 953, 954, 955, as amended, sec. 234, 83 Stat. 1244, as amended (42 U.S.C. 2132, 2133, 2134, 2135, 2201, 2232, 2233, 2236, 2239, 2282); secs 201, 202, 206, 88 Stat. 1242, 1244, as amended (42 U.S.C. 5841, 5842).

Section 54.17 also issued under E.O.12829, 3 CFR, 1993 Comp., p.570; E.O. 13526, as amended, 3 CFR, 1995 Comp., p. 333; E.O. 12968, 3 CFR, 1995 Comp., p.391.

PART 70—DOMESTIC LICENSING OF SPECIAL NUCLEAR MATERIAL

■ 31. The authority citation for part 70 continues to read as follows:

Authority: Secs. 51, 53, 161, 182, 183, 68 Stat. 929, 930, 948, 953, 954, as amended, sec. 234, 83 Stat. 444, as amended, (42 U.S.C. 2071, 2073, 2201, 2232, 2233, 2282, 2297f); secs. 201, as amended, 202, 204, 206, 88 Stat. 1242, as amended, 1244, 1245, 1246 (42 U.S.C. 5841, 5842, 5845, 5846). Sec. 193, 104 Stat. 2835 as amended by Pub.L. 104–134, 110 Stat. 1321, 1321–349 (42 U.S.C. 2243); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note); Energy Policy Act of 2005, Pub. L. No. 109–58, 119 Stat. 194 (2005).

Sections 70.1(c) and 70.20a(b) also issued under secs. 135, 141, Pub. L. 97–425, 96 Stat. 2232, 2241 (42 U.S.C. 10155, 10161).

Section 70.7 also issued under Pub. L. 95–601, sec. 10, 92 Stat. 2951 as amended by Pub. L. 102–486, sec. 2902, 106 Stat. 3123 (42 U.S.C. 5851). Section 70.21(g) also issued under sec. 122, 68 Stat. 939 (42 U.S.C. 2152). Section 70.31 also issued under sec. 57d, Pub. L. 93–377, 88 Stat. 475 (42 U.S.C. 2077). Sections 70.36 and 70.44 also issued under sec. 184, 68 Stat. 954, as amended (42 U.S.C. 2234). Section 70.81 also issued under secs. 186, 187, 68 Stat. 955 (42 U.S.C. 2236, 2237). Section 70.82 also issued under sec. 108, 68 Stat. 939, as amended (42 U.S.C. 2138).

■ 32. In § 70.5, revise paragraph (b)(2) to read as follows:

§ 70.5 Communications.

* * * * *

(b) * * *

(2) *Submissions.* (i) *Region I.* The regional licensing program involves all Federal facilities in the region and non-Federal licensees in the following Region I non-Agreement States and the District of Columbia: Connecticut, Delaware, and Vermont. All mailed or hand-delivered inquiries, communications, and applications for a new license or an amendment or renewal of an existing license specified in paragraph (b)(1) of this section must use the following address: U.S. Nuclear Regulatory Commission, Region I, Nuclear Material Section B, 475 Allendale Road, King of Prussia, PA 19406–1415; where e-mail is appropriate it should be addressed to *RidsRgn1MailCenter.Resource@nrc.gov.*

(ii) *Region II.* The regional licensing program involves all Federal facilities in the region and non-Federal licensees in the following Region II non-Agreement States and territories: West Virginia, Puerto Rico, and the Virgin Islands. All mailed or hand-delivered inquiries, communications, and applications for a new license or an amendment, renewal, or termination request of an existing license specified in paragraph (b)(1) of this section must use the following address: U.S. Nuclear Regulatory Commission, Region I, Nuclear Material Section B, 475 Allendale Road, King of Prussia, PA 19406–1415; where e-mail is appropriate it should be addressed to *RidsRgn1MailCenter.Resource@nrc.gov.*

(iii) *Region III.* (A) The regional licensing program for mining and milling involves all Federal facilities in the region, and non-Federal licensees in the Region III non-Agreement States of Indiana, Michigan, Missouri and Region III Agreement States of Minnesota, Wisconsin, and Iowa. All mailed or hand-delivered inquiries, communications, and applications for a new license or an amendment, renewal, or termination request of an existing license specified in paragraph (b)(1) of this section must use the following address: U.S. Nuclear Regulatory Commission, Region III, Material Licensing Section, 2443 Warrenville Road, Suite 210, Lisle, IL 60532–4352; where e-mail is appropriate it should be addressed to *RidsRgn3MailCenter.Resource@nrc.gov.*

(B) Otherwise, the regional licensing program involves all Federal facilities in the region and non-Federal licensees in the following Region III non-Agreement States: Indiana, Michigan, and Missouri. All mailed or hand-delivered inquiries, communications, and applications for a new license or an amendment, or renewal of an existing license specified in paragraph (b)(1) of this section must use the following address: U.S. Nuclear Regulatory Commission, Region III, Material Licensing Section, 2443 Warrenville Road, Suite 210, Lisle, IL 60532–4352; where e-mail is appropriate it should be addressed to *RidsRgn3MailCenter.Resource@nrc.gov.* Outside of this jurisdiction, concerning the licensing program involving mining and milling, the Agreement States of Illinois and Ohio should be contacted.

(iv) *Region IV.* (A) The regional licensing program for mining and milling involves all Federal facilities in the region, and non-Federal licensees in the Region IV non-Agreement States and territory of Alaska, Hawaii, Idaho, Montana, South Dakota, Wyoming and Guam and Region IV Agreement States of Oregon, California, Nevada, New Mexico, Louisiana, Mississippi, Arkansas, Oklahoma, Kansas, Nebraska, and North Dakota. All mailed or hand-delivered inquiries, communications, and applications for a new license or an amendment, renewal, or termination request of an existing license specified in paragraph (b)(1) of this section must use the following address: U.S. Nuclear Regulatory Commission, Region IV, Division of Nuclear Materials Safety, 612 E. Lamar Blvd., Suite 400, Arlington, TX 76011–4125; where e-mail is appropriate it should be addressed to *RidsRgn4MailCenter.Resource@nrc.gov.*

(B) Otherwise, the regional licensing program involves all Federal facilities in the region and non-Federal licensees in the following Region IV non-Agreement States and territory: Alaska, Hawaii, Idaho, Montana, South Dakota, Wyoming, and Guam. All mailed or hand-delivered inquiries, communications, and applications for a new license or an amendment or renewal of an existing license specified in paragraph (b)(1) of this section must use the following address: U.S. Nuclear Regulatory Commission, Region IV, Division of Nuclear Materials Safety, 612 E. Lamar Blvd., Suite 400, Arlington, TX 76011–4125; where e-mail is appropriate it should be addressed to *RidsRgn4MailCenter.Resource@nrc.gov.* Outside of this jurisdiction, concerning the licensing program involving mining and milling, the Agreement States of Colorado, Utah, Texas and Washington should be contacted.

■ 33. Revise § 70.33 to read as follows:

§ 70.33 Applications for renewal of licenses.

Applications for renewal of a license should be filed in accordance with §§ 70.21 and 70.22. Information contained in previous applications, statements or reports filed with the Commission under the license may be incorporated by reference, provided that such references are clear and specific.

■ 34. In Appendix A to part 70, revise the introductory text to read as follows:

Appendix A to Part 70—Reportable Safety Events

Licensees must comply with reporting requirements in this appendix. As required by 10 CFR 70.74, licensees subject to the requirements in subpart H of part 70, shall report:

* * * * *

PART 71—PACKING AND TRANSPORTATION OF RADIOACTIVE MATERIAL

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

Authority: Secs. 53, 57, 62, 63, 81, 161, 182, 183, 68 Stat. 930, 932, 933, 935, 948, 953, 954, as amended, sec. 1701, 106 Stat. 2951, 2952, 2953 (42 U.S.C. 2073, 2077, 2092, 2093, 2111, 2201, 2232, 2233, 2297f); secs. 201, as amended, 202, 206, 88 Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5846); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note); Energy Policy Act of 2005, Pub. L. No. 109–58, 119 Stat. 594 (2005). Section 71.97 also issued under sec. 301, Pub. L. 96–295, 94 Stat. 789–790.

§ 71.1 [Amended]

■ 36. In § 71.1, the first sentence of paragraph (a), remove the words "Spent Fuel Project Office" and add in their place the words "Division of Spent Fuel Storage and Transportation".

§ 71.6 [Amended]

■ 37. In § 71.6, paragraph (b), remove the reference "71.20,".

§ 71.17 [Amended]

■ 38. In § 71.17, paragraph (c)(3), remove the words "Spent Fuel Project Office" and add in their place the words "Division of Spent Fuel Storage and Transportation".

§ 71.95 [Amended]

■ 39. In § 71.95, the fourth sentence of the introductory text of paragraph (c), remove the words "Spent Fuel Project Office" and add in their place the words "Division of Spent Fuel Storage and Transportation".

§ 71.97 [Amended]

■ 40. In § 71.97, paragraph (c)(3)(iii), remove the words "Office of State Programs" and add in their place the words "Office of Federal and State Materials and Environmental Management Programs".

§ 71.101 [Amended]

■ 41. In § 71.101, the second sentence of paragraph (c)(1), remove the words "Spent Fuel Project Office" and add in their place the words "Division of Spent Fuel Storage and Transportation".

PART 72—LICENSING REQUIREMENTS FOR THE INDEPENDENT STORAGE OF SPENT NUCLEAR FUEL, HIGH-LEVEL RADIOACTIVE WASTE, AND REACTOR-RELATED GREATER THAN CLASS C WASTE

■ 42. The authority citation for part 72 continues to read as follows:

Authority: Secs. 51, 53, 57, 62, 63, 65, 69, 81, 161, 182, 183, 184, 186, 187, 189, 68 Stat. 929, 930, 932, 933, 934, 935, 948, 953, 954, 955, as amended, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2071, 2073, 2077, 2092, 2093, 2095, 2099, 2111, 2201, 2232, 2233, 2234, 2236, 2237, 2238, 2282); sec. 274, Pub. L. 86–373, 73 Stat. 688, as amended (42 U.S.C. 2021); sec. 201, as amended, 202, 206, 88 Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5846); Pub. L. 95–601, sec. 10, 92 Stat. 2951 as amended by Pub. L. 102–486, sec. 7902, 106 Stat. 3123 (42 U.S.C. 5851); sec. 102, Pub. L. 91–190, 83 Stat. 853 (42 U.S.C. 4332); secs. 131, 132, 133, 135, 137, 141, Pub. L. 97–425, 96 Stat. 2229, 2230, 2232, 2241, sec. 148, Pub. L. 100–203, 101 Stat. 1330–235 (42 U.S.C. 10151, 10152, 10153, 10155, 10157, 10161, 10168); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note); sec. 651(e), Pub. L. No. 109–58, 119 Stat. 806–810 (42 U.S.C. 2014, 2021, 2021b, 2111).

Section 72.44(g) also issued under secs. 142(b) and 148(c), (d), Pub. L. 100–203, 101 Stat. 1330–232, 1330–236 (42 U.S.C. 10162(b), 10168(c), (d)). Section 72.46 also issued under sec. 189, 68 Stat. 955 (42 U.S.C. 2239); sec. 134, Pub. L. 97–425, 96 Stat. 2230 (42 U.S.C. 10154).

Section 72.96(d) also issued under sec. 145(g), Pub. L. 100–203, 101 Stat. 1330–235 (42 U.S.C. 10165(g)).

Subpart J also issued under secs. 2(2), 2(15), 2(19), 117(a), 141(h), Pub. L. 97–425, 96 Stat. 2202, 2203, 2204, 2222, 2224 (42 U.S.C. 10101, 10137(a), 10161(h)).

Subparts K and L are also issued under sec. 133, 98 Stat. 2230 (42 U.S.C. 10153) and sec. 218(a), 96 Stat. 2252 (42 U.S.C. 10198).

§ 72.4 [Amended]

■ 43. In § 72.4, the first sentence, remove the words "Spent Fuel Project Office" and add in their place the words "Division of Spent Fuel Storage and Transportation".

§ 72.16 [Amended]

■ 44. In § 72.16, paragraph (a), remove the words "Spent Fuel Project Office" and add in their place the words "Division of Spent Fuel Storage and Transportation".

§ 72.44 [Amended]

■ 45. In § 72.44, the third sentence of paragraph (f), remove the words "Spent Fuel Project Office" and add in their place the words "Division of Spent Fuel Storage and Transportation".

§ 72.186 [Amended]

■ 46. In § 72.186, the second sentence of paragraph (b), remove the words "Spent Fuel Project Office" and add in their place the words "Division of Spent Fuel Storage and Transportation".

PART 95—FACILITY SECURITY CLEARANCE AND SAFEGUARDING OF NATIONAL SECURITY INFORMATION AND RESTRICTED DATA

■ 47. Revise the authority citation for part 95 to read as follows:

Authority: Secs. 145, 161, 193, 68 Stat. 942, 948, as amended (42 U.S.C. 2165, 2201); sec. 201, 88 Stat. 1242, as amended (42 U.S.C. 5841); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note); E.O. 10865, as amended, 3 CFR 1959–1963 Comp., p. 398 (50 U.S.C. 401, note); E.O. 12829, 3 CFR, 1993 Comp., p. 570; E.O. 13526, as amended, 3 CFR, 1995 Comp., p. 333, as amended by E.O. 13292, 3 CFR, 2004 Comp., p. 196; E.O. 12968, 3 CFR, 1995 Comp., p. 391.

■ 48. In § 95.5, revise the definitions of *Classified National Security Information* and *Infraction* to read as follows:

§ 95.5 Definitions.

* * * * *

Classified National Security Information means information that has been determined under E.O. 13526, as amended, or any predecessor or successor order to require protection against unauthorized disclosure and that is so designated.

* * * * *

Infraction means any knowing, willful, or negligent action contrary to the requirements of E.O. 13526, as amended, or any predecessor or successor order, or its implementing directives that does not comprise a "violation," as defined in this section.

* * * * *

■ 49. Revise § 95.59 to read as follows:

§ 95.59 Inspections.

The Commission shall make inspections and reviews of the premises, activities, records and procedures of any licensee, certificate holder, or other person subject to the regulations in this part as the Commission and CSA deem necessary to effect the purposes of the Act, E.O. 13526, as amended, or any predecessor or successor order, and/or NRC rules.

PART 110—EXPORT AND IMPORT OF NUCLEAR EQUIPMENT AND MATERIAL

■ 50. The authority citation for part 110 continues to read as follows:

Authority: Secs. 51, 53, 54, 57, 63, 64, 65, 81, 82, 103, 104, 109, 111, 126, 127, 128, 129, 134, 161, 170H., 181, 182, 187, 189, 68 Stat. 929, 930, 931, 932, 933, 936, 937, 948, 953, 954, 955, 956, as amended (42 U.S.C. 2071, 2073, 2074, 2077, 2092–2095, 2111, 2112, 2133, 2134, 2139, 2139a, 2141, 2154–2158, 2160d., 2201, 2210h., 2231–2233, 2237, 2239); sec. 201, 88 Stat. 1242, as amended (42 U.S.C. 5841; sec. 5, Pub. L. 101–575, 104 Stat. 2835 (42 U.S.C. 2243); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note); Energy Policy Act of 2005; Pub. L. 109–58, 119 Stat. 594 (2005).

Sections 110.1(b)(2) and 110.1(b)(3) also issued under Pub. L. 96–92, 93 Stat. 710 (22 U.S.C. 2403). Section 110.11 also issued under sec. 122, 68 Stat. 939 (42 U.S.C. 2152) and secs. 54c and 57d, 88 Stat. 473, 475 (42 U.S.C. 2074). Section 110.27 also issued under sec. 309(a), Pub. L. 99–440. Section 110.50(b)(3) also issued under sec. 123, 92 Stat. 142(42 U.S.C. 2153). Section 110.51 also issued under sec. 184, 68 Stat. 954, as amended (42 U.S.C. 2234). Section 110.52 also issued under sec. 186, 68 Stat. 955 (42 U.S.C. 2236). Sections 110.80–110.113 also issued under 5 U.S.C. 552, 554. Sections 110.130–110.135 also issued under 5 U.S.C. 553. Sections 110.2 and 110.42(a)(9) also issued under sec. 903, Pub. L. 102–496 (42 U.S.C. 2151 *et seq.*).

■ 51. In § 110.2, revise the definition of *Classified Information* to read as follows:

§ 110.2 Definitions.

* * * * *

Classified Information means Classified National Security Information under Executive Order 13526, as amended, or any predecessor or successor Executive Order and Restricted Data under the Atomic Energy Act.

* * * * *

PART 150—EXEMPTIONS AND CONTINUED REGULATORY AUTHORITY IN AGREEMENT STATES AND IN OFFSHORE WATERS UNDER SECTION 274

■ 52. The authority citation for part 150 continues to read as follows:

Authority: Sec. 161, 68 Stat. 948, as amended, sec. 274, 73 Stat. 688 (42 U.S.C. 2201, 2021); sec. 201, 88 Stat. 1242, as amended (42 U.S.C. 5841); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note); Energy Policy Act of 2005, Pub. L. No. 109–58, 119 Stat. 594 (2005). Sections 150.3, 150.15, 150.15a, 150.31, 150.32 also issued under secs. 11e(2), 81, 68 Stat. 923, 935, as amended, secs. 83, 84, 92 Stat. 3033, 3039 (42 U.S.C. 2014e(2), 2111, 2113, 2114). Section 150.14 also issued under sec. 53, 68 Stat. 930, as amended (42 U.S.C. 2073).

Section 150.15 also issued under secs. 135, 141, Pub. L. 97–425, 96 Stat. 2232, 2241 (42 U.S.C. 10155, 10161). Section 150.17a also issued under sec. 122, 68 Stat. 939 (42 U.S.C. 2152). Section 150.30 also issued under sec. 234, 83 Stat. 444 (42 U.S.C. 2282).

§ 150.10 [Amended]

■ 53. In § 150.10, the first sentence, remove the reference "150.18,".

§ 150.17 [Amended]

■ 54. In § 150.17, the last sentence of paragraph (b)(1), remove the reference "NUREG/BR–007" and add in its place the reference "NUREG/BR–0007".

Dated at Rockville, Maryland, this 19th day of November 2010.

For the Nuclear Regulatory Commission.

Cindy Bladey,

Chief, Rules, Announcements, and Directives Branch, Division of Administrative Services, Office of Administration.

[FR Doc. 2010–29735 Filed 11–29–10; 8:45 am]

BILLING CODE 7590–01–P

DEPARTMENT OF ENERGY

10 CFR Part 851

Worker Safety and Health Program: Safety Conscious Work Environment

AGENCY: Office of the General Counsel, Department of Energy (DOE).

ACTION: Notice of denial of petition for rulemaking.

SUMMARY: The Department of Energy received a petition from the Hanford Challenge on August 18, 2009, requesting the initiation of a rulemaking regarding safety policies at DOE's nuclear facilities. The petition calls for DOE to establish by regulation a safety program using the Nuclear Regulatory Commission's "Safety-Conscious Work Environment" guidelines as a model. DOE published this petition and a request for comment on October 16, 2009. DOE denies the petition for rulemaking.

DATES: This notice is effective November 30, 2010.

FOR FURTHER INFORMATION CONTACT: Steven L. Krahn, Acting Deputy Assistant Secretary, Safety Management and Operations, Environmental Management Office, U.S. Department of Energy, 1000 Independence Avenue, SW., Washington, DC 20585–0121, (202) 586–2281, e-mail: *steve.krahn@em.doe.gov.*

SUPPLEMENTARY INFORMATION: DOE received numerous comments in response to the notice of the Hanford Challenge petition for rulemaking, published on October 16, 2009. 74 FR 53190. The vast majority of those comments recommended denial of the petition, for two reasons. First, DOE already has numerous regulations in place to protect and encourage employees to raise work-related concerns. Second, not only would instituting a "Safety-Conscious Work Environment" by regulation be redundant, but it would also fail to add any additional protections not already in place. The comments DOE received in favor of the petition were generally related to the existing culture of safety and whistleblower protection. The main concern in these comments was that DOE facilities would be unsafe without an environment where employees could raise concerns without fear of retaliation or reprisal.

After reviewing the existing protections, DOE agrees with the majority of the comments that granting the petition for rulemaking would be unnecessary. Currently, employee protection and safety programs exist in the following statutory and regulatory authorities: 42 U.S.C. 5851, 10 CFR part 708, 10 CFR part 851, 29 CFR 1960.28, 48 CFR 970.0309, and 29 CFR part 24, as well as numerous internal DOE orders and directives including DOE's Employee Concerns Program (DOE Order 442.1A) and Differing Professional Opinions Manual (DOE Manual 442.1–1). These authorities provide sufficient guidance and protections in which employees can properly raise concerns that will be promptly reviewed and appropriately resolved with timely feedback.

DOE denies the petition for rulemaking because the existing regulations provide legal protection to employees while adequately promoting worker involvement in raising and resolving concerns. Implementing the "Safety-Conscious Work Environment" would be redundant and would fail to add any substantive protections not currently in place. While the petitioner believes that the existing regulations are inadequate, neither DOE's internal review nor the comments submitted in response to the petition demonstrate that to be the case.

Nevertheless, DOE recognizes that the existing authorities governing safety and employee protection programs can be diverse and confusing. In an attempt to provide as much clarity on this issue as possible, DOE has created a Web site summarizing the existing law and providing a central location consolidating all the relevant standards on this issue. This Web site can be accessed at: *http://www.gc.energy.gov/1630.htm.* The Department believes that this Web site will increase awareness of the existing protections for DOE employees and DOE contractors and will address the underlying concerns evident in the Hanford Challenge petition for rulemaking and the comments in support thereof.

Issued in Washington, DC, on November 23, 2010.

Scott Blake Harris,

General Counsel.

[FR Doc. 2010–30065 Filed 11–29–10; 8:45 am]

BILLING CODE 6450–01–P

FEDERAL DEPOSIT INSURANCE CORPORATION

12 CFR Part 335

RIN 3064–AD67

Securities of Nonmember Insured Banks

AGENCY: Federal Deposit Insurance Corporation.

ACTION: Interim final rule; request for comment.

SUMMARY: The FDIC is revising its securities disclosure regulations applicable to state nonmember banks with securities required to be registered under section 12 of the Securities Exchange Act of 1934 (Exchange Act). The final rule cross references changes in regulations adopted by the Securities and Exchange Commission (SEC) into the provisions of the FDIC's securities regulations. Cross referencing will assure that the FDIC's regulations remain substantially similar to the SEC's regulations, as required by law. The final rule provides general references to SEC regulations by title and part of the Code of Federal Regulations (CFR), rather than by specific references to sections and subparts of the CFR as are currently provided in part 335. This revision reflects changes to SEC regulations with respect to small business issuers and will provide general guidance to FDIC filers regarding the electronic filing of certain documents. The amendments to part 335 references to SEC regulations will greatly reduce the need for future revisions of part 335, and the FDIC's regulations will be consistent with the SEC regulations through the cross reference stated in 12 CFR 335.101.

DATES: These amendments are effective on November 30, 2010. Comments must be submitted on or before January 31, 2011.

ADDRESSES: Interested parties are invited to submit written comments to the FDIC by any of the following methods:

- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the instructions for submitting comments.
- *Agency Web Site: http://www.fdic.gov/regulations/laws/federal/propose.html.* Follow the instructions for submitting comments on the FDIC Web site.
- *E-mail: comments@FDIC.gov.* Include "Part 335—Securities of Nonmember Insured Banks" in the subject line of the message.
- *Mail:* Robert E. Feldman, Executive Secretary, Attention: Comments, Federal Deposit Insurance Corporation, 550 17th Street, NW., Washington, DC 20429.
- *Hand Delivery/Courier:* Comments may be hand-delivered to the guard station located at the rear of the FDIC's 550 17th Street building (accessible from F Street) on business days between 7 a.m. and 5 p.m.

Instructions: All submissions must include the agency name and use the title "Part 335—Securities of Nonmember Insured Banks." All comments received will be posted, generally without change, to: *http://www.fdic.gov/regulations/laws/federal/propose.html,* including any personal information provided. Paper copies of public comments may be ordered from the FDIC's Public Information Center by telephone at (877) 275–3342 or (703) 562–2200.

FOR FURTHER INFORMATION CONTACT: Dennis Chapman, Senior Staff Accountant, Division of Supervision and Consumer Protection, (202) 898–8922 or *dchapman@fdic.gov;* Maureen Loviglio, Senior Staff Accountant, Division of Supervision and Consumer Protection, (202) 898–6777 or *mloviglio@fdic.gov;* or Mark G. Flanigan, Counsel, Legal Division, (202) 898–7426 or *mflanigan@fdic.gov,* Federal Deposit Insurance Corporation, 550 17th Street, NW., Washington, DC 20429.

SUPPLEMENTARY INFORMATION:

I. Background

Section 12(i) of the Exchange Act, as amended (15 U.S.C. 78l(i)), authorizes the FDIC to issue regulations applicable to the securities of state nonmember banks that are substantially similar to those of the SEC with respect to its powers, functions, and duties to administer and enforce sections 10A(m) (standards relating to audit committees), 12 (securities registration), 13 (periodic reporting), 14(a) (proxies and proxy solicitation), 14(c) (information statements), 14(d) (tender offers), 14(f) (arrangements for changes in directors), and 16 (beneficial ownership and reporting) of the Exchange Act, and sections 302 (corporate responsibility for financial reports), 303 (improper influence on conduct of audits), 304 (forfeiture of certain bonuses and profits), 306 (insider trades during blackout periods), 401(b) (disclosure of pro forma financial information), 404 (management assessment of internal controls), 406 (code of ethics for senior financial officers), and 407 (disclosure of audit committee financial expert) of the Sarbanes-Oxley Act (codified at 15 U.S.C. 7241, 7242, 7243, 7244, 7261, 7262, 7264, and 7265). These regulations must be substantially similar to the regulations of the SEC under the listed sections of the Exchange Act and the Sarbanes-Oxley Act, unless the FDIC publishes its reasons for deviating from the SEC's rules. The proposed amendments to this part provide references to titles and parts of the CFR, and eliminate references to specific CFR sections and subparts, as a general cross reference is provided in § 335.101. The elimination of CFR section and subpart references provides efficiency as regulatory revisions by the SEC impacting CFR sections and subparts will no longer require amendments to part 335 each time a CFR section and subpart is amended.

II. Section by Section Analysis

Part 335 will be amended throughout to reflect the elimination of certain references to sections and subparts of the Code of Federal Regulations that the FDIC is currently required to administer and enforce under section 12(i) of the Exchange Act, provide a general cross reference to the relevant title and part of the Code of Federal Regulations, and reflect required and voluntary electronic filing of FDIC forms. Accordingly, the following sections in part 335 will be amended, where appropriate, to remove references to specific CFR sections and subparts in the SEC's regulations that have been cross referenced in section 335.101: § 335.111 (Forms and schedules), § 335.121 (Listing standards related to audit committees), § 335.201 (Securities exempted from registration), § 335.211 (Registration and reporting), section 335.221 (Forms for registration of securities and other matters), § 335.231 (Certification, suspension of trading, and removal from listing by exchanges), § 335.241 (Unlisted trading), § 335.251 (Forms for notification of action taken by national securities exchanges), § 335.261 (Exemptions; terminations; and definitions), § 335.301 (Reports of issuers of securities registered pursuant to § 12), § 335.311 (Forms for annual, quarterly, current, and other reports of issuers), § 335.321 (Maintenance of records and issuer's representations in connection with required reports), § 335.331 (Acquisition statements, acquisition of securities by issuers, and other matters), § 335.401 (Solicitation of proxies), § 335.501 (Tender offers), § 335.601 (Requirements of section 16 of the Securities Exchange

Act of 1934), § 335.611 (Initial statement of beneficial ownership of securities), § 335.612 (Statement of changes in beneficial ownership of securities), § 335.613 (Annual statement of beneficial ownership of securities), § 335.701 (Filing requirements, public reference, and confidentiality), and § 335.801 (Inapplicable SEC regulations; FDIC substituted regulations; additional information).

Section 335.111 (Forms and Schedules) will be amended to provide information regarding access to and the use of beneficial ownership Forms 3, 4, and 5 from the FDIC Web site.

Section 335.221 (Forms for registration of securities and other matters) will be revised to delete paragraph (c) in order to reflect amendments to SEC regulations that eliminate the optional forms for small business issuer filing requirements. To accommodate this revision, current paragraph (d), which cross references the requirements of SEC Regulation FD (Fair Disclosure) (17 CFR 243.100 through 243.103), will be renamed paragraph (c).

Section 335.311 (Forms for annual, quarterly, current, and other reports of issuers) will be amended to delete references to "small business issuers" and optional forms for filing requirements in order to reflect amendments to SEC regulations that no longer provide optional forms for filing by small business issuers.

Section 335.601 (Requirements of section 16 of the Securities Exchange Act of 1934), § 335.701 (Filing requirements, public reference, and confidentiality), and § 335.801 (Inapplicable SEC regulations; FDIC substituted regulations; additional information) will be amended, where applicable, to reflect the electronic filing requirements with respect to Beneficial Ownership Report Forms 3, 4, and 5 required by the Exchange Act, as amended by the Sarbanes-Oxley Act of 2002. The sections also will be amended to reflect the availability of voluntary electronic filing on the FDIC Web site. In addition, § 335.801 will be amended to reflect the appropriate forms for the hardship exemption from mandatory electronic filing.

Finally, the FDIC will make certain nonsubstantive changes to Part 335 to improve its clarity and readability and to correct outdated terms.

III. Request for Comments

The FDIC requests comments on all aspects of the rule changes. Commenters suggesting that the FDIC modify the requirements of the SEC's rules, regulations, and forms for state nonmember banks should support their request by demonstrating how such modification would satisfy the requirements of section 12(i) of the Exchange Act.

Comments are also welcome on the general organization of Part 335.

IV. Regulatory Analysis and Procedure

A. Administrative Procedure Act

The process of amending Part 335 by means of this Interim Rule is governed by the Administrative Procedure Act (APA). Pursuant to section 553(b)(B) of the APA, general notice and opportunity for public comment are not required with respect to a rulemaking when (1) the rule is interpretative or relates to an agency's rules of organization, procedure, or practice, and (2) an agency for good cause finds that "notice and public procedure thereon are impracticable, unnecessary, or contrary to the public interest." Similarly, sections 553(d)(2), (3) of the APA provide that the publication of a rule shall be made not less than 30 days before its effective date, except if the rule is interpretative and "as otherwise provided by the agency for good cause found and published with the rule."

Consistent with sections 553(b)(A), (B) of the APA, the FDIC finds that good cause exists for a finding that general notice and opportunity for public comment are unnecessary in that certain portions of part 335 that are being amended in light of the issuance of regulations by the SEC, which SEC issuances already have been subjected to public notice and request for comment. In addition, certain other changes to part 335 are organizational in nature and are exempt from the APA's general notice and public comment requirement. Accordingly, pursuant to the APA, the FDIC is foregoing the general notice and public comment requirement as to this rulemaking.

Further, immediate issuance of this Interim Rule furthers the public interest by conforming the FDIC's rules with the SEC's requirements and organizing the rule to reduce redundancies and increase readability. For these same reasons, the FDIC finds good cause to publish this Interim Rule with an immediate effective date.[1]

Although general notice and opportunity for public comment are not required prior to the effective date, the FDIC invites comments on all aspects of the Interim Rule, which the FDIC may revise if necessary or appropriate in light of the comments received.

[1] 5 U.S.C. 553(d)(3).

B. Riegle Community Development and Regulatory Improvement Act

The Riegle Community Development and Regulatory Improvement Act provides that any new regulations or amendments to regulations prescribed by a Federal banking agency that impose additional reporting, disclosures, or other new requirements on insured depository institutions shall take effect on the first day of a calendar quarter which begins on or after the date on which the regulations are published in final form, unless the agency determines, for good cause published with the rule, that the rule should become effective before such time.[2] For the same reasons discussed above, the FDIC finds that good cause exists for an immediate effective date for the Interim Rule.

C. Paperwork Reduction Act

This rule contains no new collections of information as defined by the Paperwork Reduction Act.

D. Regulatory Flexibility Act

A regulatory flexibility analysis is required only when the agency must publish a notice of proposed rulemaking (5 U.S.C. 603, 604). Because the revisions to part 335 are published in interim final form without a notice of proposed rulemaking, no regulatory flexibility analysis is required.

E. Small Business Regulatory Enforcement Fairness Act

The Office of Management and Budget (OMB) has determinedthat the Interim Rule is not a "major rule" within the meaning of the relevant sections of the Small Business Regulatory Enforcement Act of 1996 (SBREFA), 5 U.S.C. 801 *et seq.* As required by SBREFA, the FDIC will file the appropriate reports with Congress and the Government Accountability Office as soon as it receives a determination from OMB. Nevertheless, as discussed above, consistent with section 553(b)(B) of the APA, the FDIC has determined for good cause that general notice and opportunity for public comment is unnecessary. Therefore, in accordance with 5 U.S.C. 808(2), this Interim Rule will take effect upon publication in the **Federal Register.**

List of Subjects in 12 CFR Part 335

Accounting, Banks, Banking, Confidential business information, Reporting and recordkeeping requirements, Securities.

[2] 12 U.S.C. 4802.

■ For the reasons set forth in the preamble, the Board of Directors of the Federal Deposit Insurance Corporation hereby amends part 335 of title 12 of the Code of Federal Regulations as follows:

PART 335—SECURITIES OF NONMEMBER INSURED BANKS

■ 1. The authority citation for part 335 continues to read as follows:

Authority: 12 U.S.C. 1819; 15 U.S.C. 78l(i), 78m, 78n, 78p, 78w, 7241, 7242, 7243, 7244, 7261, 7262, 7264, and 7265.

■ 2. Section 335.111 is revised to read as follows:

§ 335.111 Forms and schedules.

The Exchange Act regulations of the SEC, which are cross referenced under this part, require the filing of forms and schedules as applicable. Reference is made to SEC Exchange Act regulation 17 CFR part 249 regarding the availability of all applicable SEC Exchange Act forms. Required schedules are codified and are found within the context of the SEC's regulations. All forms and schedules shall be titled with the name of the FDIC in substitution for the name of the SEC. The filing of forms and schedules shall be made with the FDIC at the address in § 335.701 or may be filed electronically at FDIC*connect* at *https://www2.fdicconnect.gov/index.asp.* However, electronic filing of Beneficial Ownership Forms 3, 4 and 5 is required. Copies of Forms 3 (§ 335.611), 4 (§ 335.612) and 5 (§ 335.613) and the instructions thereto may be printed and downloaded from *https://www.fdic.gov/regulations/laws/forms.*

■ 3. Section 335.121 is revised to read as follows:

§ 335.121 Listing standards related to audit committees.

The provisions of the applicable SEC regulation under section 10(A)(m) of the Exchange Act shall be followed as codified at 17 CFR part 240.

■ 4. Section 335.201 is revised to read as follows:

§ 335.201 Securities exempted from registration.

Persons subject to registration requirements under Exchange Act section 12 and subject to this part shall follow the applicable and currently effective SEC regulations relative to exemptions from registration issued under sections 3 and 12 of the Exchange Act as codified at 17 CFR part 240.

■ 5. Section 335.211 is revised to read as follows:

§ 335.211 Registration and reporting.

Persons with securities subject to registration under Exchange Act sections 12(b) and 12(g), required to report under Exchange Act section 13, and subject to this part shall follow the applicable and currently effective SEC regulations issued under section 12(b) of the Exchange Act as codified at 17 CFR part 240.

■ 6. Section 335.221 is revised to read as follows:

§ 335.221 Forms for registration of securities and cross reference to Regulation FD (Fair Disclosure).

(a) The applicable forms for registration of securities and similar matters are codified in 17 CFR part 249. All forms shall be filed with the FDIC as appropriate and shall be titled with the name of the FDIC instead of the SEC.

(b) The requirements for Financial Statements can generally be found in Regulation S–X (17 CFR part 210). Banks may also refer to the instructions for Federal Financial Institutions Examination Council (FFIEC) Consolidated Reports of Condition and Income when preparing unaudited interim statements. The requirements for Management's Discussion and Analysis of Financial Condition and Results of Operations can be found at 17 CFR part 229. Additional requirements are provided at Industry Guide 3, Statistical Disclosure by Bank Holding Companies, which is found at 17 CFR part 229.

(c) The provisions of the applicable and currently effective SEC regulation FD shall be followed as codified at 17 CFR part 243.

■ 7. Section 335.231 is revised to read as follows:

§ 335.231 Certification, suspension of trading, and removal from listing by exchanges.

The provisions of the applicable and currently effective SEC regulations under section 12(d) of the Exchange Act shall be followed as codified at 17 part CFR 240.

■ 8. Section 335.241 is revised to read as follows:

§ 335.241 Unlisted trading.

The provisions of the applicable and currently effective SEC regulations under section 12(f) of the Exchange Act shall be followed as codified at 17 CFR part 240.

■ 9. Section 335.251 is revised to read as follows:

§ 335.251 Forms for notification of action taken by national securities exchanges.

The applicable forms for notification of action taken by national securities exchanges are codified in 17 CFR part 249. All forms shall be filed with the FDIC as appropriate and shall be titled with the name of the FDIC instead of the SEC.

■ 10. Section 335.261 is revised to read as follows:

§ 335.261 Exemptions, terminations, and definitions.

The provisions of the applicable and currently effective SEC regulations under sections 12(g) and 12(h) of the Exchange Act shall be followed as codified in 17 CFR part 240.

■ 11. Section 335.301 is revised to read as follows:

§ 335.301 Reports of issuers of securities registered pursuant to section 12.

The provisions of the applicable and currently effective SEC regulations under section 13(a) of the Exchange Act shall be followed as codified at 17 CFR part 240.

■ 12. Section 335.311 is revised to read as follows:

§ 335.311 Forms for annual, quarterly, current, and other reports of issuers.

(a) The applicable forms for annual, quarterly, current, and other reports are codified in 17 CFR part 249. All forms shall be filed with the FDIC as appropriate and shall be titled with the name of the FDIC instead of the SEC.

(b) The requirements for Financial Statements can generally be found in Regulation S–X (17 CFR part 210). Banks may also refer to the instructions for FFIEC Consolidated Reports of Condition and Income when preparing unaudited interim reports. The requirements for Management's Discussion and Analysis of Financial Condition and Results of Operations can be found at 17 CFR part 229. Additional requirements are included in Industry Guide 3, Statistical Disclosure by Bank Holding Companies, which is found at 17 CFR part 229.

■ 13. Section 335.321 is revised to read as follows:

§ 335.321 Maintenance of records and issuer's representations in connection with required reports.

The provisions of the applicable and currently effective SEC regulations under 13(b) of the Exchange Act shall be followed as codified at 17 CFR part 240.

■ 14. Section 335.331 is revised to read as follows:

§ 335.331 Acquisition statements, acquisition of securities by issuers, and other matters.

The provisions of the applicable and currently effective SEC regulations under sections 13(d) and 13(e) of the Exchange Act shall be followed as codifed at 17 CFR part 240.

■ 15. Section 335.401 is revised to read as follows:

§ 335.401 Solicitations of proxies.

The provisions of the applicable and currently effective SEC regulations under sections 14(a) and 14(c) of the Exchange Act shall be followed as codified at 17 CFR part 240.

■ 16. Section 335.501 is revised to read as follows:

§ 335.501 Tender offers.

The provisions of the applicable and currently effective SEC regulations under sections 14(d), 14(e), and 14(f) of the Exchange Act shall be followed as codified at 17 CFR part 240.

■ 17. Section 335.601 is revised to read as follows:

§ 335.601 Requirements of section 16 of the Securities Exchange Act of 1934.

Persons subject to section 16 of the Exchange Act with respect to securities registered under this part shall follow the applicable and currently effective SEC regulations issued under section 16 of the Exchange Act (17 CFR part 240), except that the forms described in § 335.611 (FDIC Form 3), § 335.612 (FDIC Form 4), and § 335.613 (FDIC Form 5) shall be used in lieu of SEC Form 3, Form 4, and Form 5, respectively. FDIC Forms 3, 4, and 5 shall be filed electronically on FDIC*connect* at *https://www2.fdicconnect.gov/index.asp.* Copies of FDIC Forms 3, 4, and 5 and the instructions thereto can be printed and downloaded at *https://www.fdic.gov/regulations/laws/forms.*

■ 18. Section 335.611 is revised to read as follows:

§ 335.611 Initial statement of beneficial ownership of securities (Form 3).

This form shall be filed in lieu of SEC Form 3 pursuant to SEC rules for initial statements of beneficial ownership of securities. The FDIC is authorized to solicit the information required by this form pursuant to sections 16(a) and 23(a) of the Exchange Act (15 U.S.C. 78p and 78w) and the rules and regulations thereunder. SEC regulations referenced in this form are codified at 17 CFR part 240.

■ 19. Section 335.612 is revised to read as follows:

§ 336.612 Statement of changes in beneficial ownership of securities (Form 4).

This form shall be filed in lieu of SEC Form 4 pursuant to SEC Rules for statements of changes in beneficial ownership of securities. The FDIC is authorized to solicit the information required by this form pursuant to sections 16(a) and 23(a) of the Exchange Act (15 U.S.C. 78p and 78w) and the rules and regulations thereunder. SEC regulations referenced in this form are codified at 17 CFR part 240.

■ 20. Section 335.613 is revised to read as follows:

§ 336.613 Annual statement of beneficial ownership of securities (Form 5).

This form shall be filed in lieu of SEC Form 5 pursuant to SEC Rules for annual statements of beneficial ownership of securities. The FDIC is authorized to solicit the information required by this form pursuant to sections 16(a) and 23(a) of the Exchange Act (15 U.S.C. 78p and 78w) and the rules and regulations thereunder. SEC regulations referenced in this form are codified at 17 CFR part 240.

■ 21. Section 335.701 is revised to read as follows:

§ 335.701 Filing requirements, public reference, and confidentiality.

(a) *Filing requirements.* Unless otherwise indicated in this part, one original and four conformed copies of all papers required to be filed with the FDIC under the Exchange Act or regulations thereunder shall be filed at its office in Washington, DC. Official filings may be filed electronically at *https://www2.fdicconnect.gov/index.asp,* except for FDIC Beneficial Ownership Forms 3, 4, and 5 for which electronic filing is mandatory as described in § 335.801(b). Paper filings should be submitted to the FDIC's office in Washington, DC, and should be addressed as follows: Accounting and Securities Disclosure Section, Division of Supervision and Consumer Protection, Federal Deposit Insurance Corporation, 550 17th Street, NW., Washington, DC 20429. Material may be filed by delivery to the FDIC through the mails or otherwise. The date on which paper filings are actually received by the designated FDIC office shall be the date of filing.

(b) *Inspection.* Except as provided in paragraph (c) of this section, all information filed regarding a security registered with the FDIC will be available for inspection at the Federal Deposit Insurance Corporation, Accounting and Securities Disclosure Section, Division of Supervision and Consumer Protection, 550 17th Street, NW., Washington, DC. Beneficial ownership report forms and other official filings that are electronically submitted to the FDIC are available for inspection on the FDIC's Web site at *http://www2.fdic.gov/efr/.*

(c) *Nondisclosure of certain information filed.* Any person filing any statement, report, or document with the FDIC under the Exchange Act may make a written objection to the public disclosure of any information contained therein in accordance with the procedure set forth in this paragraph (c) or the instructions provided for electronic filing available on the FDIC's Web site *https://www2.fdicconnect.gov/index.asp.*

(1) The person shall omit from the statement, report, or document, when it is filed, the portion thereof that it desires to keep undisclosed (hereinafter called the confidential portion). In lieu thereof, it shall indicate at the appropriate place in the statement, report, or document that the confidential portion has been so omitted and filed separately with the FDIC.

(2) The person shall file with the copies of the statement, report, or document filed with the FDIC:

(i) As many copies of the confidential portion, each clearly marked "Confidential Treatment," as there are copies of the statement, report, or document filed with the FDIC and with each exchange, if any. Each copy shall contain the complete text of the item and, notwithstanding that the confidential portion does not constitute the whole of the answer, the entire answer thereto; except that in the case where the confidential portion is part of a financial statement or schedule, only the particular financial statement or schedule need be included. All copies of the confidential portion shall be in the same form as the remainder of the statement, report, or document;

(ii) An application making objection to the disclosure of the confidential portion. Such application shall be on a sheet or sheets separate from the confidential portion and shall contain:

(A) An identification of the portion of the statement, report, or document that has been omitted;

(B) A statement of the grounds of the objection;

(C) Consent that the FDIC may determine the question of public disclosure upon the basis of the application, subject to proper judicial reviews;

(D) The name of each exchange, if any, with which the statement, report, or document is filed;

(iii) The copies of the confidential portion and the application filed in accordance with this paragraph shall be enclosed in a separate envelope marked "Confidential Treatment" and addressed to Executive Secretary, Federal Deposit Insurance Corporation, Washington, DC 20429.

(3) Pending the determination by the FDIC as to the objection filed in accordance with paragraph (c)(2)(ii) of this section, the confidential portion will not be disclosed by the FDIC.

(4) If the FDIC determines that the objection shall be sustained, a notation to that effect will be made at the appropriate place in the statement, report, or document.

(5) If the FDIC determines that disclosure of the confidential portion is in the public interest, a finding and determination to that effect will be entered and notice of the finding and determination will be sent by registered or certified mail to the person.

(6) The confidential portion shall be made available to the public:

(i) Upon the lapse of 15 days after the dispatch of notice by registered or certified mail of the finding and determination of the FDIC described in paragraph (c)(5) of this section, or the date of the electronic filing, if prior to the lapse of such 15 days the person shall not have filed a written statement that he intends in good faith to seek judicial review of the finding and determination;

(ii) Upon the lapse of 60 days after the dispatch of notice by registered or certified mail, or the date of the electronic filing, of the finding and determination of the FDIC, if the statement described in paragraph (c)(6)(i) of this section shall have been filed and if a petition for judicial review shall not have been filed within such 60 days; or

(iii) If such petition for judicial review shall have been filed within such 60 days upon final disposition, adverse to the person, of the judicial proceedings.

(7) If the confidential portion is made available to the public, a copy thereof shall be attached to each copy of the statement, report, or document filed with the FDIC and with each exchange concerned.

■ 22. Amend Section 335.801 by revising paragraphs (b)(1), (b)(2), (b)(6)(iv), and (b)(6)(v) to read as follows:

§ 335.801 Inapplicable SEC regulations; FDIC substituted regulations; additional information.

* * * * *

(b) *Electronic filings.* (1) The FDIC does not participate in the SEC's EDGAR (Electronic Data Gathering Analysis and Retrieval) electronic filing program (17 CFR part 232). The FDIC permits voluntary electronically transmitted filings and submissions of correspondence and other materials in electronic format to the FDIC, with the exception of Beneficial Ownership Reports (Forms 3, 4, and 5) for which electronic filing is mandatory. Beneficial Ownership Report filing requirements are provided in paragraph (b)(2) of this section.

(2) All reporting persons must electronically file Beneficial Ownership Reports (FDIC Forms 3, 4, and 5), including amendments and exhibits thereto, using the Internet-based interagency Beneficial Ownership Filings System, except that a reporting person that has obtained a continuing hardship exemption under these rules may file the forms with the FDIC in paper format. For electronic filing purposes, FDIC Forms 3, 4, and 5 are accessible at the Internet-based interagency Web site for Beneficial Ownership Filings at FDIC*connect* at *https://www2.fdicconnect.gov/index.asp.* These forms and the instructions thereto are available for printing and downloading at *http://www.fdic.gov/regulations/laws/forms.* A reporting person that has obtained a continuing hardship exemption under these rules may file the appropriate forms with the FDIC in paper format. Instructions for continuing hardship exemptions are provided in paragraph (b)(6) of this section.

* * * * *

(6) * * *

(iv) Where a continuing hardship exemption is granted with respect to an exhibit only, the paper format exhibit shall be filed with the FDIC under Form SE (17 CFR part 249). The name of the FDIC shall be substituted for the name of the SEC on the form. Form SE shall be filed as a paper cover sheet to all exhibits to Beneficial Ownership Reports submitted to the FDIC in paper form pursuant to a hardship exemption.

(v) Form SE may be filed with the FDIC up to six business days prior to, or on the date of filing of, the electronic form to which it relates but shall not be filed after such filing date. If a paper exhibit is submitted in this manner, requirements that the exhibit be filed with, provided with, or accompany the electronic filing shall be satisfied. Any requirements as to delivery or furnishing the information to persons other than the FDIC shall not be affected by this section.

* * * * *

By order of the Board of Directors.

Federal Deposit Insurance Corporation.

Dated at Washington, DC, this 9th day of November 2010.

Robert E. Feldman,

Executive Secretary.

[FR Doc. 2010–30078 Filed 11–29–10; 8:45 am]

BILLING CODE 6714–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

21 CFR Parts 1, 14, and 17

[Docket No. FDA–2010–N–0560]

RIN 0910–AG55

Amendments to General Regulations of the Food and Drug Administration

AGENCY: Food and Drug Administration, HHS.

ACTION: Direct final rule.

SUMMARY: The Food and Drug Administration (FDA) is amending certain of its general regulations to include tobacco products, where appropriate, in light of FDA's authority to regulate these products under the Family Smoking Prevention and Tobacco Control Act (Tobacco Control Act). With these amendments, tobacco products will be subject to the same general requirements that apply to other FDA-regulated products. Elsewhere in this issue of the **Federal Register**, we are publishing a companion proposed rule under FDA's usual procedures for notice and comment to provide a procedural framework to finalize the rule in the event we receive significant adverse comment and withdraw this direct final rule.

DATES: This rule is effective April 14, 2011. Submit either electronic or written comments by February 14, 2011. If we receive no significant adverse comments within the specified comment period, we intend to publish a document confirming the effective date of the final rule in the **Federal Register** within 30 days after the comment period on this direct final rule ends. If we receive any timely significant adverse comment, we will withdraw this final rule in part or in whole by publication of a document in the **Federal Register** within 30 days after the comment period ends.

ADDRESSES: You may submit comments, identified by Docket No. FDA–2010–N–0560 and/or RIN number 0910–AG55, by any of the following methods:

Electronic Submissions

Submit electronic comments in the following way:

- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the instructions for submitting comments.

Written Submissions

Submit written submissions in the following ways:

- *FAX:* 301–827–6870.
- *Mail/Hand delivery/Courier (for paper, disk, or CD–ROM submissions):* Division of Dockets Management (HFA–305), Food and Drug Administration, 5630 Fishers Lane, rm. 1061, Rockville, MD 20852.

Instructions: All submissions received must include the Agency name and docket number and Regulatory Information Number (RIN) for this rulemaking. All comments received may be posted without change to *http://www.regulations.gov,* including any personal information provided. For additional information on submitting comments, see the "Comments" heading of the **SUPPLEMENTARY INFORMATION** section of this document.

Docket: For access to the docket to read background documents or comments received, go to *http://www.regulations.gov* 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: Gerie A. Voss, Center for Tobacco Products, Food and Drug Administration, 9200 Corporate Blvd., rm. 240G, Rockville, MD 20850, 1–877–CTP–1373, *gerie.voss@fda.hhs.gov.*

SUPPLEMENTARY INFORMATION:

I. What is the background of the rule?

The Tobacco Control Act was enacted on June 22, 2009, amending the Federal Food, Drug, and Cosmetic Act (the FD&C Act) and providing FDA with the authority to regulate tobacco products (Pub. L. 11–31; 123 Stat. 1776). In enacting the Tobacco Control Act, Congress sought to ensure that FDA had authority to provide effective oversight and to impose appropriate regulatory controls on tobacco products. In order to effectuate these purposes, FDA is amending several provisions of its general regulations to reflect the Agency's new authority and mandate regarding tobacco products.

II. What does this direct final rulemaking do?

In this direct final rule, FDA is making the following amendments to its existing general regulations, reflecting the Agency's authority over tobacco products under the Tobacco Control Act:

1. Revising 21 CFR 1.1(b) to ensure the applicability of definitions contained in the Tobacco Control Act;
2. Removing the reference to "package" in 21 CFR 1.1(c), as this definition now also is covered by the Tobacco Control Act and is no longer provided solely by the Fair Packaging and Labeling Act;
3. Revising 21 CFR 1.20 to exclude from this definition of "package" the term "package" as defined in section 900(13) of the Tobacco Control Act (21 U.S.C. 387q(13));
4. Adding paragraph (f) to 21 CFR 14.55 to identify the Tobacco Products Scientific Advisory Committee as a permanent statutory advisory committee; and
5. Adding paragraph (j) to 21 CFR 17.1 and revising 21 CFR 17.2 to reflect FDA's authority to impose civil monetary penalties on tobacco-related violations.

III. What are the procedures for issuing a direct final rule?

In the **Federal Register** of November 21, 1997 (62 FR 62466), FDA announced the availability of the guidance document entitled "Guidance for FDA and Industry: Direct Final Rule Procedures" that described when and how FDA will employ direct final rulemaking. We believe that this rule is appropriate for direct final rulemaking because it is intended to make noncontroversial changes to existing regulations. We anticipate no significant adverse comments.

Consistent with FDA's procedures on direct final rulemaking, we are publishing elsewhere in this issue of the **Federal Register** a companion proposed rule that is identical to the direct final rule. The companion proposed rule provides a procedural framework within which the rule may be finalized in the event the direct final rule is withdrawn because of any significant adverse comment. The comment period for this direct final rule runs concurrently with the comment period of the companion proposed rule. Any comments received in response to the companion proposed rule will also be considered as comments regarding this direct final rule.

We are providing a comment period on the direct final rule of 75 days after the date of publication in the **Federal Register**. If we receive any significant adverse comment, we intend to withdraw this final rule before its effective date by publication of a notice in the **Federal Register** within 30 days after the comment period ends. A significant adverse comment is defined as a comment that explains why the rule would be inappropriate, including challenges to the rule's underlying premise or approach, or would be ineffective or unacceptable without change. In determining whether an adverse comment is significant and warrants terminating a direct final rulemaking, we will consider whether the comment raises an issue serious enough to warrant a substantive response in a notice-and-comment process in accordance with the Administrative Procedure Act (APA) (5 U.S.C. 553). Comments that are frivolous, insubstantial, or outside the scope of the rule will not be considered significant or adverse under this procedure. For example, a comment recommending an additional change to the rule will not be considered a significant adverse comment, unless the comment states why the rule would be ineffective without the additional change. In addition, if a significant adverse comment applies to part of a rule and that part can be severed from the remainder of the rule, we may adopt as final those parts of the rule that are not the subject of a significant adverse comment.

If we withdraw the direct final rule, all comments received will be considered under the companion proposed rule in developing a final rule under the usual notice-and-comment procedures under the APA. If we receive no significant adverse comment during the specified comment period, we intend to publish a confirmation document in the **Federal Register** within 30 days after the comment period ends.

You can find additional information about FDA's direct final rulemaking procedures in the guidance document entitled "Guidance for FDA and Industry: Direct Final Rule Procedures" (62 FR 62466). This guidance document may be accessed at *http://www.fda.gov/RegulatoryInformation/Guidances/ucm125166.htm.*

IV. What is the legal authority for this rule?

FDA is issuing this direct final rule under provisions of the FD&C Act, as amended by the Tobacco Control Act (21 U.S.C. 321, 331, 333, 387, 387a, and 387q).

V. What is the environmental impact of this rule?

The Agency has determined under 21 CFR 25.30(h) and (i) that this action is of a type that does not individually or cumulatively have a significant effect on the human environment. Therefore, neither an environmental assessment nor an environmental impact statement is required.

VI. What is the economic impact of this rule?

FDA has examined the impacts of the final rule under Executive Order 12866 and the Regulatory Flexibility Act (5 U.S.C. 601–612), and the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4). Executive Order 12866 directs agencies to assess all costs and benefits of available regulatory alternatives and, when regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity). The Agency believes that this direct final rule is not a significant regulatory action under the Executive order.

The Regulatory Flexibility Act requires agencies to analyze regulatory options that would minimize any significant impact of a rule on small entities. Because this direct final rule does not impose any new requirements on tobacco product manufacturers, retailers, or distributors, the Agency certifies that the final rule will not have a significant economic impact on a substantial number of small entities.

Section 202(a) of the Unfunded Mandates Reform Act of 1995 requires that agencies prepare a written statement, which includes an assessment of anticipated costs and benefits, before proposing "any rule that includes any Federal mandate that may result in the expenditure by State, local, and tribal governments, in the aggregate, or by the private sector, of $100,000,000 or more (adjusted annually for inflation) in any one year." The current threshold after adjustment for inflation is $135 million, using the most current (2009) Implicit Price Deflator for the Gross Domestic Product. FDA does not expect this final rule to result in any 1-year expenditure that would meet or exceed this amount.

VII. Paperwork Reduction Act of 1995

FDA concludes that the regulatory revisions and amendments identified in this document are not subject to review by the Office of Management and Budget because they do not constitute a "collection of information" under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*).

VIII. What are the federalism impacts of this rule?

FDA has analyzed this final rule in accordance with the principles set forth in Executive Order 13132. FDA has determined that the rule does not contain policies that 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. Accordingly, the Agency has concluded that the rule does not contain policies that have federalism implications as defined in the Executive order and, consequently, a federalism summary impact statement is not required.

IX. How do you submit comments on this rule?

Interested persons may submit to the Division of Dockets Management (*see* **ADDRESSES**) either electronic or written comments regarding this document. It is only necessary to send one set of comments. It is no longer necessary to send two copies of mailed comments. Identify comments with the docket number found in brackets in the heading of this document. Received comments may be seen in the Division of Dockets Management between 9 a.m. and 4 p.m., Monday through Friday.

List of Subjects

21 CFR Part 1

Cosmetics, Drugs, Exports, Food labeling, Imports, Labeling, Reporting and recordkeeping requirements.

21 CFR Part 14

Administrative practice and procedure, Advisory committees, Color additives, Drugs, Radiation protection.

21 CFR Part 17

Administrative practice and procedure, Penalties.

■ Therefore, under the Federal Food, Drug, and Cosmetic Act and under authority delegated to the Commissioner of Food and Drugs, 21 CFR parts 1, 14, and 17 are amended as follows:

PART 1—GENERAL ENFORCEMENT REGULATIONS

■ The authority citation for part 1 is revised to read as follows:

Authority: 15 U.S.C. 1453, 1454, 1455; 19 U.S.C. 1490, 1491; 21 U.S.C. 321, 331, 333, 334, 335a, 343, 350c, 350d, 352, 355, 360b, 362, 371, 374, 381, 382, 387, 387a, 393; 42 U.S.C. 216, 241, 243, 262, 264.

■ 2. In § 1.1, revise paragraph (b); and in the first sentence of paragraph (c), remove "*package* in § 1.20 and of" to read as follows:

§ 1.1 General.

* * * * *

(b) The definitions and interpretations of terms contained in sections 201 and 900 of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 321 and 387) shall be applicable also to such terms when used in regulations promulgated under that act.

* * * * *

■ 3. Amend § 1.20 by revising the introductory text to read as follows:

§ 1.20 Presence of mandatory label information.

Except as otherwise provided by section 900(13) of the Family Smoking Prevention and Tobacco Control Act (21 U.S.C. 387(13)) defining "package," the term *package* means any container or wrapping in which any food, drug, device, or cosmetic is enclosed for use in the delivery or display of such commodities to retail purchasers, but does not include:

* * * * *

PART 14—PUBLIC HEARING BEFORE A PUBLIC ADVISORY COMMITTEE

■ 4. The authority citation for part 14 continues to read as follows:

Authority: 5 U.S.C. App. 2; 15 U.S.C. 1451–1461, 21 U.S.C. 41–50, 141–149, 321–394, 467f, 679, 821, 1034; 28 U.S.C. 2112; 42 U.S.C. 201, 262, 263b, 264; Pub. L. 107–109; Pub. L. 108–155.

■ 5. Amend § 14.55 by adding paragraph (f) to read as follows:

§ 14.55 Termination of advisory committees.

* * * * *

(f) The Tobacco Products Scientific Advisory Committee is a permanent statutory advisory committee established by section 917 of the Family Smoking Prevention and Tobacco Control Act (21 U.S.C. 387q) (Pub. L. 111–31) and is not subject to termination and renewal under paragraph (a) of this section.

PART 17—CIVIL MONEY PENALTIES HEARINGS

■ 6. The authority citation for part 17 continues to read as follows:

Authority: 21 U.S.C. 331, 333, 337, 351, 352, 355, 360, 360c, 360f, 360i, 360j, 371; 42 U.S.C. 262, 263b, 300aa–28; 5 U.S.C. 554, 555, 556, 557.

■ 7. Amend § 17.1 by adding paragraph (j) to read as follows:

§ 17.1 Scope.

* * * * *

(j) Section 303(f) of the act authorizing civil money penalties for any person who violates a requirement of the Family Smoking Prevention and Tobacco Control Act which relates to tobacco products.

■ 8. Revise § 17.2 to read as follows:

§ 17.2 Maximum penalty amounts.

The following table shows maximum civil monetary penalties associated with the statutory provisions authorizing civil monetary penalties under the act or the Public Health Service Act.

CIVIL MONETARY PENALTIES AUTHORITIES ADMINISTERED BY FDA AND ADJUSTED MAXIMUM PENALTY AMOUNTS

U.S.C. Section	Former maximum penalty amount (in dollars)[1]	Assessment method	Date of last penalty figure or adjustment	Adjusted maximum penalty amount (in dollars)
		21 U.S.C.		
333(b)(2)(A)	55,000	For each of the first two violations in any 10-year period	2008	60,000.
333(b)(2)(B)	1,100,000	For each violation after the second conviction in any 10-year period.	2008	1,200,000.
333(b)(3)	110,000	Per violation	2008	120,000.
333(f)(1)(A)	16,500	Per violation	2008	16,500 (not adjusted).
333(f)(1)(A)	1,100,000	For the aggregate of violations	2008	1,200,000.
333(f)(2)(A)	55,000	Per individual	2008	60,000.
333(f)(2)(A)	275,000	Per "any other person"	2008	300,000.
333(f)(2)(A)	550,000	For all violations adjudicated in a single proceeding	2008	600,000.
333(f)(3)(A)	10,000	For all violations adjudicated in a single proceeding	2007	10,000 (not adjusted).
333(f)(3)(B)	10,000	For each day the violation is not corrected after a 30-day period following notification until the violation is corrected.	2007	10,000 (not adjusted).
333(f)(4)(A)(i)	250,000	Per violation	2007	250,000 (not adjusted).
333(f)(4)(A)(i)	1,000,000	For all violations adjudicated in a single proceeding	2007	1,000,000 (not adjusted).
333(f)(4)(A)(ii)	250,000	For the first 30-day period (or any portion thereof) of continued violation following notification.	2007	250,000 (not adjusted).
333(f)(4)(A)(ii)	1,000,000	For any 30-day period, where the amount doubles for every 30-day period of continued violation after the first 30-day period.	2007	1,000,000 (not adjusted).
333(f)(4)(A)(ii)	10,000,000	For all violations adjudicated in a single proceeding	2007	10,000,000 (not adjusted).
333(f)(9)(A)	[1] N/A	Per violation	2009	15,000 (not adjusted).
333(f)(9)(A)	N/A	For all violations adjudicated in a single proceeding	2009	1,000,000 (not adjusted).
333(f)(9)(B)(i)(I)	N/A	Per violation	2009	250,000 (not adjusted).
333(f)(9)(B)(i)(I)	N/A	For all violations adjudicated in a single proceeding	2009	1,000,000 (not adjusted).
333(f)(9)(B)(i)(II)	N/A	For the first 30-day period (or any portion thereof) of continued violation following notification.	2009	250,000 (not adjusted).
333(f)(9)(B)(i)(II)	N/A	For any 30-day period, where the amount doubled for every 30-day period of continued violation after the first 30-day period.	2009	1,000,000 (not adjusted).
333(f)(9)(B)(i)(II)	N/A	For all violations adjudicated in a single proceeding	2009	10,000,000 (not adjusted).
333(f)(9)(B)(ii)(I)	N/A	Per violation	2009	250,000 (not adjusted).
333(f)(9)(B)(ii)(I)	N/A	For all violations adjudicated in a single proceeding	2009	1,000,000 (not adjusted).
333(f)(9)(B)(ii)(II)	N/A	For the first 30-day period (or any portion thereof) of continued violation following notification.	2009	250,000 (not adjusted).
333(f)(9)(B)(ii)(II)	N/A	For any 30-day period, where the amount doubled for every 30-day period of continued violation after the first 30-day period.	2009	1,000,000 (not adjusted).
333(f)(9)(B)(ii)(II)	N/A	For all violations adjudicated in a single proceeding	2009	10,000,000 (not adjusted).
333(g)(1)	250,000	For the first violation in any 3-year period	2007	250,000 (not adjusted).
333(g)(1)	500,000	For each subsequent violation in any 3-year period	2007	500,000 (not adjusted).
333 note	N/A	For the second violation (following a first violation with warning) within a 12-month period by a retailer with an approved training program.	2009	250 (not adjusted).
333 note	N/A	For the third violation within a 24-month period by a retailer with an approved training program.	2009	500 (not adjusted).
333 note	N/A	For the fourth violation within a 24-month period by a retailer with an approved training program.	2009	2,000 (not adjusted).
333 note	N/A	For the fifth violation within a 36-month period by a retailer with an approved training program.	2009	5,000 (not adjusted).
333 note	N/A	For the six or subsequent violation within a 48-month period by a retailer with an approved training program.	2009	10,000 (not adjusted).
333 note	N/A	For the first violation by a retailer without an approved training program.	2009	250 (not adjusted).
333 note	N/A	For the second violation within a 12-month period by a retailer without an approved training program.	2009	500 (not adjusted).
333 note	N/A	For the third violation within a 24-month period by a retailer without an approved training program.	2009	1,000 (not adjusted).

CIVIL MONETARY PENALTIES AUTHORITIES ADMINISTERED BY FDA AND ADJUSTED MAXIMUM PENALTY AMOUNTS—Continued

U.S.C. Section	Former maximum penalty amount (in dollars)[1]	Assessment method	Date of last penalty figure or adjustment	Adjusted maximum penalty amount (in dollars)
333 note	N/A	For the fourth violation within a 24-month period by a retailer without an approved training program.	2009	2,000 (not adjusted).
333 note	N/A	For the fifth violation within a 36-month period by a retailer without an approved training program.	2009	5,000 (not adjusted).
333 note	N/A	For the six or subsequent violation within a 48-month period by a retailer without an approved training program.	2009	10,000 (not adjusted).
335b(a)	275,000	Per violation for an individual	2008	300,000.
335b(a)	1,100,000	Per violation for "any other person"	2008	1,200,000.
360pp(b)(1)	1,100	Per violation per person	2008	1,100 (not adjusted).
360pp(b)(1)	330,000	For any related series of violations	2008	355,000.
42 U.S.C.				
263b(h)(3)	11,000	Per violation	2008	11,000 (not adjusted).
300aa–28(b)(1)	110,000	Per occurrence	2008	120,000.

[1] Maximum penalties assessed under The Family Smoking Prevention and Tobacco Control Act do not have a "former maximum penalty."

Dated: November 23, 2010.

Leslie Kux,

Acting Assistant Commissioner for Policy.

[FR Doc. 2010–30039 Filed 11–29–10; 8:45 am]

BILLING CODE 4160–01–P

FEDERAL MINE SAFETY AND HEALTH REVIEW COMMISSION

29 CFR Part 2700

Penalty Settlement Procedure

AGENCY: Federal Mine Safety and Health Review Commission.

ACTION: Final rule.

SUMMARY: The Federal Mine Safety and Health Review Commission (the "Commission") is an independent adjudicatory agency that provides hearings and appellate review of cases arising under the Federal Mine Safety and Health Act of 1977, or Mine Act. Hearings are held before the Commission's Administrative Law Judges, and appellate review is provided by a five-member Review Commission appointed by the President and confirmed by the Senate. The Commission is publishing a final rule to streamline the process for settling civil penalties assessed under the Mine Act.

DATES: The final rule takes effect on December 30, 2010. The Commission will accept written and electronic comments received on or before December 15, 2010.

ADDRESSES: Written comments should be mailed to Michael A. McCord, General Counsel, Office of the General Counsel, Federal Mine Safety and Health Review Commission, 601 New Jersey Avenue, NW., Suite 9500, Washington, DC 20001, or sent via facsimile to 202–434–9944. Persons mailing written comments shall provide an original and three copies of their comments. Electronic comments should state "Comments on Penalty Settlement Rule" in the subject line and be sent to *mmccord@fmshrc.gov.*

FOR FURTHER INFORMATION CONTACT: Michael A. McCord, General Counsel, Office of the General Counsel, 601 New Jersey Avenue, NW., Suite 9500, Washington, DC 20001; telephone 202–434–9935; fax 202–434–9944.

SUPPLEMENTARY INFORMATION:

Background

On April 27, 2010, the Commission published in the **Federal Register** an interim rule regarding the Commission's civil penalty settlement procedures. 75 FR 21987. The Commission explained that since 2006, the number of new cases filed with the Commission has dramatically increased, and that in order to deal with that burgeoning caseload, the Commission is considering methods to simplify how it processes civil penalty settlements. The interim rule became effective on May 27, 2010, and the Commission accepted comments on the rule through June 28, 2010. The Commission received comments from the Secretary of Labor (the "Secretary") through the U.S. Department of Labor's Office of the Solicitor, individual Conference and Litigation Representatives ("CLRs"), and a few members of the mining community.

Under section 110(k) of the Mine Act, 30 U.S.C. 820(k), a proposed civil penalty that has been contested before the Commission may be settled only with the approval of the Commission. Under the Commission's practice prior to the effective date of the interim rule, a party submitted to a Commission Administrative Law Judge a motion to approve a penalty settlement that included for each violation the amount of the penalty proposed by the Department of Labor's Mine Safety and Health Administration ("MSHA"), the amount of the penalty agreed to in settlement, and facts in support of the penalty agreed to by the parties. 29 CFR 2700.31(b) (2009). A Commission Judge considered the motion and evaluated the penalty agreed to by the parties based on the criteria set forth in section 110(i) of the Mine Act, 30 U.S.C. 820(i). If the Judge concluded that the settlement was consistent with the statutory criteria, the Judge issued a decision approving the settlement and setting forth the reasons for approval.

The interim rule changed the current procedure by adding two new requirements. First, in all penalty proceedings, except for discrimination proceedings arising under section 105(c) of the Mine Act, 30 U.S.C. 815(c), or proceedings against individuals pursuant to section 110(c) of the Mine Act, 30 U.S.C. 820(c), the interim rule requires that a party filing a motion to approve a penalty settlement submit a proposed decision approving settlement ("proposed order") with the motion. Second, it requires the filing party to submit the motion and proposed order electronically. The basic requirements

for content of a motion to approve settlement are relatively unchanged in that the interim rule requires that a movant include in the motion for each violation the amount of the proposed penalty, the amount of the penalty agreed to in settlement, and facts that support the penalty agreed to by the parties. The Commission explained in the preamble to the interim rule that a filing party may set forth this information in the proposed order and incorporate the proposed order by reference in the motion.

The interim rule also includes a new requirement that the party filing the motion must certify that the opposing party has reviewed the motion and has authorized the filing party to represent that the opposing party consents to the granting of the motion and the entry of the proposed order approving settlement. In addition, the interim rule requires that, if a motion had been filed by a CLR on behalf of the Secretary of Labor, the accompanying proposed order must include a provision in which the Judge accepts the CLR to represent the Secretary in accordance with the notice of either limited or unlimited appearance previously filed with the Commission. The Commission has made sample forms for proposed orders approving settlement available on the Commission's Web site (*http://www.fmshrc.gov*).

The interim rule provides that in all penalty proceedings, except discrimination and section 110(c) proceedings, parties must file any settlement motion electronically in accordance with the rule and the Commission's Web site instructions. The Commission provides in the interim rule that a party may file non-electronically only with the permission of the Judge.

The interim rule further requires that a copy of a motion and proposed order be served on the opposing party as expeditiously as possible. In recognition that some parties may not have the capability of being served with the motion and proposed order by e-mail, facsimile transmission, or commercial delivery, the interim rule provides that, in such circumstances, the filing party may serve the motion and proposed order on the opposing party by mail.

The interim rule also provides that if a party filing a motion to approve settlement and proposed order fails to include required information in the motion and proposed order, the Commission will not accept for filing the motion and proposed order. Rather, the Commission will inform the filing party of the need for correction and resubmission.

As previously mentioned, before the interim rule became effective parties were required to include in a motion to approve settlement the amount of the proposed penalty, the amount of the penalty agreed to in settlement, and facts in support of the penalty agreed to by the parties. The final rule provides that such factual support must be submitted in the motion to approve settlement and proposed order. However, in order to minimize any extra work required of parties, the Commission has clarified in the final rule that a filing party need only submit the amount of the proposed penalty, the amount of the penalty agreed to in settlement, and facts in support of the penalty agreed to by the parties in the proposed order, and may incorporate that factual support by reference in the motion. Thus, the parties need to provide the factual support for a settlement only in one document filed with the Commission, as was the practice before the interim rule became effective.

It is important to emphasize that the Commission intends for each proposed order to be able to stand alone as a description of the settlement and reasons for any approval of the settlement without reference to the motion. Thus, although the motion may be brief and incorporate by reference the factual support set forth in detail in the proposed order, the reverse is not true. A party may not submit a brief order that incorporates by reference the factual support set forth in detail in the motion. If a party submits a motion that contains detailed factual support and a proposed order that merely incorporates by reference the detailed information provided in the motion, the Commission will not accept the motion and proposed order for filing in accordance with the provisions of paragraph (f) of the final rule. The proposed order must set forth the amount of the proposed penalty, the amount of the penalty agreed to in settlement, and facts in support of the penalty agreed to by the parties.

Although motions may be submitted in PDF format, it is important that proposed orders not be submitted in PDF format. Judges are unable to make electronic changes to proposed orders that are submitted in PDF format. The Commission will be able to process settlements more efficiently if orders are submitted in a format in which the Judge may easily make any necessary changes.

Commenters have also complained that they are having technical difficulties with the forms available on the Commission's Web site, and that the interim rule is ambiguous as to whether parties are required to use the forms. The Secretary suggested that the final rule should clarify that the proposed order does not have to conform to one of the templates on the Commission's Web site as long as the proposed order includes the required information. The Secretary also commented that the final rule should require that the proposed order include language telling operators where to send penalty checks.

The Commission has clarified in the final rule that parties are not required to use the proposed order forms available on the Commission's Web site. The final rule provides, however, that if a proposed order fails to include pertinent information, the motion and proposed order may be rejected for filing by the Commission in accordance with paragraph (f) of the final rule. The Commission has not included in the final rule a requirement that a proposed order must include language telling operators where to send penalty checks. Such language is provided in the Commission's proposed order forms, however. The Commission notes that parties may include such language in the proposed orders even if they do not use the forms.

As to the certification requirement set forth in the interim rule, the Secretary commented that her attorneys and CLRs have difficulty verifying that operators have actually reviewed the settlement. She suggests that the purpose of the rule, *i.e.,* streamlining the settlement of penalty proceedings, would be better served if the filing party were only required to certify that the opposing party has authorized the granting of the motion and the entry of the proposed order.

In a related comment, a member of the mining community stated that on occasion CLRs have unilaterally filed "joint" settlement motions that have not been reviewed or approved by the operator. The commenter suggested that the Commission should require that any settlement motions must either be signed by both parties' representatives or, prior to filing, a settlement motion and proposed order must be submitted to the opposing party for review at least three business days prior to filing.

The Commission agrees with these comments and has revised the language of the rule accordingly. The final rule provides that the party filing a motion must certify that the opposing party has authorized the granting of the motion and the entry of the proposed order. The final rule does not require a certification that the opposing party has reviewed the motion and proposed order. In order to ensure that an opposing party has reviewed the motion and proposed

order, the Commission has added a provision to the final rule requiring that a settlement motion and proposed order must be served on all parties or if the parties are represented, on their representatives, at least five business days before the motion and proposed order are filed with the Commission. The Commission has included a five-day requirement rather than a three-day requirement in order to provide as much review time as possible to the parties, particularly if the settlement motion and proposed order are served by mail. The Commission notes that both the five-day service requirement and the certification requirement apply in every case where a settlement motion and proposed order are filed.

The Secretary commented that the final rule should clarify that before filing a settlement motion on behalf of the Secretary, a CLR does not need to have obtained Commission authorization to represent the Secretary in that proceeding. The Commission has included that change in the final rule.

One commenter stated that section 110(c) proceedings are frequently consolidated with, and/or are settled with, the related civil penalty proceeding against the operator. The commenter stated that in such circumstances, it makes sense to discuss the settlement of both cases in a single motion. The commenter suggested that section 110(c) proceedings should be covered by the final rule and should not be specifically excluded. The Commission agrees and has made this change. Thus, discrimination cases are the only cases in which a party must submit a hard paper copy of a motion to approve settlement to the Judge that includes for each violation the amount of the proposed penalty, the amount of the penalty agreed to in settlement, and the supporting facts. In discrimination proceedings, a proposed order need not be submitted. Filing and service in discrimination proceedings shall be accomplished in accordance with the provisions of 29 CFR 2700.5 and 2700.7.

Notice and Public Procedure

Although notice-and-comment rulemaking requirements under the Administrative Procedure Act ("APA") do not apply to rules of agency procedure (*see* 5 U.S.C. 553(b)(3)(A)), the Commission invites members of the interested public to submit comments on the final rule. The Commission will accept public comments until December 15, 2010.

The Commission is an independent regulatory agency and, as such, is not subject to the requirements of E.O. 12866, E.O. 13132, or the Unfunded Mandates Reform Act, 2 U.S.C. 1501 *et seq.*

The Commission has determined under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) that this rule would not have a significant economic impact on a substantial number of small entities. Therefore, a Regulatory Flexibility Statement and Analysis has not been prepared.

The Commission has determined that the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*) does not apply because this rule does not contain any information collection requirements that require the approval of the OMB.

The Commission has determined that the Congressional Review Act (5 U.S.C. 801) is not applicable here because, pursuant to 5 U.S.C. 804(3)(C), this rule "does not substantially affect the rights or obligations of non-agency parties."

List of Subjects in 29 CFR Part 2700

Administrative practice and procedure, Mine safety and health, Penalties, Whistleblowing.

■ For the reasons stated in the preamble, the Federal Mine Safety and Health Review Commission amends 29 CFR part 2700 as follows:

PART 2700—PROCEDURAL RULES

■ 1. The authority citation for part 2700 continues to read as follows:

Authority: 30 U.S.C. 815, 820, 823, and 876.

■ 2. Section 2700.5 is amended by revising paragraph (b) to read as follows:

§ 2700.5 General requirements for pleadings and other documents; status or informational requests.

* * * * *

(b) *Where to file.* Unless otherwise provided for in the Act, these rules, or by order:

(1) Until a Judge has been assigned to a case, all documents shall be filed with the Commission. Documents filed with the Commission shall be addressed to the Executive Director and mailed or delivered to the Docket Office, Federal Mine Safety and Health Review Commission, 601 New Jersey Avenue, NW., Suite 9500, Washington, DC 20001; facsimile delivery as allowed by these rules (*see* section 2700.5(e)), shall be transmitted to (202) 434–9954.

(2) After a Judge has been assigned, and before a decision has been issued, documents shall be filed with the Judge at the address set forth on the notice of the assignment.

(3) Documents filed in connection with interlocutory review shall be filed with the Commission in accordance with section 2700.76.

(4) After the Judge has issued a final decision, documents shall be filed with the Commission as described in paragraph (b)(1) of this section.

* * * * *

■ 3. Section 2700.31 is revised to read as follows:

§ 2700.31 Penalty settlement.

(a) *General.* A proposed penalty that has been contested before the Commission may be settled only with the approval of the Commission upon motion. In all penalty proceedings, except for discrimination proceedings arising under section 105(c) of the Mine Act, 30 U.S.C. 815(c), a settlement motion must be accompanied by a proposed order approving settlement. In discrimination proceedings, a party shall file a motion to approve settlement that includes the factual support described in paragraph (b)(1) of this section, and that shall be filed and served in accordance with the provisions of 29 CFR 2700.5 and 2700.7, respectively. In discrimination proceedings, a party need not file a proposed order.

(b) *Content of motion.*

(1) *Factual support.* A motion to approve a penalty settlement shall include for each violation the amount of the penalty proposed by the Secretary, the amount of the penalty agreed to in settlement, and facts in support of the penalty agreed to by the parties. Rather than setting forth such information in detail, the motion may incorporate by reference the information which has been included in the accompanying proposed order as required by paragraph (c)(1) of this section.

(2) *Certification.* The party filing a motion must certify that the opposing party has authorized the filing party to represent that the opposing party consents to the granting of the motion and the entry of the proposed order approving settlement.

(c) *Content of proposed order.*

(1) *Factual support.* A proposed order approving a penalty settlement shall include for each violation the amount of the penalty proposed by the Secretary, the amount of the penalty agreed to in settlement, and facts in support of the penalty agreed to by the parties. Forms for proposed orders approving settlement are available on the Commission's Web site (*http://www.fmshrc.gov*). Although parties are not required to use the forms on the Commission's Web site, if proposed orders fail to include pertinent information, the motion and proposed order may be rejected for filing by the Commission in accordance with paragraph (f) of this section. Proposed

orders shall not be submitted in PDF format.

(2) *Appearance by CLR.* If a motion has been filed by a Conference and Litigation Representative ("CLR") on behalf of the Secretary, the proposed order approving settlement accompanying the motion shall include a provision in which the Judge accepts the CLR to represent the Secretary in accordance with the notice of either limited or unlimited appearance previously filed with the Commission. A CLR does not need to obtain authorization from the Commission to represent the Secretary before the CLR files a motion to approve settlement and proposed order.

(d) *Filing and service of motion accompanied by proposed order.*

(1) *Electronic filing.* A motion and proposed order shall be filed electronically according to the requirements set forth in this rule and instructions on the Commission's Web site (*http://www.fmshrc.gov*). Filing is effective upon the date of the electronic transmission of the motion and proposed order. The transmitting party is responsible for retaining records showing the date of transmission, including receipts.

(i) *Signatures.* Any signature line set forth within a motion to approve settlement submitted electronically shall include the notation "/s/" followed by the typewritten name of the party or representative of the party filing the document. Such representation of the signature shall be deemed to be the original signature of the representative for all purposes unless the party representative shows that such representation of the signature was unauthorized. *See* 29 CFR 2700.6.

(ii) *Status of documents.* A motion and proposed order filed electronically constitute written documents for the purpose of applying the Commission's procedural rules (29 CFR part 2700), and such rules apply unless an exception to those rules is specifically set forth in this rule. Any copies of the motion and proposed order which have been printed and placed in the official case file by the Commission shall have the same force and effect as original documents.

(2) *Filing by non-electronic means.* A party may file a motion to approve settlement and an accompanying proposed order by non-electronic means only with the permission of the Judge.

(3) *Service.* A settlement motion and proposed order shall be served on all parties or, if parties are represented, upon their representatives, by the most expeditious means possible and at least five business days before the motion and proposed order are filed with the Commission. If a party cannot be served by e-mail, facsimile transmission, or commercial delivery, a copy of the motion and proposed order may be served by mail. A certificate of service shall accompany the motion and proposed order setting forth the date and manner of service.

(e) *Filing of motion and proposed order prior to filing of petition.* If a motion to approve settlement and proposed order is filed with the Commission before the Secretary has filed a petition for assessment of penalty, the filing party must also submit as attachments, electronic copies of the proposed penalty assessment and citations and orders at issue. If such attachments are filed, the Secretary need not file a petition for assessment of penalty.

(f) *Non-acceptance of motion and proposed order.* If a party filing a motion to approve settlement and a proposed order fails to include in the motion and proposed order pertinent information required by this rule and the Commission's instructions posted on the Commission's Web site, the Commission will not accept for filing the motion and proposed order. Rather, the Commission will inform the filing party of the need for correction and resubmission.

(g) *Final order.* Any order by the Judge approving a settlement shall set forth the reasons for approval and shall be supported by the record. Such order shall become the final order of the Commission 40 days after issuance unless the Commission has directed that the order be reviewed. A Judge may correct clerical errors in an order approving settlement in accordance with the provisions of 29 CFR 2700.69(c).

Dated: November 23, 2010.

Mary Lu Jordan,

Chairman, Federal Mine Safety and Health Review Commission.

[FR Doc. 2010–30117 Filed 11–29–10; 8:45 am]

BILLING CODE 6735–01–P

DEPARTMENT OF THE TREASURY

Office of Foreign Assets Control

31 CFR Part 548

Belarus Sanctions Regulations

AGENCY: Office of Foreign Assets Control, Treasury.

ACTION: Final rule.

SUMMARY: The Department of the Treasury's Office of Foreign Assets Control ("OFAC") is amending the Belarus Sanctions Regulations ("BSR") in the Code of Federal Regulations to authorize U.S. persons to engage in otherwise prohibited transactions with two blocked entities, Lakokraska OAO and/or Polotsk Steklovolokno OAO, until May 31, 2011. In addition, OFAC is amending the BSR to make a technical correction to the authority citation.

DATES: *Effective Date:* November 30, 2010.

FOR FURTHER INFORMATION CONTACT: Assistant Director for Compliance, Outreach & Implementation, tel.: 202/622–2490, Assistant Director for Licensing, tel.: 202/622–2480, Assistant Director for Policy, tel.: 202/622–4855, Office of Foreign Assets Control, or Chief Counsel (Foreign Assets Control), tel.: 202/622–2410, Office of the General Counsel, Department of the Treasury (not toll free numbers).

SUPPLEMENTARY INFORMATION:

Electronic and Facsimile Availability

This document and additional information concerning OFAC are available from OFAC's Web site (*http://www.treas.gov/ofac*). Certain general information pertaining to OFAC's sanctions programs also is available via facsimile through a 24-hour fax-on-demand service, tel.: 202/622–0077.

Background

The Belarus Sanctions Regulations, 31 CFR part 548 ("BSR"), implement Executive Order 13405 of June 16, 2006, "Blocking Property of Certain Persons Undermining Democratic Processes or Institutions in Belarus" ("E.O. 13405"). Pursuant to E.O. 13405, on May 15, 2008, OFAC designated the entities Lakokraska OAO and Polotsk Steklovolokno OAO, blocking their property and interests in property (73 FR 29849, May 22, 2008). On September 4, 2008, before the publication of the BSR, OFAC issued and posted on its Web site Belarus General License No. 1, which authorized all transactions between U.S. persons and Lakokraska OAO and/or Polotsk Steklovolokno OAO from September 4, 2008, until March 2, 2009. This authorization was subject to the proviso that all property and interests in property of Lakokraska OAO or Polotsk Steklovolokno OAO that previously had been blocked pursuant to E.O. 13405 were to remain blocked. OFAC subsequently amended Belarus General License No. 1 four times to extend its authorization for transactions between U.S. persons and the two entities. The latest of those

amendments, Belarus General License No. 1–D, extended the authorization for all transactions between U.S. persons and Lakokraska OAO and/or Polotsk Steklovolokno OAO until November 30, 2010.

The BSR were published on February 3, 2010 (75 FR 5502). Section 548.509 of the BSR memorialized General License No. 1, as amended, and authorized all transactions between U.S. persons and Lakokraska OAO and/or Polotsk Steklovolokno OAO for a limited period of time. Today, OFAC is amending section 548.509(a) of the BSR to extend the authorization until May 31, 2011. U.S. persons may continue to engage in all transactions otherwise prohibited by the BSR with Lakokraska OAO and/or Polotsk Steklovolokno OAO, except that, as provided in section 548.509(b), any property and interests in property that were blocked prior to September 4, 2008, still remain blocked.

This rule also corrects a typographical error in the BSR's authority citation.

Public Participation

Because the amendments of the Regulations involve a foreign affairs function, the provisions of Executive Order 12866 and the Administrative Procedure Act (5 U.S.C. 553) requiring notice of proposed rulemaking, opportunity for public participation, and delay in effective date are inapplicable. Because no notice of proposed rulemaking is required for this rule, the Regulatory Flexibility Act (5 U.S.C. 601–612) does not apply.

Paperwork Reduction Act

The collections of information related to the Regulations are contained in 31 CFR part 501 (the "Reporting, Procedures and Penalties Regulations"). Pursuant to the Paperwork Reduction Act of 1995 (44 U.S.C. 3507), those collections of information have been approved by the Office of Management and Budget under control number 1505–0164. 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 control number.

List of Subjects in 31 CFR Part 548

Administrative practice and procedure, Banks, Banking, Belarus, Blocking of assets, Credit, Foreign trade, Penalties, Reporting and recordkeeping requirements, Securities, Services.

■ For the reasons set forth in the preamble, the Department of the Treasury's Office of Foreign Assets Control amends 31 CFR part 548 as follows:

PART 548—BELARUS SANCTIONS REGULATIONS

■ 1. Revise the authority citation to part 548 to read as follows:

Authority: 3 U.S.C. 301; 31 U.S.C. 321(b); 50 U.S.C. 1601–1651, 1701–1706; Pub. L. 101–410, 104 Stat. 890 (28 U.S.C. 2461 note); Pub. L. 110–96, 121 Stat. 1011 (50 U.S.C. 1705 note); E.O. 13405, 71 FR 35485; 3 CFR, 2007 Comp., p. 231.

Subpart E—Licenses, Authorizations, and Statements of Licensing Policy

■ 2. Revise § 548.509(a) to read as follows:

§ 548.509 Transactions with certain blocked persons authorized.

(a) Except as provided in paragraph (b) of this section, U.S. persons are authorized to engage in all transactions otherwise prohibited by this part with Lakokraska OAO and/or Polotsk Steklovolokno OAO, entities whose property and interests in property are blocked pursuant to § 548.201(a)(2), until May 31, 2011.

* * * * *

Dated: November 23, 2010.

Adam J. Szubin,

Director, Office of Foreign Assets Control.

[FR Doc. 2010–30182 Filed 11–29–10; 8:45 am]

BILLING CODE 4810–AL–P

DEPARTMENT OF HOMELAND SECURITY

Coast Guard

33 CFR Part 165

[Docket No. USCG–2010–1045]

RIN 1625–AA00

Safety Zone; Chicago Harbor, Navy Pier Southeast, Chicago, IL

AGENCY: Coast Guard, DHS.

ACTION: Notice of enforcement of regulation.

SUMMARY: The Coast Guard will enforce the Navy Pier Southeast Safety Zone in Chicago Harbor from December 4, 2010 through January 1, 2011. This action is necessary and intended to ensure safety of life on the navigable waters of the United States immediately prior to, during, and immediately after fireworks events. This rule will establish restrictions upon, and control movement of, vessels in a specified area immediately prior to, during, and immediately after fireworks events. During the enforcement period, no person or vessel may enter the safety zones without permission of the Captain of the Port, Sector Lake Michigan.

DATES: The regulations in 33 CFR 165.931 will be enforced from 6:15 p.m. on December 4, 2010 to 12:30 a.m. on January 1, 2011.

FOR FURTHER INFORMATION CONTACT: If you have questions on this notice, call or email BM1 Adam Kraft, Prevention Department, Coast Guard Sector Lake Michigan, Milwaukee, WI at 414–747–7154, e-mail *Adam.D.Kraft@uscg.mil.*

SUPPLEMENTARY INFORMATION: The Coast Guard will enforce the Safety Zone; Chicago Harbor, Navy Pier Southeast, Chicago, IL listed in 33 CFR 165.931 for the following events:

(1) *Navy Pier Fireworks;* on December 4, 2010 from 6:15 p.m. through 6:30 p.m.; on December 31, 2010 from 7:45 p.m. through 8:15 p.m.; and from 11:45 p.m. on December 31, 2010 to 12:30 a.m. on January 1, 2011.

All vessels must obtain permission from the Captain of the Port, Sector Lake Michigan, or his or her on-scene representative to enter, move within or exit the safety zone. Vessels and persons granted permission to enter the safety zone shall obey all lawful orders or directions of the Captain of the Port, Sector Lake Michigan, or his or her on-scene representative. While within a safety zone, all vessels shall operate at the minimum speed necessary to maintain a safe course.

This notice is issued under authority of 33 CFR 165.931 and 5 U.S.C. 552 (a). In addition to this notice in the **Federal Register**, the Coast Guard will provide the maritime community with advance notification of these enforcement periods via broadcast Notice to Mariners or Local Notice to Mariners. The Captain of the Port, Sector Lake Michigan, will issue a Broadcast Notice to Mariners notifying the public when enforcement of the safety zone established by this section is suspended. If the Captain of the Port, Sector Lake Michigan, determines that the safety zone need not be enforced for the full duration stated in this notice, he or she may use a Broadcast Notice to Mariners to grant general permission to enter the safety zone. The Captain of the Port, Sector Lake Michigan, or his or her on-scene representative may be contacted via VHF Channel 16.

Dated: November 19, 2010.

S.R. Schenk,

Commander, U.S. Coast Guard, Captain of the Port, Sector Lake Michigan, Acting.

[FR Doc. 2010–30133 Filed 11–29–10; 8:45 am]

BILLING CODE 9110–04–P

DEPARTMENT OF HOMELAND SECURITY

Coast Guard

33 CFR PART 165

[Docket No. USCG–2010–1013]

RIN 1625–AA00

Safety Zone; "Contagion" Movie Filming, Calumet River, Chicago, IL

AGENCY: Coast Guard, DHS.

ACTION: Temporary final rule.

SUMMARY: The Coast Guard is establishing a temporary safety zone on the Calumet River near Chicago, Illinois. This zone is intended to restrict vessels from a portion of the Calumet River due to the filming of a movie involving high speed boat chases and other dangerous stunts on the water. This temporary safety zone is necessary to protect the surrounding public and vessels from the hazards associated with the stunts that will be performed on the river during the filming of this movie.

DATES: This rule is effective from 7 a.m. on December 11, 2010 until 7 a.m. on December 12, 2010. This rule will be enforced from 7 a.m. on December 11, 2010 until 7 a.m. on December 12, 2010.

ADDRESSES: Documents indicated in this preamble as being available in the docket are part of docket USCG–2010–1013 and are available online by going to *http://www.regulations.gov,* inserting USCG–2010–1013 in the "Keyword" box, and then clicking "search." They are also available for inspection or copying at the Docket Management Facility (M–30), U.S. Department of Transportation, West Building Ground floor, Room W12–140, 1200 New Jersey Avenue, SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: If you have questions on this temporary rule, contact or e-mail BM1 Adam Kraft, U.S. Coast Guard Sector Lake Michigan, at 414–747–7154 or *Adam.D.Kraft@uscg.mil.* If you have questions on viewing the docket, call Renee V. Wright, Program Manager, Docket Operations, telephone 202–366–9826.

SUPPLEMENTARY INFORMATION:

Regulatory Information

The Coast Guard is issuing this temporary final rule without prior notice and opportunity to comment pursuant to authority under section 4(a) of the Administrative Procedure Act (APA) (5 U.S.C. 553(b)). This provision authorizes an agency to issue a rule without prior notice and opportunity to comment when an agency for good cause finds that those procedures are "impracticable, unnecessary, or contrary to the public interest." Under U.S.C. 553 (b)(B), the Coast Guard finds that good cause exists for not publishing a notice of proposed rulemaking (NPRM) with respect to this rule because the final details for this event were not submitted to the Coast Guard until October 27, 2010. As such, it is impracticable to provide a full comment period due to lack of time. In addition, given the high risks of injury and damage that will be created during the filming of the movie Contagion, a delay in enacting this safety zone would be contrary to the public interest.

Under 5 U.S.C. 553(d)(3), the Coast Guard finds that good cause exists for making this rule effective less than 30 days after publication in the **Federal Register**. A 30-day notice period is not possible for the same reasons that publishing an NPRM was not possible. Due to the high risks of personal injury and property damage that will be created during the filming of the movie Contagion, delaying the effective date of this rule would be contrary to the public interest.

Background and Purpose

This temporary safety zone is necessary to protect vessels from the hazards associated with the filming of the motion picture Contagion. The filming of dangerous boat chases and other stunts on the water poses serious risks of injury to persons and property. As such, the Captain of the Port, Sector Lake Michigan, has determined that the filming of this motion picture does pose significant risks to public safety and property and that a safety zone is necessary.

Discussion of Rule

The safety zone will encompass all U.S. navigable waters of the Calumet River in the vicinity of the South Torrence Avenue Bridge between Mile Marker 329.0 and Mile Marker 327.5 of the Calumet River in Chicago, IL. [DATUM: NAD 83].

All persons and vessels shall comply with the instructions of the Coast Guard Captain of the Port, Sector Lake Michigan, or his or her on-scene representative. Entry into, transiting, or anchoring within the safety zone is prohibited unless authorized by the Captain of the Port, Sector Lake Michigan, or his or her on-scene representative. The Captain of the Port, Sector Lake Michigan, or his or her on-scene representative may be contacted via VHF Channel 16.

Regulatory Analyses

We developed this rule after considering numerous statutes and executive orders related to rulemaking. Below we summarize our analyses based on 13 of these statutes or executive orders.

Regulatory Planning and Review

This rule is not a significant regulatory action under section 3(f) of Executive Order 12866, Regulatory Planning and Review, and does not require an assessment of potential costs and benefits under section 6(a)(3) of that Order. The Office of Management and Budget has not reviewed it under that Order.

This determination is based on the minimal time that vessels will be restricted from the zone and the zone is an area where the Coast Guard expects insignificant adverse impact to mariners from the zones' activation.

Small Entities

Under the Regulatory Flexibility Act (5 U.S.C. 601–612), we have considered whether this rule will have a significant economic impact on a substantial number of small entities. 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 rule will not have a significant economic impact on a substantial number of small entities.

This rule will affect the following entities, some of which might be small entities: The owners or operators of vessels intending to transit or anchor on a portion of the Calumet River between 7 a.m. on December 11, 2010 until 7 a.m. on December 12, 2010.

This safety zone will not have a significant economic impact on a substantial number of small entities for the following reasons: This rule will only be enforced while unsafe conditions exist. The Coast Guard also expects that traffic will generally be very low based on the time of year that this closure will occur.

In the event that this temporary safety zone affects shipping, commercial vessels may request permission from the Captain of The Port, Sector Lake Michigan, or his or her on-scene representative to transit through the safety zone. The Coast Guard will give notice to the public via a Broadcast to Mariners that the regulation is in effect.

Assistance for Small Entities

Under section 213(a) of the Small Business Regulatory Enforcement Fairness Act of 1996 (Pub. L. 104–121), we offer to assist small entities in understanding the rule so that they could better evaluate its effects on them and participate in the rulemaking process. Small businesses may send comments on the actions of Federal employees who enforce, or otherwise determine compliance with, Federal regulations to the Small Business and Agriculture Regulatory Enforcement Ombudsman and the Regional Small Business Regulatory Fairness Boards. The Ombudsman evaluates these actions annually and rates each agency's responsiveness to small business. If you wish to comment on actions by employees of the Coast Guard, call 1–888–REG–FAIR (1–888–734–3247). The Coast Guard will not retaliate against small entities that question or complain about this rule or any policy or action of the Coast Guard.

Collection of Information

This rule calls for no new collection of information under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501–3520).

Federalism

A rule has implications for federalism under Executive Order 13132, Federalism, if it has a substantial direct effect on State or local governments and would either preempt State law or impose a substantial direct cost of compliance on them. We have analyzed this rule under that Order and have determined that it does not have implications for federalism.

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 rule will not result in such expenditure, we do discuss the effects of this rule elsewhere in this preamble.

Taking of Private Property

This rule will not affect a taking of private property or otherwise have taking implications under Executive Order 12630, Governmental Actions and Interference with Constitutionally Protected Property Rights.

Civil Justice Reform

This rule meets applicable standards in sections 3(a) and 3(b)(2) of Executive Order 12988, Civil Justice Reform, to minimize litigation, eliminate ambiguity, and reduce burden.

Protection of Children

We have analyzed this rule under Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks. This rule is not an economically significant rule and does not concern an environmental risk to health or risk to safety that may disproportionately affect children.

Indian Tribal Governments

This rule does not have tribal implications under Executive Order 13175, Consultation and Coordination with Indian Tribal Governments, because it does 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.

Energy Effects

We have analyzed this rule under Executive Order 13211, Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use. We have determined that it is not a "significant energy action" under that order because it is not a "significant regulatory action" under Executive Order 12866 and is not likely to have a significant adverse effect on the supply, distribution, or use of energy. The Administrator of the Office of Information and Regulatory Affairs has not designated it as a significant energy action. Therefore, it does not require a Statement of Energy Effects under Executive Order 13211.

Technical Standards

The National Technology Transfer and Advancement Act (NTTAA) (15 U.S.C. 272 note) directs agencies to use voluntary consensus standards in their regulatory activities unless the agency provides Congress, through the Office of Management and Budget, with an explanation of why using these standards would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (*e.g.,* specifications of materials, performance, design, or operation; test methods; sampling procedures; and related management systems practices) that are developed or adopted by voluntary consensus standards bodies.

This rule does not use technical standards. Therefore, we did not consider the use of voluntary consensus standards.

Environment

We have analyzed this rule under Department of Homeland Security Management Directive 023–01 and Commandant Instruction M16475.lD, which guide the Coast Guard in complying with the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321–4370f), and have concluded this action is one of a category of actions which do not individually or cumulatively have a significant effect on the human environment. This rule is categorically excluded, under figure 2–1, paragraph (34)(g), of the Instruction. This rule involves the establishment of a safety zone and is therefore categorically excluded under paragraph 34(g) of the Instruction. This rule involves the establishment of a temporary safety zone that will be effective for less than twenty four hours. As such, it fits within the categorical exclusion for safety zones.

A final environmental analysis checklist and categorical exclusion determination are available in the docket where indicated under **ADDRESSES**.

List of Subjects in 33 CFR Part 165

Harbors, Marine Safety, Navigation (water), Reporting and recordkeeping requirements, Security measures, Waterways.

For the reasons discussed in the preamble, the Coast Guard amends 33 CFR part 165 as follows:

PART 165—REGULATED NAVIGATION AREAS AND LIMITED ACCESS AREAS

■ 1. The authority citation for part 165 continues to read as follows:

Authority: 33 U.S.C. 1226, 1231; 46 U.S.C. Chapter 701, 3306, 3703; 50 U.S.C. 191, 195; 33 CFR 1.05–1, 6.04–1, 6.04–6, and 160.5; Pub. L. 107–295, 116 Stat. 2064; Department of Homeland Security Delegation No. 0170.1.

■ 2. A new temporary § 165.T09–1013 is added as follows:

§ 165.T09–1013 Safety Zone; Contagion Movie Filming, Calumet River, Chicago, Illinois

(a) *Location.* The safety zone will encompass all U.S. navigable waters of the Calumet River in the vicinity of the South Torrence Avenue Bridge between Mile Marker 329.0 and Mile Marker 327.5 of the Calumet River in Chicago, IL. [DATUM: NAD 83].

(b) *Effective period.* This regulation is effective from 7 a.m. on December 11, 2010 until 7 a.m. on December 12, 2010. This regulation will be enforced from 7 a.m. on December 11, 2010 until 7 a.m. on December 12, 2010. The Captain of the Port, Sector Lake Michigan, or his or her on-scene representative may suspend and restart the enforcement of the safety zone at any time.

(c) *Regulations.* (1) In accordance with the general regulations in section 165.23 of this part, entry into, transiting, or anchoring within this safety zone is prohibited unless authorized by the Captain of the Port, Sector Lake Michigan, or his or her on-scene representative.

(2) This safety zone is closed to all vessel traffic, except as may be permitted by the Captain of the Port, Sector Lake Michigan, or his or her on-scene representative.

(3) The "on-scene representative" of the Captain of the Port, Sector Lake Michigan, is any Coast Guard commissioned, warrant or petty officer who has been designated by the Captain of the Port, Sector Lake Michigan, to act on his or her behalf. The on-scene representative of the Captain of the Port, Sector Lake Michigan, will be on land in the vicinity of the safety zone and will have constant communications with the Chicago Marine Unit vessels that will be on-scene to assist the Coast Guard in enforcing the safety zone.

(4) Vessel operators desiring to enter or operate within the safety zone shall contact the Captain of the Port, Sector Lake Michigan, or his or her on-scene representative to obtain permission to do so. The Captain of the Port, Sector Lake Michigan, or his or her on-scene representative may be contacted via VHF Channel 16. Vessel operators given permission to enter or operate in the safety zone must comply with all directions given to them by the Captain of the Port, Sector Lake Michigan, or his or her on-scene representative.

Dated: November 17, 2010.

S.R. Schenk,

Commander, U.S. Coast Guard, Captain of the Port, Sector Lake Michigan, Acting.

[FR Doc. 2010–30146 Filed 11–29–10; 8:45 am]

BILLING CODE 9110–04–P

DEPARTMENT OF HOMELAND SECURITY

Coast Guard

33 CFR Part 165

[Docket No. USCG–2010–1043]

RIN 1625–AA00

Safety Zone; Bridge Demolition; Illinois River, Seneca, IL

AGENCY: Coast Guard, DHS.

ACTION: Temporary final rule.

SUMMARY: The Coast Guard is establishing a temporary safety zone on the Illinois River near Seneca, Illinois. This zone is intended to restrict vessels from a portion of the Illinois River due to the demolition of the Seneca Highway Bridge. This temporary safety zone is necessary to protect the surrounding public and vessels from the hazards associated with the demolition of the Seneca Highway Bridge.

DATES: This rule is effective in the CFR on November 30, 2010 through 6 a.m. on December 11, 2010. This rule is effective with actual notice for purposes of enforcement on 6 a.m. on November 18, 2010 through 6 a.m. on November 19, 2010. This rule will be enforced again from 6 a.m. on December 2, 2010 through 6 a.m. on December 11, 2010.

ADDRESSES: Documents indicated in this preamble as being available in the docket are part of docket USCG–2010–1043 and are available online by going to *http://www.regulations.gov,* inserting USCG–2010–1043 in the "Keyword" box, and then clicking "search." They are also available for inspection or copying at the Docket Management Facility (M–30), U.S. Department of Transportation, West Building Ground floor, Room W12–140, 1200 New Jersey Avenue, SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: If you have questions on this temporary rule, contact or e-mail BM1 Adam Kraft, U.S. Coast Guard Sector Lake Michigan, at 414–747–7154 or *Adam.D.Kraft@uscg.mil.* If you have questions on viewing the docket, call Renee V. Wright, Program Manager, Docket Operations, telephone 202–366–9826.

SUPPLEMENTARY INFORMATION:

Regulatory Information

The Coast Guard is issuing this temporary final rule without prior notice and opportunity to comment pursuant to authority under section 4(a) of the Administrative Procedure Act (APA) (5 U.S.C. 553(b)). This provision authorizes an agency to issue a rule without prior notice and opportunity to comment when an agency for good cause finds that those procedures are "impracticable, unnecessary, or contrary to the public interest." Under U.S.C. 553(b)(B), the Coast Guard finds that good cause exists for not publishing a notice of proposed rulemaking (NPRM) with respect to this rule because it is impracticable as the final details for this demolition were not received by the Coast Guard until November 9, 2010. Furthermore, the Coast Guard has reached out to potentially affected waterway users and has determined that potential impacts as a result of this safety zone will be minimal. Given the short time frame, low impact of the zone, and hazards associated with a bridge demolition, delaying the enactment of this rule would be contrary to the public interest.

Under 5 U.S.C. 553(d)(3), the Coast Guard finds that good cause exists for making this rule effective less than 30 days after publication in the **Federal Register**. A 30 day notice period is impracticable given the short time frame for enacting this regulation. Given the hazards created by a bridge demolition, delaying the effective date of this rule would be contrary to the public interest.

Background and Purpose

This temporary safety zone is necessary to protect vessels from the hazards associated with the demolition of the Seneca Highway Bridge. The detonation of explosives and the falling debris associated with the demolition of this bridge pose serious risks of injury to persons and property. As such, the Captain of the Port, Sector Lake Michigan, has determined that the demolition of the Seneca Highway Bridge does pose significant risks to public safety and property and that a safety zone is necessary.

Discussion of Rule

The safety zone will encompass all U.S. navigable waters of the Illinois River in the vicinity of Seneca Highway Bridge between Mile Marker 252.5 and Mile Marker 253.0 of the Illinois River in Seneca, IL. [DATUM: NAD 83].

All persons and vessels shall comply with the instructions of the Coast Guard Captain of the Port, Sector Lake Michigan, or his or her on-scene representative. Entry into, transiting, or anchoring within the safety zone is prohibited unless authorized by the Captain of the Port, Sector Lake Michigan, or his or her on-scene representative. The Captain of the Port, Sector Lake Michigan, or his or her on-

scene representative may be contacted via VHF Channel 16.

Regulatory Analyses

We developed this rule after considering numerous statutes and executive orders related to rulemaking. Below we summarize our analyses based on 13 of these statutes or executive orders.

Regulatory Planning and Review

This rule is not a significant regulatory action under section 3(f) of Executive Order 12866, Regulatory Planning and Review, and does not require an assessment of potential costs and benefits under section 6(a)(3) of that Order. The Office of Management and Budget has not reviewed it under that Order.

This determination is based on the minimal time that vessels will be restricted from the zone and the zone is an area where the Coast Guard expects insignificant adverse impact to mariners from the zones' activation.

Small Entities

Under the Regulatory Flexibility Act (5 U.S.C. 601–612), we have considered whether this rule will have a significant economic impact on a substantial number of small entities. 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 rule will not have a significant economic impact on a substantial number of small entities.

This rule will affect the following entities, some of which might be small entities: The owners or operators of vessels intending to transit or anchor on a portion of the Illinois River between 6 a.m. on November 18, 2010 through 6 a.m. on November 19, 2010 and again from 6 a.m. on December 2, 2010 through 6 a.m. on December 11, 2010.

This safety zone will not have a significant economic impact on a substantial number of small entities for the following reasons: This rule will only be enforced while unsafe conditions exist. Vessel traffic will be minimal due to the time of year that this closure will occur and because the location of the safety zone is in an area that typically does not experience high volumes of vessel traffic. Several commercial traffic entities have already been contacted concerning this closure and have confirmed that it will not affect them in a negative way.

In the event that this temporary safety zone affects shipping, commercial vessels may request permission from the Captain of The Port, Sector Lake Michigan, or his or her on scene representative to transit through the safety zone. The Coast Guard will give notice to the public via a Broadcast to Mariners that the regulation is in effect.

Assistance for Small Entities

Under section 213(a) of the Small Business Regulatory Enforcement Fairness Act of 1996 (Pub. L. 104–121), we offer to assist small entities in understanding the rule so that they could better evaluate its effects on them and participate in the rulemaking process. Small businesses may send comments on the actions of Federal employees who enforce, or otherwise determine compliance with, Federal regulations to the Small Business and Agriculture Regulatory Enforcement Ombudsman and the Regional Small Business Regulatory Fairness Boards. The Ombudsman evaluates these actions annually and rates each agency's responsiveness to small business. If you wish to comment on actions by employees of the Coast Guard, call 1–888–REG–FAIR (1–888–734–3247). The Coast Guard will not retaliate against small entities that question or complain about this rule or any policy or action of the Coast Guard.

Collection of Information

This rule calls for no new collection of information under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501–3520).

Federalism

A rule has implications for federalism under Executive Order 13132, Federalism, if it has a substantial direct effect on State or local governments and would either preempt State law or impose a substantial direct cost of compliance on them. We have analyzed this rule under that Order and have determined that it does not have implications for federalism.

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 rule will not result in such expenditure, we do discuss the effects of this rule elsewhere in this preamble.

Taking of Private Property

This rule will not affect a taking of private property or otherwise have taking implications under Executive Order 12630, Governmental Actions and Interference with Constitutionally Protected Property Rights.

Civil Justice Reform

This rule meets applicable standards in sections 3(a) and 3(b)(2) of Executive Order 12988, Civil Justice Reform, to minimize litigation, eliminate ambiguity, and reduce burden.

Protection of Children

We have analyzed this rule under Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks. This rule is not an economically significant rule and does not concern an environmental risk to health or risk to safety that may disproportionately affect children.

Indian Tribal Governments

This rule does not have tribal implications under Executive Order 13175, Consultation and Coordination with Indian Tribal Governments, because it does 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.

Energy Effects

We have analyzed this proposed rule under Executive Order 13211, Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use. We have determined that it is not a "significant energy action" under that order because it is not a "significant regulatory action" under Executive Order 12866 and is not likely to have a significant adverse effect on the supply, distribution, or use of energy. The Administrator of the Office of Information and Regulatory Affairs has not designated it as a significant energy action. Therefore, it does not require a Statement of Energy Effects under Executive Order 13211.

Technical Standards

The National Technology Transfer and Advancement Act (NTTAA) (15 U.S.C. 272 note) directs agencies to use voluntary consensus standards in their regulatory activities unless the agency provides Congress, through the Office of Management and Budget, with an explanation of why using these standards would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are

technical standards (*e.g.,* specifications of materials, performance, design, or operation; test methods; sampling procedures; and related management systems practices) that are developed or adopted by voluntary consensus standards bodies.

This rule does not use technical standards. Therefore, we did not consider the use of voluntary consensus standards.

Environment

We have analyzed this rule under Department of Homeland Security Management Directive 023–01 and Commandant Instruction M16475.lD, which guide the Coast Guard in complying with the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321–4370f), and have concluded this action is one of a category of actions which do not individually or cumulatively have a significant effect on the human environment. This rule is categorically excluded, under figure 2–1, paragraph (34)(g), of the Instruction. This rule involves the establishment of a safety zone and is therefore categorically excluded under paragraph 34(g) of the Instruction.

A final environmental analysis check list and categorical exclusion determination are available in the docket where indicated under **ADDRESSES**.

List of Subjects in 33 CFR Part 165

Harbors, Marine Safety, Navigation (water), Reporting and recordkeeping requirements, Security measures, Waterways.

■ For the reasons discussed in the preamble, the Coast Guard amends 33 CFR part 165 as follows:

PART 165—REGULATED NAVIGATION AREAS AND LIMITED ACCESS AREAS

■ 1. The authority citation for part 165 continues to read as follows:

Authority: 33 U.S.C. 1226, 1231; 46 U.S.C. Chapter 701; 50 U.S.C. 191, 195; 33 CFR 1.05–1(g), 6.04–1, 6.04–6, and 160.5; Pub. L. 107–295, 116 Stat. 2064; Department of Homeland Security Delegation No. 0170.1.

■ 2. A new temporary § 165.T09–1043 is added as follows:

§ 165.T09–1043 Safety Zone; Bridge Demolition, Illinois River, Seneca, Illinois.

(a) *Location.* The safety zone will encompass all U.S. navigable waters of the Illinois River in the vicinity of the Seneca Highway Bridge between Mile Marker 252.5 and Mile Marker 253.0 of the Illinois River in Seneca, IL. [DATUM: NAD 83].

(b) *Effective period.* This regulation is effective from 6 a.m. on November 18, 2010 until 6 a.m. on December 11, 2010. This regulation will be enforced from 6 a.m. on November 18, 2010 until 6 a.m. on November 19, 2010 and then again from 6 a.m. on December 2, 2010 until 6 a.m. on December 11, 2010. The Captain of the Port, Sector Lake Michigan, or his or her on-scene representative may suspend and restart the enforcement of the safety zone during the effective period at any time.

(c) *Regulations.*

(1) In accordance with the general regulations in section 165.23 of this part, entry into, transiting, or anchoring within this safety zone is prohibited unless authorized by the Captain of the Port, Sector Lake Michigan, or his or her on-scene representative.

(2) This safety zone is closed to all vessel traffic, except as may be permitted by the Captain of the Port, Sector Lake Michigan, or his or her on-scene representative.

(3) The "on-scene representative" of the Captain of the Port, Sector Lake Michigan, is any Coast Guard commissioned, warrant or petty officer who has been designated by the Captain of the Port, Sector Lake Michigan, to act on his or her behalf. The on-scene representative of the Captain of the Port, Sector Lake Michigan, will be on land in the vicinity of the safety zone and will have constant communications with the involved safety vessels which will be provided by the contracting company and the Illinois Department of Transportation.

(4) Vessel operators desiring to enter or operate within the safety zone shall contact the Captain of the Port, Sector Lake Michigan, or his or her on-scene representative to obtain permission to do so. The Captain of the Port, Sector Lake Michigan, or his or her on-scene representative may be contacted via VHF Channel 16. Vessel operators given permission to enter or operate in the safety zone must comply with all directions given to them by the Captain of the Port, Sector Lake Michigan, or his or her on-scene representative.

Dated: November 15, 2010.

L. Barndt,

Captain, U.S. Coast Guard, Captain of the Port, Sector Lake Michigan.

[FR Doc. 2010–30142 Filed 11–29–10; 8:45 am]

BILLING CODE 9110–04–P

DEPARTMENT OF HOMELAND SECURITY

Coast Guard

33 CFR Part 165

[Docket No. USCG–2010–1044]

RIN 1625–AA00

Safety Zone; USS Fort Worth Launch, Marinette, WI

AGENCY: Coast Guard, DHS.

ACTION: Temporary final rule.

SUMMARY: The Coast Guard is establishing a temporary safety zone on the Menominee River in Marinette, Wisconsin. This zone is intended to restrict vessels from a portion of Menominee River during the launching of the USS Fort Worth on December 4, 2010. This temporary safety zone is necessary to protect spectators and vessels from the hazards associated with the launching of this extremely large ship.

DATES: This rule is effective from 8 a.m. to 2 p.m. on December 4, 2010. This rule will be enforced from 8 a.m. to 2 p.m. on December 4, 2010.

ADDRESSES: Documents indicated in this preamble as being available in the docket are part of docket USCG–2010–1044 and are available online by going to *http://www.regulations.gov,* selecting the Advanced Docket Search option on the right side of the screen, inserting USCG–2010–1044 in the Docket ID box, pressing Enter, and then clicking on the item in the Docket ID column. They are also available for inspection or copying at the Docket Management Facility (M–30), U.S. Department of Transportation, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue, SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: If you have questions on this temporary rule, contact or e-mail BM1 Adam Kraft, U.S. Coast Guard Sector Lake Michigan, at 414–747–7154 or *Adam.D.Kraft@uscg.mil.* If you have questions on viewing the docket, call Renee V. Wright, Program Manager, Docket Operations, telephone 202–366–9826.

SUPPLEMENTARY INFORMATION:

Regulatory Information

The Coast Guard is issuing this temporary final rule without prior notice and opportunity to comment pursuant to authority under section 4(a) of the Administrative Procedure Act

(APA) (5 U.S.C. 553(b)). This provision authorizes an agency to issue a rule without prior notice and opportunity to comment when the agency for good cause finds that those procedures are "impracticable, unnecessary, or contrary to the public interest." Under 5 U.S.C. 553(b)(B), the Coast Guard finds that good cause exists for not publishing a notice of proposed rulemaking (NPRM) with respect to this rule because the final details for this event were not received by the Coast Guard with sufficient time to allow for a public comment period. Given the hazards associated with this ship launching, delaying this rule to provide for public comment would be contrary to the public interest. Under 5 U.S.C. 553(d)(3), the Coast Guard finds that good cause exists for making this rule effective less than 30 days after publication in the **Federal Register**. Delaying the effective date of this rule to provide a 30-day notice period is contrary to the public interest due to the hazards associated with a ship launching.

Background and Purpose

This temporary safety zone is necessary to protect vessels from the hazards associated with the launching of the USS Fort Worth in Marinette, WI. The Captain of the Port, Sector Lake Michigan, has determined that the launching of the USS Fort Worth does pose significant risks to public safety and property. As such, this safety zone is necessary to prevent injury to persons and damage to property.

Discussion of Rule

This temporary safety zone will encompass all waters of the Menominee River, in the vicinity of Marinette Marine Corporation, between the Bridge Street Bridge located in position 45°06′12″ N, 087°37′34″ W and a line crossing the river perpendicularly passing through position 45°05′57″ N, 087°36′43″ W, in the vicinity of the Ansul Company. (DATUM: NAD 83).

All persons and vessels shall comply with the instructions of the Coast Guard Captain of the Port, Sector Lake Michigan, or his or her on-scene representative. Entry into, transiting, or anchoring within the safety zone is prohibited unless authorized by the Captain of the Port, Sector Lake Michigan, or his or her on-scene representative. The Captain of the Port, Sector Lake Michigan, or his or her on-scene representative may be contacted via VHF Channel 16.

Regulatory Analyses

We developed this rule after considering numerous statutes and executive orders related to rulemaking. Below we summarize our analyses based on 13 of these statutes or executive orders.

Regulatory Planning and Review

This rule is not a "significant regulatory action" under section 3(f) of Executive Order 12866, Regulatory Planning and Review, and does not require an assessment of potential costs and benefits under section 6(a)(3) of that Order. The Office of Management and Budget has not reviewed it under that Order.

This determination is based on the minimal time that vessels will be restricted from the zone and the zone is an area where the Coast Guard expects insignificant adverse impact to mariners from the zones' activation.

Small Entities

Under the Regulatory Flexibility Act (5 U.S.C. 601–612), we have considered whether this rule will have a significant economic impact on a substantial number of small entities. 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 rule will not have a significant economic impact on a substantial number of small entities.

This rule will affect the following entities, some of which might be small entities: The owners or operators of vessels intending to transit or anchor in a portion of Menominee River between 8 a.m. and 2 p.m. on December 4, 2010.

This temporary safety zone will not have a significant economic impact on a substantial number of small entities for the following reasons: Vessel traffic should be minimal given the location and the time of year that this event is occurring. Furthermore, this safety zone will only be in effect for six hours. In the event that this temporary safety zone affects shipping, commercial vessels may request permission from the Captain of The Port, Sector Lake Michigan, to transit through the safety zone. The Coast Guard will give notice to the public via a Broadcast to Mariners that the regulation is in effect.

Assistance for Small Entities

Under section 213(a) of the Small Business Regulatory Enforcement Fairness Act of 1996 (Pub. L. 104–121), we offered to assist small entities in understanding the rule so that they could better evaluate its effects on them and participate in the rulemaking process. Small businesses may send comments on the actions of Federal employees who enforce, or otherwise determine compliance with, Federal regulations to the Small Business and Agriculture Regulatory Enforcement Ombudsman and the Regional Small Business Regulatory Fairness Boards. The Ombudsman evaluates these actions annually and rates each agency's responsiveness to small business. If you wish to comment on actions by employees of the Coast Guard, call 1–888–REG–FAIR (1–888–734–3247). The Coast Guard will not retaliate against small entities that question or complain about this rule or any policy or action of the Coast Guard.

Collection of Information

This rule calls for no new collection of information under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501–3520).

Federalism

A rule has implications for federalism under Executive Order 13132, Federalism, if it has a substantial direct effect on State or local governments and would either preempt State law or impose a substantial direct cost of compliance on them. We have analyzed this rule under that Order and have determined that it does not have implications for federalism.

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 rule will not result in such expenditure, we do discuss the effects of this rule elsewhere in this preamble.

Taking of Private Property

This rule will not affect a taking of private property or otherwise have taking implications under Executive Order 12630, Governmental Actions and Interference with Constitutionally Protected Property Rights.

Civil Justice Reform

This rule meets applicable standards in sections 3(a) and 3(b)(2) of Executive Order 12988, Civil Justice Reform, to minimize litigation, eliminate ambiguity, and reduce burden.

Protection of Children

We have analyzed this rule under Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks. This rule is not an economically significant rule and does not concern an environmental risk to health or risk to safety that may disproportionately affect children.

Indian Tribal Governments

This rule does not have tribal implications under Executive Order 13175, Consultation and Coordination with Indian Tribal Governments, because it does 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.

Energy Effects

We have analyzed this proposed rule under Executive Order 13211, Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use. We have determined that it is not a "significant energy action" under that order because it is not a "significant regulatory action" under Executive Order 12866 and is not likely to have a significant adverse effect on the supply, distribution, or use of energy. The Administrator of the Office of Information and Regulatory Affairs has not designated it as a significant energy action. Therefore, it does not require a Statement of Energy Effects under Executive Order 13211.

Technical Standards

The National Technology Transfer and Advancement Act (NTTAA) (15 U.S.C. 272 note) directs agencies to use voluntary consensus standards in their regulatory activities unless the agency provides Congress, through the Office of Management and Budget, with an explanation of why using these standards would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (*e.g.,* specifications of materials, performance, design, or operation; test methods; sampling procedures; and related management systems practices) that are developed or adopted by voluntary consensus standards bodies.

This rule does not use technical standards. Therefore, we did not consider the use of voluntary consensus standards.

Environment

We have analyzed this rule under Department of Homeland Security Management Directive 023–01 and Commandant Instruction M16475.lD, which guide the Coast Guard in complying with the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321–4370f), and have concluded this action is one of a category of actions which do not individually or cumulatively have a significant effect on the human environment. This rule is categorically excluded, under figure 2–1, paragraph (34)(g), of the Instruction. This rule involves the establishment of a temporary safety zone that will be in place for only six hours. Therefore paragraph (34)(g) of the Instruction applies.

An environmental analysis checklist and a categorical exclusion determination are available in the docket where indicated under **ADDRESSES**.

List of Subjects in 33 CFR Part 165

Harbors, Marine safety, Navigation (water), Reporting and recordkeeping requirements, Security measures, Waterways.

■ For the reasons discussed in the preamble, the Coast Guard amends 33 CFR part 165 as follows:

PART 165—REGULATED NAVIGATION AREAS AND LIMITED ACCESS AREAS

■ 1. The authority citation for part 165 continues to read as follows:

Authority: 33 U.S.C. 1226, 1231; 46 U.S.C. Chapter 701, 3306, 3703; 50 U.S.C. 191, 195; 33 CFR 1.05–1, 6.04–1, 6.04–6, and 160.5; Pub. L. 107–295, 116 Stat. 2064; Department of Homeland Security Delegation No. 0170.1.

■ 2. A new temporary § 165.T09–1044 is added as follows

§ 165.T09–1044 Safety Zone; USS Fort Worth Launch, Marinette, Wisconsin.

(a) *Location.* All waters of the Menominee River, in the vicinity of Marinette Marine Corporation, between the Bridge Street Bridge located in position 45°06′12″ N, 087°37′34″ W and a line crossing the river perpendicularly passing through position 45°05′57″ N, 087°36′43″ W, in the vicinity of the Ansul Company. (DATUM: NAD 83).

(b) *Effective period.* This rule is effective from 8 a.m. to 2 p.m. on December 4, 2010. This rule will be enforced from 8 a.m. to 2 p.m. on December 4, 2010. The Captain of the Port, Sector Lake Michigan, or his or her on-scene representative may terminate this event at anytime.

(c) *Regulations.*

(1) In accordance with the general regulations in section 165.23 of this part, entry into, transiting, or anchoring within this safety zone is prohibited unless authorized by the Captain of the Port, Sector Lake Michigan, or his or her on-scene representative.

(2) This safety zone is closed to all vessel traffic, except as may be permitted by the Captain of the Port, Sector Lake Michigan, or his or her on-scene representative.

(3) The "on-scene representative" of the Captain of the Port, Sector Lake Michigan, is any Coast Guard commissioned, warrant or petty officer who has been designated by the Captain of the Port, Sector Lake Michigan, to act on his or her behalf. The on-scene representative of the Captain of the Port, Sector Lake Michigan, will be aboard either a Coast Guard or Coast Guard Auxiliary vessel.

(4) Vessel operators desiring to enter or operate within the safety zone shall contact the Captain of the Port, Sector Lake Michigan, or his or her on-scene representative to obtain permission to do so. The Captain of the Port, Sector Lake Michigan, or his or her on-scene representative may be contacted via VHF Channel 16. Vessel operators given permission to enter or operate in the safety zone must comply with all directions given to them by the Captain of the Port, Sector Lake Michigan, or his or her on-scene representative.

Dated: November 19, 2010.

S.R. Schenk,

Commander, U.S. Coast Guard, Captain of the Port, Sector Lake Michigan, Acting.

[FR Doc. 2010–30137 Filed 11–29–10; 8:45 am]

BILLING CODE 9110–04–P

DEPARTMENT OF HOMELAND SECURITY

Coast Guard

33 CFR Part 165

[Docket No. USCG–2010–1027]

Safety Zone, Brandon Road Lock and Dam to Lake Michigan Including Des Plaines River, Chicago Sanitary and Ship Canal, Chicago River, and Calumet-Saganashkee Channel, Chicago, IL

AGENCY: Coast Guard, DHS.

ACTION: Notice of enforcement of regulation.

SUMMARY: The Coast Guard will enforce a segment of the Safety Zone; Brandon Road Lock and Dam to Lake Michigan including Des Plaines River, Chicago Sanitary and Ship Canal, Chicago River, Calumet-Saganashkee Channel on all waters of the Chicago Sanitary and Ship Canal from Mile Marker 296.1 to Mile

Marker 296.7 daily from 7 a.m. to 11 a.m. and from 1 p.m. to 5 p.m. on December 6, 2010 through December 11, 2010 and from December 13, 2010 through December 18, 2010. This enforcement action will then occur again from 7 a.m. on December 20, 2010 through 5 p.m. on December 23, 2010. This action is necessary to protect the waterways, waterway users, and vessels from hazards associated with the U.S. Army Corps of Engineers' startup testing of the new dispersal barrier IIB, which will help control the spread of aquatic nuisance species that have the potential of devastating the waters of the Great Lakes.

During the enforcement period, entry into, transiting, mooring, laying-up or anchoring within the enforced area of this safety zone by any person or vessel is prohibited unless authorized by the Captain of the Port, Sector Lake Michigan, or his or her designated representative.

DATES: The regulations in 33 CFR 165.T09–0166 will be enforced from 7 a.m. on December 6, 2010 through 5 p.m. on December 23, 2010.

FOR FURTHER INFORMATION CONTACT: If you have questions on this notice, call or e-mail CDR Tim Cummins, Deputy Prevention Division, Ninth Coast Guard District, telephone 216–902–6045, e-mail address *Timothy.M.Cummins@uscg.mil*.

SUPPLEMENTARY INFORMATION: The Coast Guard will enforce a segment of the Safety Zone; Brandon Road Lock and Dam to Lake Michigan including Des Plaines River, Chicago Sanitary and Ship Canal, Chicago River, Calumet-Saganashkee Channel, Chicago, IL, listed in 33 CFR 165.T09–0166, on all waters of the Chicago Sanitary and Ship Canal from Mile Marker 296.1 to Mile Marker 296.7 daily from 7 a.m. to 11 a.m. and from 1 p.m. to 5 p.m. on December 6, 2010 through December 11, 2010 and from December 13, 2010 through December 18, 2010. This enforcement action will then occur again from 7 a.m. on December 20, 2010 through 5 p.m. on December 23, 2010.

This enforcement action is necessary because the Captain of the Port, Sector Lake Michigan has determined that the U.S. Army Corps of Engineers' dispersal barrier IIB startup testing poses risks to life and property. The combination of vessel traffic and electric current in the water makes the control of vessels through the impacted portion of the Chicago Sanitary and Ship Canal necessary to prevent injury and property loss.

In accordance with the general regulations in § 165.23 of this part, entry into, transiting, mooring, laying up, or anchoring within the enforced area of this safety zone by any person or vessel is prohibited unless authorized by the Captain of the Port, Sector Lake Michigan, or his or her designated representative.

This notice is issued under authority of 33 CFR 165.T09–0166 and 5 U.S.C. 552(a). In addition to this notice in the **Federal Register**, the Captain of the Port, Sector Lake Michigan, will also provide notice through other means, which may include but are not limited to Broadcast Notice to Mariners, Local Notice to Mariners, local news media, distribution in leaflet form, and on-scene oral notice. Additionally, the Captain of the Port, Sector Lake Michigan, may notify representatives from the maritime industry through telephonic and e-mail notifications.

Dated: November 17, 2010.

S.R. Schenk,

Commander, U.S. Coast Guard, Captain of the Port, Sector Lake Michigan, Acting.

[FR Doc. 2010–30148 Filed 11–29–10; 8:45 am]

BILLING CODE 9110–04–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 62

[EPA–R03–OAR–2010–0771; FRL–9233–4]

Approval and Promulgation of State Air Quality Plans for Designated Facilities and Pollutants, State of Delaware; Control of Emissions From Existing Hospital/Medical/Infectious Waste Incinerator (HMIWI) Units, Negative Declaration and Withdrawal of EPA Plan Approval

AGENCY: Environmental Protection Agency (EPA).

ACTION: Direct final rule.

SUMMARY: EPA is taking direct final action to approve the State of Delaware's negative declaration and request for EPA withdrawal of its section 111(d)/129 plan (the plan) approval for HMIWI units.

DATES: This rule is effective January 31, 2011 without further notice, unless EPA receives adverse written comment by December 30, 2010. If EPA receives such comments, it will publish a timely withdrawal of the direct final rule in the **Federal Register** and inform the public that the rule will not take effect.

ADDRESSES: Submit your comments, identified by Docket ID Number EPA–R03–OAR–2010–0771 by one of the following methods:

A. *http://www.regulations.gov.* Follow the on-line instructions for submitting comments.

B. *E-mail: wilkie.walter@epa.gov.*

C. *Mail:* EPA–R03–OAR–2010–0771, Walter K. Wilkie, Associate Director, Air Protection Division, Office of Air Monitoring and Analysis, Mailcode 3AP40, U.S. Environmental Protection Agency, Region III, 1650 Arch Street, Philadelphia, Pennsylvania 19103.

D. *Hand Delivery:* At the previously-listed EPA Region III address. Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments to Docket ID No. EPA–R03–OAR–2010–0771. EPA's policy is that all comments received will be included in the public docket without change, and may be made available online at *http://www.regulations.gov,* including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through *http://www.regulations.gov* or e-mail. The *http://www.regulations.gov* Web site is an "anonymous access" system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA without going through *http://www.regulations.gov,* your e-mail address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD–ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses.

Docket: All documents in the electronic docket are listed in the *http://www.regulations.gov* index. Although listed in the index, some information is not publicly available, *i.e.,* CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form.

Publicly available docket materials are available either electronically in *http://www.regulations.gov* or in hard copy during normal business hours at the Air Protection Division, U.S. Environmental Protection Agency, Region III, 1650 Arch Street, Philadelphia, Pennsylvania 19103. Copies of the State submittal are available at the Delaware Department of Natural Resources and Environmental Control, 89 Kings Highway, P.O. Box 1401, Dover, Delaware 19903.

FOR FURTHER INFORMATION CONTACT: James B. Topsale, P.E., at (215) 814–2190, or by e-mail at *topsale.jim@epa.gov.*

SUPPLEMENTARY INFORMATION:

I. Background

The Delaware HMIWI plan and related state rule were approved by EPA in the April 14, 2000 edition of the **Federal Register** and codified in 40 CFR part 62, subpart I. (65 FR 20090). However, since that time, all three designated incinerator facilities in the plan inventory have been dismantled, according to the Delaware Department of Natural Resources and Environmental Control (DNREC). On October 6, 2009, EPA promulgated revised HMIWI emission guidelines under 40 CFR part 60, subpart Ce, that triggered the need for revised state plans. As a result, on June 17, 2010, the DNREC requested EPA's approval of its negative declaration and plan withdrawal request. The submitted negative declaration contains the name of each designated facility that was dismantled, and the year it was dismantled.

II. Final Action

EPA is approving the State of Delaware's negative declaration and request for EPA withdrawal of its plan approval for HMIWI units. DNREC has determined that there are now no designated facilities, subject to subpart Ce requirements, in its air pollution control jurisdiction. EPA accepts that determination. Accordingly, EPA is amending part 62 to reflect approval of the DNREC June 17, 2010 negative declaration and request for EPA withdrawal of the HMIWI plan approval. However, if an affected Delaware HMIWI unit is discovered in the future, all the requirements of the Federal Plan (including revisions or amendments), part 62, subpart HHH, will be applicable to the affected unit.

III. Statutory and Executive Order Reviews

A. General Requirements

Under Executive Order 12866 (58 FR 51735, October 4, 1993), this action is not a "significant regulatory action" and therefore is not subject to review by the Office of Management and Budget. For this reason, this action is also not subject to Executive Order 13211, "Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use" (66 FR 28355, May 22, 2001). This action merely approves state law as meeting Federal requirements and imposes no additional requirements beyond those imposed by state law. Accordingly, the Administrator certifies that this rule will not have a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*). Because this rule approves pre-existing requirements under state law and does not impose any additional enforceable duty beyond that required by state law, it does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4). This rule also does not have tribal implications because it will 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, as specified by Executive Order 13175 (65 FR 67249, November 9, 2000). This action also does not have Federalism implications because it does not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132 (64 FR 43255, August 10, 1999). This action merely approves a state rule implementing a Federal requirement, and does not alter the relationship or the distribution of power and responsibilities established in the Clean Air Act (CAA). This rule also is not subject to Executive Order 13045 (62 FR 19885, April 23, 1997), because it approves a state rule implementing a Federal standard.

In reviewing section 111(d)/129 plan submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. In this context, in the absence of a prior existing requirement for the State to use voluntary consensus standards (VCS), EPA has no authority to disapprove a 111(d)/129 plan submission for failure to use VCS. It would thus be inconsistent with applicable law for EPA, when it reviews a 111(d)/129 plan submission, to use VCS in place of a 111(d)/129 plan submission that otherwise satisfies the provisions of the CAA. Thus, the requirements of section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) do not apply. This rule does not impose an information collection burden under the provisions of the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*).

B. Submission to Congress and the Comptroller General

The Congressional Review Act, 5 U.S.C. 801 *et seq.,* as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this 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 rule is not a "major rule" as defined by 5 U.S.C. 804(2).

C. Petitions for Judicial Review

Under section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by January 31, 2011. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this rule for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action approving the Delaware section 111(d)/129 negative declaration and request for EPA withdrawal of the HMIWI plan approval may not be challenged later in proceedings to enforce its requirements. (See section 307(b)(2).)

List of Subjects in 40 CFR Part 62

Environmental protection, Administrative practice and procedure, Air pollution control, Aluminum, Fertilizers, Fluoride, Intergovernmental relations, Paper and paper products industry, Phosphate, Reporting and recordkeeping requirements, Sulfur oxides, Sulfur acid plants, Waste treatment and disposal.

Dated: November 17, 2010.

W.C. Early,

Acting Regional Administrator, Region III.

■ 40 CFR part 62 is amended as follows:

PART 62—[AMENDED]

■ 1. The authority citation for part 62 continues to read as follows:

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

Subpart I—Delaware

■ 2. Section 62.1975 is amended by revising the section heading, designating the existing paragraph as (a) and adding paragraph (b) to read as follows:

§ 62.1975 Identification of plan—negative declaration.

* * * * *

(b) On June 17, 2010, the Delaware Department of Natural Resources and Environmental Control submitted a negative declaration and request for withdrawal of EPA's plan approval under paragraph (a) of this section.

§ 62.1976 [Removed]

■ 3. Section 62.1976 is removed.

■ 4. Section 62.1977 is revised to read as follows:

§ 62.1977 Effective date.

The effective date of the negative declaration and EPA withdrawal of the plan approval is January 31, 2011.

[FR Doc. 2010–30102 Filed 11–29–10; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 81

[EPA–R04–OAR–2010–0614–201055; FRL–9234–2]

Approval and Promulgation of Implementation Plans; Extension of Attainment Date for the Atlanta, GA 1997 8-Hour Ozone Moderate Nonattainment Area

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: EPA is taking final action to approve a request from the State of Georgia, through the Georgia Department of Natural Resources' Environmental Protection Division (EPD), to grant a one-year extension of the attainment date for the 1997 8-hour ozone national ambient air quality standards (NAAQS) for the Atlanta, Georgia Area (hereafter referred to as the "Atlanta Area"). This request was sent to EPA via letter from EPD on June 9, 2010. The Atlanta Area consists of Barrow, Bartow, Carroll, Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Hall, Henry, Newton, Paulding, Rockdale, Spalding, and Walton Counties in Georgia. In today's action, EPA is finalizing a determination that the State of Georgia has met the Clean Air Act (CAA or Act) requirements to obtain a one-year extension to its attainment date for the 1997 8-hour ozone NAAQS for the Atlanta Area. As a result, EPA is approving a one-year extension of the 1997 8-hour ozone moderate attainment date for the Atlanta Area. Specifically, EPA (through this final action) is extending the Atlanta Area's attainment date from June 15, 2010, to June 15, 2011.

DATES: *Effective Date:* This rule will be effective December 30, 2010.

ADDRESSES: EPA has established a docket for this action under Docket Identification No. EPA–R04–OAR–2010–0614. All documents in the docket are listed on the *http://www.regulations.gov* Web site. Although listed in the index, some information is not publicly available, *i.e.,* Confidential Business Information or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through *http://www.regulations.gov* or in hard copy at the Regulatory Development Section, Air Planning Branch, Air, Pesticides and Toxics Management Division, U.S. Environmental Protection Agency, Region 4, 61 Forsyth Street, SW., Atlanta, Georgia 30303–8960. EPA requests that if at all possible, you contact the person listed in the **FOR FURTHER INFORMATION CONTACT** section to schedule your inspection. The Regional Office's official hours of business are Monday through Friday, 8:30 to 4:30, excluding Federal holidays.

FOR FURTHER INFORMATION CONTACT: Ms. Jane Spann or Ms. Sara Waterson, Regulatory Development Section, Air Planning Branch, Air, Pesticides and Toxics Management Division, U.S. Environmental Protection Agency, Region 4, 61 Forsyth Street, SW., Atlanta, Georgia 30303–8960. The telephone number for Ms. Spann is (404) 562–9029. Ms. Spann can also be reached via electronic mail at *spann.jane@epa.gov.* The telephone number for Ms. Waterson is (404) 562–9061. Ms. Waterson can also be reached via electronic mail at *waterson.sara@epa.gov.*

SUPPLEMENTARY INFORMATION:

Table of Contents

I. Background
II. Today's Action
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I. Background

Detailed background information and rationale for today's final action can be found in EPA's proposed rule entitled "Approval and Promulgation of Implementation Plans; Extension of Attainment Date for the Atlanta, GA 1997 8–Hour Ozone Moderate Nonattainment Area," 75 FR 56943 (September 17, 2010). The comment period for EPA's proposed action closed on October 18, 2010. EPA did not receive any comments, adverse or otherwise, on its proposed action to extend the attainment date for the Atlanta 1997 8-hour ozone area. This section includes a brief summary of the background information and rationale for EPA's approval of Georgia's one-year extension request.

Section 181(b)(2)(A) requires the Administrator, within six months of the attainment date, to determine whether an ozone nonattainment area attained the NAAQS. CAA section 181(b)(2)(A) states that, for areas classified as marginal, moderate, or serious, if the Administrator determines that the area did not attain the standard by its attainment date, the area must be reclassified to the next classification. However, in accordance with CAA Section 181(a)(5), EPA may grant up to 2 one-year extensions of the attainment date under specified conditions. Specifically, in relevant part, Section 181(a)(5) states:

> "Upon application by any State, the Administrator may extend for one additional year (hereinafter referred to as the "Extension Year") the date specified in table 1 of paragraph (1) of this subsection if—
>
> (A) the State has complied with all requirements and commitments pertaining to the area in the applicable implementation plan, and
>
> (B) no more than 1 exceedance of the national ambient air quality standard level for ozone has occurred in the area in the year preceding the Extension Year.

With regard to the first element, "applicable implementation plan" is defined in Section 302(q) of the CAA as, the portion (or portions) of the implementation plan, or most recent revision thereof, which has been approved under Section 110, or promulgated under Section 110(c), or promulgated or approved pursuant to regulations promulgated under Section 301(d) and which implements the relevant requirements of the CAA.

The language in section 181(a)(5)(B) reflects the form of the 1-hour ozone NAAQS, which is exceedance based and does not reflect the 1997 8-hour ozone NAAQS, which is concentration based. Because section 181(a)(5)(B) does not reflect the form of the 8-hour NAAQS and application would produce an absurd result, EPA interprets this provision in a manner consistent with Congressional intent but reflecting the form of the 1997 8-hour NAAQS. Therefore, EPA adopted an interpretation that under both section 172(a)(2)(C) and 181(a)(5), an area will be eligible for the first of the one-year extensions under the 8-hour NAAQS if, for the attainment year, the area's 4th highest daily 8-hour average is 0.084 ppm or less. The area will be eligible for the second extension if the area's 4th highest daily 8-hour value averaged over both the original attainment year and the first extension year is 0.084 ppm or less. No more than 2 one-year extensions may be issued for a single nonattainment area.

EPA interprets the CAA and implementing regulations to allow the granting of a one-year extension under the following minimum conditions: (1) The State requests a one-year extension; (2) all requirements and commitments in the EPA-approved SIP for the area have been complied with; and (3) the area has a 4th highest daily 8-hour average of 0.084 ppm or less for the attainment year (or an area's 4th highest daily 8-hour value averaged over both the original attainment year and the first extension year is 0.084 ppm or less, if a second one-year extension is requested). Because the Atlanta Area attainment date was June 15, 2010, the "attainment year" used for this purpose is the 2009 ozone season. The Georgia ozone season runs from March 1 to October 31 of any given year.

II. Today's Action

EPA has determined that Georgia has met the CAA requirements to obtain a one-year extension of the attainment date for the 1997 8-hour ozone NAAQS for the Atlanta Area. As a result, EPA is taking final action to extend the Atlanta Area's attainment date from June 15, 2010, to June 15, 2011, for the 1997 8-hour ozone NAAQS. Specifically, EPA has determined that Georgia is in compliance with the requirements and commitments associated with the EPA-approved implementation plan, and that the 4th highest daily 8-hour ozone average concentration for 2009 for the Atlanta Area is below the 1997 8-hour ozone NAAQS as required by the CAA. EPA has reviewed the 1997 8-hour ozone NAAQS ambient air quality monitoring data for the Atlanta Area, consistent with the requirements contained in 40 CFR part 50 and as recorded in the EPA Air Quality System database. On the basis of that review, EPA has concluded that for the attainment year, 2009, the Atlanta Area's 4th highest daily 8-hour average concentration was 0.077 ppm which is below the 8-hour ozone NAAQS of 0.08 ppm (effectively 0.084 ppm). This final action is based upon complete, quality assured, quality controlled, and certified ambient air monitoring data for 2009. As provided in 40 CFR 51.907, this final action extends, by one year, the deadline by which the Atlanta Area must attain the 1997 8-hour ozone NAAQS. It also extends the timeframe by which EPA must make an attainment determination for the area.

EPA notes that this final action only relates to the initial one-year extension. As described in Section 181(a)(5) of the CAA, areas may qualify for up to 2 one-year extensions. If requested at a future date, EPA will make a determination of the appropriateness of a second one-year extension for the Atlanta Area for the 1997 8-hour ozone NAAQS in a separate rulemaking.

III. Final Action

EPA is taking final action to approve Georgia's June 9, 2010, request for EPA to grant a one-year extension (from June 15, 2010, to June 15, 2011) of the Atlanta Area attainment date for the 1997 8-hour ozone NAAQS. EPA has determined that Georgia has met the statutory requirements for such an extension.

IV. Statutory and Executive Order Reviews

Under the CAA, the Administrator is required to approve a SIP submission or request from the states that comply with the provisions of the Act and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing the state's request for an extension of the 1997 8-hour ozone NAAQS attainment date for the Atlanta Area, EPA's role is to approve state's request, provided that they meet the criteria of the CAA. Accordingly, this action merely approves a state's request for an extension of the 1997 8-hour ozone NAAQS attainment date as meeting Federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this action:

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

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

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

Under section 307(b)(1) of the CAA, petitions for judicial review of this

action must be filed in the United States Court of Appeals for the appropriate circuit by January 31, 2011. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements. (See section 307(b)(2).)

List of Subjects in 40 CFR Part 81

Environmental protection, Air pollution control.

Dated: November 17, 2010.

Stanley Meiburg,

Acting Regional Administrator, Region 4.

■ 40 CFR part 81 is amended as follows:

PART 81—[AMENDED]

■ 1. The authority citation for part 81 continues to read as follows:

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

■ 2. In § 81.311, the table entitled "Georgia—Ozone (8-Hour Standard)" is amended under "Atlanta, GA" by revising the entries for "Barrow County," "Bartow County," "Carroll County," "Cherokee County," "Clayton County," "Cobb County," "Coweta County," "DeKalb County," "Douglas County," "Fayette County," "Forsyth County," "Fulton County," "Gwinnett County," "Hall County," "Henry County," "Newton County," "Paulding County," "Rockdale County," "Spalding County," and "Walton County" to read as follows:

§ 81.311 Georgia.

* * * * *

GEORGIA—OZONE (8-HOUR STANDARD)

Designated	Designation [a]		Category/classification	
	Date [1]	Type	Date [1]	Type
Atlanta, GA:				
Barrow County	This action is effective November 30, 2010	Nonattainment	April 7, 2008	Subpart 2/Moderate [4].
Bartow County	This action is effective November 30, 2010	Nonattainment	April 7, 2008	Subpart 2/Moderate [4].
Carroll County	This action is effective November 30, 2010	Nonattainment	April 7, 2008	Subpart 2/Moderate [4].
Cherokee County	This action is effective November 30, 2010	Nonattainment	April 7, 2008	Subpart 2/Moderate [4].
Clayton County	This action is effective November 30, 2010	Nonattainment	April 7, 2008	Subpart 2/Moderate [4].
Cobb County	This action is effective November 30, 2010	Nonattainment	April 7, 2008	Subpart 2/Moderate [4].
Coweta County	This action is effective November 30, 2010	Nonattainment	April 7, 2008	Subpart 2/Moderate [4].
DeKalb County	This action is effective November 30, 2010	Nonattainment	April 7, 2008	Subpart 2/Moderate [4].
Douglas County	This action is effective November 30, 2010	Nonattainment	April 7, 2008	Subpart 2/Moderate [4].
Fayette County	This action is effective November 30, 2010	Nonattainment	April 7, 2008	Subpart 2/Moderate [4].
Forsyth County	This action is effective November 30, 2010	Nonattainment	April 7, 2008	Subpart 2/Moderate [4].
Fulton County	This action is effective November 30, 2010	Nonattainment	April 7, 2008	Subpart 2/Moderate [4].
Gwinnett County	This action is effective November 30, 2010	Nonattainment	April 7, 2008	Subpart 2/Moderate [4].
Hall County	This action is effective November 30, 2010	Nonattainment	April 7, 2008	Subpart 2/Moderate [4].
Henry County	This action is effective November 30, 2010	Nonattainment	April 7, 2008	Subpart 2/Moderate [4].
Newton County	This action is effective November 30, 2010	Nonattainment	April 7, 2008	Subpart 2/Moderate [4].
Paulding County	This action is effective November 30, 2010	Nonattainment	April 7, 2008	Subpart 2/Moderate [4].
Rockdale County	This action is effective November 30, 2010	Nonattainment	April 7, 2008	Subpart 2/Moderate [4].
Spalding County	This action is effective November 30, 2010	Nonattainment	April 7, 2008	Subpart 2/Moderate [4].
Walton County	This action is effective November 30, 2010	Nonattainment	April 7, 2008	Subpart 2/Moderate [4].
*	*	*	*	*

[a] Includes Indian Country located in each county or area, except as otherwise specified.
[1] This date is June 15, 2004, unless otherwise noted.
[2] Effective April 15, 2008.
[3] The boundary change is effective October 13, 2006.
[4] Attainment date extended to June 15, 2011.

* * * * *

[FR Doc. 2010–30104 Filed 11–29–10; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 261

[EPA–R06–RCRA–2009–0312; SW FRL–9231–3]

Hazardous Waste Management System; Identification and Listing of Hazardous Waste; Removal of Direct Final Exclusion

AGENCY: Environmental Protection Agency (EPA).

ACTION: Removal of Direct Final Exclusion.

SUMMARY: Because EPA received adverse comment, we are removing the direct final exclusion for Eastman Chemical Company—Texas Operations, published on September 24, 2010.

DATES: Effective November 30, 2010.

FOR FURTHER INFORMATION CONTACT: Michelle Peace, Environmental Protection Agency, Multimedia Planning and Permitting Division, RCRA Branch, Mail Code: 6PD–C, 1445 Ross Avenue, Dallas, TX 75202, by calling (214) 665–7430 or by e-mail at *peace.michelle@epa.gov*.

SUPPLEMENTARY INFORMATION: Because EPA received adverse comment, we are removing the direct final exclusion for Eastman Chemical Company—Texas Operations, published on September 24, 2010, 75 FR 58315. We stated in that direct final rule that if we received adverse comment by October 25, 2010, the direct final rule would not take effect and we would publish a timely removal in the **Federal Register**. We subsequently received adverse comment on that direct final rule. We will address the comments submitted in a subsequent final action which will be based on the parallel proposed rule also published on September 24, 2010, 75 FR 58346. As stated in the direct final rule and the parallel proposed rule, we will not institute a second comment period on this action.

Lists of Subjects in 40 CFR Part 261

Environmental Protection, Hazardous waste, Recycling, Reporting and recordkeeping requirements.

Authority: Sec. 3001(f) RCRA, 42 U.S.C. 6921(f).

Dated: November 16, 2010.

Bill Luthans,

Acting Director, Multimedia Planning and Permitting Division.

■ 40 CFR part 261 is amended as follows:

PART 261—IDENTIFICATION AND LISTING OF HAZARDOUS WASTE

■ 1. The authority citation for part 261 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912(a), 6921, 6922, and 6938.

■ 2. In Tables 1, 2 and 3 of Appendix IX of part 261 remove the following facility's waste streams: for Facility: Eastman Chemical Company—Texas Operations, Address: Longview, TX; Waste Description: RKI bottom ash, RKI fly ash and RKI scrubber water blowdown.

[FR Doc. 2010–30109 Filed 11–29–10; 8:45 am]

BILLING CODE 6560–50–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Centers for Medicare & Medicaid Services

42 CFR Parts 433, 447, and 457

[CMS–2361–F]

RIN 0938–AQ40

Medicaid Program; Cost Limit for Providers Operated by Units of Government and Provisions To Ensure the Integrity of Federal-State Financial Partnership

AGENCY: Centers for Medicare & Medicaid Services (CMS), HHS.

ACTION: Final rule; implementation of court orders.

SUMMARY: This final rule amends Medicaid regulations to conform with the decision by the United States District Court for the District of Columbia on May 23, 2008 in *Alameda County Medical Center, et al.* v. *Michael O. Leavitt, Secretary, U.S. Department of Health and Human Services, et al.,* 559 F. Supp. 2d (2008) that vacated a final rule with comment period published in the **Federal Register** in May 29, 2007. This regulatory action takes ministerial steps to remove the vacated provisions from the Code of Federal Regulations and reinstate the prior regulatory language impacted by the May 29, 2007 final rule with comment period.

DATES: *Effective Date:* This regulation is effective immediately on date of publication November 30, 2010.

FOR FURTHER INFORMATION CONTACT: Rob Weaver, (410) 786–5914.

SUPPLEMENTARY INFORMATION:

I. Background

A. Introduction

Title XIX of the Social Security Act (the Act) authorizes Federal grants to States for Medicaid programs that provide medical assistance to low-income families, the elderly and persons with disabilities. Each State administers the Medicaid program in accordance with an approved Medicaid State plan. States have considerable flexibility in designing their programs, but must comply with Federal requirements specified in the Medicaid statute, regulations, and program guidance. Sections 1902(a)(2), 1903(a), and 1905(b) of the Act set forth requirements that describe how the responsibility to fund the Medicaid program will be shared between the Federal and State governments. Section 1905(b) of the Act delineates a percentage referred to as the Federal medical assistance percentage (FMAP) that determines on a State-by-State basis the Federal and non-Federal share of program expenditures. Section 1903(a) of the Act requires Federal reimbursement to the State of the Federal share. Section 1902(a)(2) of the Act and implementing regulations at 42 CFR 433.50(a)(1) permit a State to delegate some responsibility for the non-Federal share of medical assistance expenditures to local units of government sources under some circumstances.

The U.S. Troop Readiness, Veterans Care, Katrina Recovery and Iraq Accountability Appropriations Act of 2007 prohibited the Secretary of Health and Human Services from finalizing or otherwise implement the provisions contained in a proposed rule published on January 18, 2007, titled "Medicaid Program; Cost Limit for Providers Operated by Units of Government and Provisions To Ensure the Integrity of Federal-State Financial Partnership" (72 FR 2236 through 2248).

B. Final Rule With Comment Period Published May 29, 2007

On May 29, 2007, the Department of Human and Human Services (DHHS) published a final rule with comment period titled, "Medicaid Program; Cost Limit for Providers Operated by Units of Government and Provisions To Ensure the Integrity of Federal-State Financial Partnership" in the **Federal Register** (72 FR 29747 through 29836).

That final rule eliminated, modified, or implemented regulatory requirements pertaining to the financial relationship

between the Federal and State governments. Specifically, this rule consisted of the following:

- Clarified that entities involved in the financing of the non-Federal share of Medicaid payments must be a unit of government.
- Clarified the documentation necessary to support a Medicaid certified public expenditure.
- Limited Medicaid reimbursement for health care providers that are operated by units of government to an amount that does not exceed the health care provider's cost of providing services to Medicaid individuals.
- Required all health care providers to receive and retain the full amount of total computable payments for services furnished under the approved Medicaid State plan.
- Made conforming changes to provisions governing the Child Health Insurance Program (CHIP) to make the same requirements applicable, with the exception of the cost limit on reimbursement.

On May 23, 2008, the United States District Court for the District of Columbia, in *Alameda County Medical Center, et al.* v. *Michael O. Leavitt, Secretary, U.S. Department of Health and Human Services, et al., 559 F. Supp. 2d,* found that DHHS had improperly promulgated these regulations. The court stated that DHHS violated the Congressional moratorium on finalization of this regulation in the Troop Readiness, Veteran's Care, Katrina Recovery and Iraq Accountability Appropriation Act of 2007 (UTRA), (Pub. L. 110–28) and vacated the rule and remanded the matter to DHHS. Accordingly, DHHS is removing the vacated rule from the Code of Federal Regulations.

Section 7001 of the Supplemental Appropriations Act of 2008 Public Law 110–252 extended the moratorium on finalizing the Cost rule to April 1, 2009. The Congress considered this matter again in the passage of the American Recovery and Reinvestment Act (ARRA) of 2009. Section 5003(d) of ARRA expressed the sense of Congress that the Cost rule should not be adopted as a final rule.

II. Provisions of the Final Regulations

In this final rule, DHHS is removing all of the provisions that were issued in the May 29, 2007 final rule with comment period. Concurrently, DHHS is restoring regulation text so that the regulatory language impacted by the May 2007 final rule will appear in the Code of Federal Regulations as it did prior to issuance of that rule.

Part 433—State Fiscal Administration

(Sec. 433.50) Basis, Scope, and Applicability

In § 433.50(a)(1), DHHS is removing the language that states "and section 1903(w)(7)(G)." DHHS is also removing "units of." DHHS is also adding "s" to the word "government" and adding the word "both" before the words "State and local governments." In addition, DHHS is removing paragraphs (a)(1)(i) and (a)(1)(ii) of this regulation.

(Sec. 433.51) Funds From Units of Government as the State Share of Financial Participation

In § 433.51, DHHS is revising the section heading to read "*§ 433.51 Public funds as the State share of financial participation*."

In § 433.51(a), DHHS is adding the word "Public" before the word "funds." DHHS is also removing the words "from units of government" of this regulation.

In § 433.51(b), DHHS is revising the paragraph to read "The public funds are appropriated directly to the State or local Medicaid agency, or are transferred from other public agencies (including Indian tribes) to the State or local agency and under its administrative control, or certified by the contributing public agency as representing expenditures eligible for FFP under this section."

In § 433.51(c), DHHS is adding the word "Public" before the word "funds." DHHS is also removing the words "from units of government" of this regulation.

Part 447—Payments For Services

(Sec. 447.206) Cost Limit for Providers Operated by Units of Government

In part 447, DHHS is removing the entire provisions of § 447.206 of this regulation. (§ 447.207) Retention of payments.

In part 447, DHHS is removing the entire provisions of § 447.207 of this regulation.

(Sec. 447.271) Upper Limits Based on Customary Charges

In § 447.271(a), DHHS is adding an introductory phrase to read "Except as provided in paragraph (b) of this section,".

In § 447.271(b), DHHS is removing the word "Reserved" and replacing it with "The agency may pay a public provider that provides services free or at a nominal charge at the same rate that would be used if the provider charges were equal to or greater than its costs."

(Sec. 447.272) Inpatient Services: Application of Upper Payment Limits

In § 447.272(a), DHHS is removing the word "nursing facilities" replacing it with "NFs."

In § 447.272(a)(1), DHHS is revising the paragraph to read "State government-owned or operated facilities (that is, all facilities that are either owned or operated by the State)."

In § 447.272(a)(2), DHHS is revising the paragraph to read "Non-State government-owned or operated facilities (that is, all government facilities that are neither owned nor operated by the State)."

In § 447.272(a)(3), DHHS is revising the paragraph to read "Privately-owned and operated facilities."

In § 447.272(b)(1), DHHS is removing the words "For privately operated facilities."

In § 447.272(b)(2), DHHS is revising the paragraph to read "Except as provided for in paragraph (c) of this section, aggregate Medicaid payments to a group of facilities within one of the categories described in paragraph (a) of this section may not exceed the upper payment limit described in paragraph (b)(1) of this section."

In § 447.272(b)(3), DHHS is removing entire provision of this regulation.

In § 447.272(b)(4), DHHS is removing entire provision of this regulation.

In § 447.272(c), DHHS is removing symbol "—" and replacing it with ".".

In § 447.272, DHHS is removing paragraph (c)(3) of this regulation.

In § 447.272(d)(1), DHHS is revising the paragraph to read "For non-State government owned or operated hospitals—March 19, 2002."

(Sec. 447.321) Outpatient Hospital and Clinic Services: Application of Upper Payment Limits

In § 447.321(a)(1), DHHS is revising the paragraph to read "State government-owned or operated facilities (that is, all facilities that are owned or operated by the State)."

In § 447.321(a)(2), DHHS is revising the paragraph to read "Non-State government owned or operated facilities (that is, all government operated facilities that are neither owned nor operated by the State)."

In § 447.321(a)(3), DHHS is revising the paragraph to read "Privately-owned and operated facilities."

In § 447.321(b)(1), DHHS is removing the words "For privately operated facilities,".

In § 447.321(b)(2), DHHS is revising the provision to read "Except as provided for in paragraph (c) of this section, aggregate Medicaid payments to

a group of facilities within one of the categories described in paragraph (a) of this section may not exceed the upper payment limit described in paragraph (b)(1) of this section."

In § 447.321, DHHS is removing paragraph (b)(3) of this regulation.

In § 447.321, DHHS is removing pargraph (b)(4) of this regulation.

In § 447.321(c)(1), DHHS is removing the designated number "(1)" of this regulation.

In § 447.321, DHHS is removing paragraph (c)(2) of this regulation.

In § 447.321, DHHS is removing paragraph (c)(3) of this regulation.

In § 447.321(d), DHHS is removing reference to paragraph "(b)" and replacing it with a reference to paragraph "(b)(1)."

In § 447.321(d)(1), DHHS is revising the paragraph to read "For non-State government-owned or operated hospitals—March 19, 2002."

In § 447.321, DHHS is removing paragraph (d)(2) and redesignating paragraph (d)(3) as paragraph (d)(2) of this regulation.

Sec. 457.220 Funds From Units of Government as the State Share of Financial Participation

In § 457.220(a), DHHS is adding the word "Public" before the word "Funds." DHHS is also removing the words "from units of government."

In § 457.220(b), DHHS is revising the paragraph to read "The public funds are appropriated directly to the State or local SCHIP agency, or are transferred from other public agencies (including Indian tribes) to the State or local agency and are under its administrative control, or are certified by the contributing public agency as representing expenditures eligible for FFP under this section."

In § 457.220(c), DHHS is adding the word "public" after the word "The" before the word "funds." DHHS is also removing the words "from units of government."

Sec. 457.628 Other Applicable Federal Regulations

In § 457.628(a), DHHS is removing the parenthesis "(" before the word "sources" and removing the parenthesis ")" after the word "Donations" and adding a semicolon and the word "Donations." In addition, DHHS is removing the words "and § 447.207 of this chapter (Retention of payments)."

III. Collection of Information

This document does not impose information collection and recordkeeping requirements. Consequently, it need not be reviewed by the Office of Management and Budget under the authority of the Paperwork Reduction Act of 1995.

IV. Waiver of Proposed Rulemaking and Delayed Effective Date

DHHS ordinarily publish a notice of proposed rulemaking in the **Federal Register** and invite public comment on the proposed rule. The notice of proposed rulemaking includes a reference to the legal authority under which the rule is proposed, and the terms and substances of the proposed rule or a description of the subjects and issues involved. This procedure can be waived, however, if an agency finds good cause that a notice-and-comment procedure is impractical, unnecessary, or contrary to the public interest and incorporates a statement of the finding and its reasons in the rule issued. DHHS has determined that providing prior notice and opportunity for comment on the amending regulations is unnecessary. This final rule merely removes regulatory language relating to CMS–2258–FC, which was vacated by the United States District Court for the District of Columbia. As a result of this decision, the regulatory language related to CMS–2258–FC has no force or effect, and public comment would not affect that status. The presence of that language in the Code of Federal Regulations can be confusing, and thus the public interest would be served by removal of that language. Furthermore, removing this language from the Code of Federal Regulations and reinstating the prior regulatory language has no legal impact but simply reflects this final judicial determination.

For the same reasons, DHHS believes there is good cause for waiving any delay in the effective date, making the reinstated regulatory provisions immediately effective. See 5 U.S.C. 553(d).

V. Regulatory Impact Statement

DHHS has examined the impact of this rule as required by Executive Order 12866 on Regulatory Planning and Review (September 30, 1993), the Regulatory Flexibility Act (RFA) (September 19, 1980, Pub. L. 96–354), section 1102(b) of the Social Security Act, section 202 of the Unfunded Mandates Reform Act of 1995 (March 22, 1995; Pub. L. 104–4), Executive Order 13132 on Federalism (August 4, 1999) and the Congressional Review Act (5 U.S.C. 804(2)).

Executive Order 12866 directs agencies to assess all costs and benefits of available regulatory alternatives and, if regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety effects, distributive impacts, and equity). A regulatory impact analysis (RIA) must be prepared for major rules with economically significant effects ($100 million or more in any 1 year). This regulatory action only removes those regulations vacated by the United States District Court for the District of Columbia. Therefore, this action is not a "significant" regulatory action as defined by E.O. 12866. This rule also does not reach the economic threshold and thus is not considered a major rule.

The RFA requires agencies to analyze options for regulatory relief of small businesses. For purposes of the RFA, small entities include small businesses, nonprofit organizations, and small governmental jurisdictions. Most hospitals and most other providers and suppliers are small entities, either by nonprofit status or by having revenues of $7 million to $34.5 million in any one year. Individuals and States are not included in the definition of a small entity. DHHS is not preparing an analysis for the RFA because DHHS has determined, and the Secretary certifies, that this final rule will not have a significant economic impact on a substantial number of small entities.

In addition, section 1102(b) of the Act requires us to prepare a regulatory impact analysis if a rule may have a significant impact on the operations of a substantial number of small rural hospitals. This analysis must conform to the provisions of section 604 of the RFA. For purposes of section 1102(b) of the Act, we define a small rural hospital as a hospital that is located outside of a Core-Based Statistical Area (for Medicaid) and outside a Metropolitan Statistical Area for Medicare) and has fewer than 100 beds. DHHS is not preparing an analysis for section 1102(b) of the Act because we have determined, and the Secretary certifies, that this final rule will not have a significant impact on the operations of a substantial number of small rural hospitals.

Section 202 of the Unfunded Mandates Reform Act of 1995 also requires that agencies assess anticipated costs and benefits before issuing any rule whose mandates require spending in any 1 year of $100 million in 1995 dollars, updated annually for inflation. In 2010, that threshold is approximately $135 million. This rule will have no consequential effect on State, local, or tribal governments or on the private sector.

Executive Order 13132 establishes certain requirements that an agency must meet when it promulgates

regulations that imposes substantial direct requirement costs on State and local governments, preempts State law, or otherwise has Federalism implications. Since this regulation does not impose any costs on State or local governments, the requirements of Executive Order 13132 are not applicable.

In accordance with the provisions of Executive Order 12866, this regulation was reviewed by the Office of Management and Budget.

List of Subjects

42 CFR Part 433

Administrative practice and procedure, Child support, Claims, Grant programs—health, Medicaid, Reporting and recordkeeping requirements.

42 CFR Part 447

Accounting, Administrative practice and procedure, Drugs, Grant programs—health, Health facilities, Health professions, Medicaid, Reporting and recordkeeping requirements, Rural areas.

42 CFR Part 457

Administrative practice and procedure, Grant programs—health, Health insurance, Reporting and recordkeeping requirements.

■ For the reasons set forth in the preamble, the Centers for Medicare & Medicaid Services amends 42 CFR chapter IV as set forth below:

PART 433—STATE FISCAL ADMINISTRATION

■ 1. The authority citation for part 433 continues to read as follows:

Authority: Sec. 1102 of the Social Security Act (42 U.S.C. 1302).

Subpart B—General Administrative Requirements State Financial Participation

■ 2. Section § 433.50 is amended by revising paragraph (a)(1) to read as follows:

§ 433.50 Basis, scope, and applicability.

(a) * * *

(1) Section 1902(a)(2) of the Act which requires States to share in the cost of medical assistance expenditures and permit both State and local governments to participate in the financing of the non-Federal portion of medical assistance expenditures.

* * * * *

■ 3. Section 433.51 is revised to read as follows:

§ 433.51 Public Funds as the State share of financial participation.

(a) Public Funds may be considered as the State's share in claiming FFP if they meet the conditions specified in paragraphs (b) and (c) of this section.

(b) The public funds are appropriated directly to the State or local Medicaid agency, or are transferred from other public agencies (including Indian tribes) to the State or local agency and under its administrative control, or certified by the contributing public agency as representing expenditures eligible for FFP under this section.

(c) The public funds are not Federal funds, or are Federal funds authorized by Federal law to be used to match other Federal funds.

PART 447—PAYMENTS FOR SERVICES

■ 4. The authority citation for part 447 continues to read as follows:

Authority: Sec. 1102 of the Social Security Act (42 U.S.C. 1302).

Subpart B—Payment Methods: General Provisions

§ 447.206 [Removed]

■ 5. Section 447.206 is removed.

§ 447.207 [Removed]

■ 6. Section 447.207 is removed.

Subpart C—Payment for Inpatient Hospital and Long-Term Care Facility Services

Upper Limits

■ 7. Section § 447.271 is revised to read as follows:

§ 447.271 Upper limits based on customary charges.

(a) Except as provided in paragraph (b) of this section, the agency may not pay a provider more for inpatient hospital services under Medicaid than the provider's customary charges to the general public for the services.

(b) The agency may pay a public provider that provides services free or at a nominal charge at the same rate that would be used if the provider charges were equal to or greater than its costs.

■ 8. Section 447.272 is amended by—

■ A. Revising paragraphs (a), (b), and (d)(1).

■ B. Revising the heading for paragraph (c).

■ C. Removing paragraph (c)(3).

The revisions read as follows:

§ 447.272 Inpatient services: Application of upper payment limits.

(a) *Scope.* This section applies to rates set by the agency to pay for inpatient services furnished by hospitals, NFs, and ICFs/MR within one of the following categories:

(1) State government-owned or operated facilities (that is, all facilities that are either owned or operated by the State).

(2) Non-State government-owned or operated facilities (that is, all government facilities that are neither owned nor operated by the State).

(3) Privately-owned and operated facilities.

(b) *General rules.*

(1) Upper payment limit refers to a reasonable estimate of the amount that would be paid for the services furnished by the group of facilities under Medicare payment principles in subchapter B of this chapter.

(2) Except as provided for in paragraph (c) of this section, aggregate Medicaid payments to a group of facilities within one of the categories described in paragraph (a) of this section may not exceed the upper payment limit described in paragraph (b)(1) of this section.

(c) *Exceptions.*

* * * * *

(d) * * *

(1) For non-State government owned or operated hospitals,—March 19, 2002.

* * * * *

Subpart F—Payment Methods for Other Institutional and Noninstitutional Services

Outpatient Hospital and Clinic Services

■ 9. Section 447.321 is amended by—

■ A. Revising paragraphs (a), (b), (c) and (d)(1).

■ B. Revising introductory text of paragraph (d) by removing the phrase "paragraph (b)" and adding in its place the phrase "paragraph (b)(1)."

■ C. Removing paragraphs (d)(2).

■ D. Redesignating paragraph (d)(3)as paragraph (d)(2).

The revisions read as follows:

§ 447.321 Outpatient hospital and clinic services: Application of upper payment limits.

(a) *Scope.* This section applies to rates set by the agency to pay for outpatient services furnished by hospitals and clinics within one of the following categories:

(1) State government-owned or operated facilities (that is, all facilities that are owned or operated by the State.)

(2) Non-State government owned or operated facilities (that is, all government operated facilities that are neither owned nor operated by the State).

(3) Privately-owned and operated facilities.

(b) *General rules.* (1) Upper payment limit refers to a reasonable estimate of the amount that would be paid for the services furnished by the group of facilities under Medicare payment principles in subchapter B of this chapter.

(2) Except as provided in paragraph (c) of this section, aggregate Medicaid payments to a group of facilities within one of the categories described in paragraph (a) of this section may not exceed the upper payment limit described in paragraph (b)(1) of this section.

(c) *Exceptions.* Indian Health Services and tribal facilities. The limitation in paragraph (b) of this section does not apply to Indian Health Services facilities and tribal facilities that are funded through the Indian Self-Determination and Education Assistance Act (Pub. L. 93–638).

(d) * * *

(1) For non-State government-owned or operated hospitals—March 19, 2002.

* * * * *

PART 457—ALLOTMENTS AND GRANTS TO STATES

■ 10. The authority for part 457 continues to read as follows:

Authority: Sec. 1102 of the Social Security Act (42 U.S.C. 1302).

Subpart B—General Administration—Reviews and Audits; Withholding for Failure To Comply; Deferral and Disallowance of Claims; Reduction of Federal Medical Payments

■ 11. Section 457.220 is revised to read as follows:

§ 457.220 Funds from units of government as the State share of financial participation.

(a) Public funds may be considered as the State's share in claiming FFP if they meet the conditions specified in paragraphs (b) and (c) of this section.

(b) The public funds are appropriated directly to the State or local SCHIP agency, or are transferred from other public agencies (including Indian tribes) to the State or local agency and are under its administrative control, or are certified by the contributing public agency as representing expenditures eligible for FFP under this section.

(c) The public funds are not Federal funds, or are Federal funds authorized by Federal law to be used to match other Federal funds.

Subpart F—Payments to States

■ 12. Section 457.628 is amended by revising the introductory text and paragraph (a) to read as follows:

§ 457.628 Other applicable Federal regulations.

Other regulations applicable to SCHIP programs include the following:

(a) HHS regulations in 42 Subpart B—433.51–433.74 sources of non-Federal share and Health Care-Related Taxes and Provider-Related Donations; apply to States' SCHIP programs in the same manner as they apply to States' Medicaid programs.

* * * * *

(Catalog of Federal Domestic Assistance Program No. 93.778, Medical Assistance Program)

Dated: July 28, 2010.

Donald M. Berwick,

Administrator, Centers for Medicare & Medicaid Services.

Approved: August 20, 2010.

Kathleen Sebelius

Secretary.

[FR Doc. 2010–30066 Filed 11–29–10; 8:45 am]

BILLING CODE 4120–01–P

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 73

[MB Docket No. 09–52; FCC 10–24]

Policies To Promote Rural Radio Service and To Streamline Allotment and Assignment Procedures

AGENCY: Federal Communications Commission.

ACTION: Final rule; announcement of compliance date.

SUMMARY: In this document, the Commission announces that the Office of Management and Budget (OMB) has approved, for a period of three years, the information collection requirements associated with the Commission's rules and FCC Forms 301, 314, 315, 316 and 340. These rules and form changes were approved on May 27, 2010 and June 4, 2010 and the compliance date will be November 30, 2010.

DATES: The compliance date for §§ 73.3571(k), 73.7000, 73.7002(b), and 73.7002(c) and FCC Forms 301, 314, 315, 316 and 340 published at 75 FR 9797, March 4, 2010 is November 30, 2010.

FOR FURTHER INFORMATION CONTACT: Cathy Williams on (202) 418–2918 or send an e-mail to: *Cathy.Williams@fcc.gov.*

SUPPLEMENTARY INFORMATION: As required by the Paperwork Reduction Act of 1995 (44 U.S.C. 3507), the Commission is notifying the public that it received OMB approval on May 27, 2010, and June 4, 2010, for a period of three years, for the information collection requirements contained in Sections 73.3571(k), 73.7000, 73.7002(b), and 73.7002(c) of the Commission's rules and FCC Forms 301, 314, 315, 316 and 340 and that the compliance date for these rules and forms published at 75 FR 9797, March 4, 2010, is November 30, 2010. If you have any comments on the burden estimates, or how the Commission can improve the collections and reduce any burdens caused thereby, please contact Cathy Williams, Federal Communications Commission, Room 1–C823, 445 12th Street, SW., Washington, DC 20554. Please include OMB Control Numbers 3060–0029, 3060–0027, 3060–0996, 3060–0031 and/or 3060–0009 in your correspondence. The Commission also will accept your comments via the Internet if you send them to *PRA@fcc.gov.* To request materials in accessible formats for people with disabilities (Braille, large print, electronic files, audio format), send an e-mail to *fcc504@fcc.gov* or call the Consumer & Governmental Affairs Bureau at (202)418–0530 (voice), (202) 418–0432 (TTY).

Under 5 CFR 1320, an agency may not conduct or sponsor a collection of information unless it displays a current, valid OMB Control Number.

No person shall be subject to any penalty for failing to comply with a collection of information subject to the Paperwork Reduction Act that does not display a valid OMB Control Number. The OMB Control Numbers are 3060–0027, 3060–0029, 3060–0996, 3060–0031 and 3060–0009 and the total annual reporting burdens and costs for respondents are as follows:

OMB Control Number: 3060–0029.

OMB Approval Date: June 4, 2010.

Expiration Date: June 30, 2013.

Title: Application for Construction Permit for Reserved Channel Noncommercial Educational Broadcast Station.

Form Number: FCC Form 340.

Respondents: Business or other for-profit entities; Not-for-profit institutions; State, local or tribal government.

Number of Respondents and Responses: 2,710 respondents and 2,710 responses.

Estimated Time per Response: 2 to 5 hours.

Frequency of Response: On occasion reporting requirement; Third party disclosure requirement.

Obligation to Respond: Required to obtain or retain benefits. Statutory authority for this collection of information is contained in Sections

154(i), 303 and 308 of the Communications Act of 1934, as amended.

Total Annual Burden: 6,700 hours.

Total Annual Costs: $27,894,950.00.

Nature and Extent of Confidentiality: There is no need for confidentiality and respondents are not being asked to submit confidential information to the Commission.

Needs and Uses: On April 7, 2009, the Commission adopted a Notice of Proposed Rule Making in the Matter of Policies to Promote Rural Radio Service and to Streamline Allotment and Assignment Procedures, MB Docket No. 09–52, FCC 09–30, 24 FCC Rcd 5239 (2009). On January 28, 2010, the Commission adopted a First Report and Order in the Matter of Policies to Promote Rural Radio Service and to Streamline Allotment and Assignment Procedures (the "Order"), MB Docket No. 09–52, FCC 10–24, 25 FCC Rcd 1583 (2010). In the Order, the Commission adopted the Tribal Priority proposed in the Notice of Proposed Rule Making, with some modifications. Under the Tribal Priority, a Section 307(b) priority will apply to an applicant meeting all of the following criteria: (1) The applicant is either a federally recognized Tribe or tribal consortium, or an entity 51 percent or more of which is owned or controlled by a Tribe or Tribes (with the Tribes or entities occupying tribal lands that are covered by at least 50 percent of the daytime principal community contour of the proposed facility); (2) at least 50 percent of the daytime principal community contour of the proposed facilities covers tribal lands, in addition to meeting all other Commission technical standards; (3) the specified community of license is located on tribal lands; and (4) the applicant proposes the first local tribal-owned noncommercial educational transmission service at the proposed community of license. The proposed Tribal Priority would apply, if applicable, before the fair distribution analysis currently used by noncommercial educational applicants. The Tribal Priority does not prevail over an applicant proposing first overall reception service to a significant population.

FCC Form 340 and its instructions are being revised to accommodate those applicants qualifying for the new Tribal Priority. Specifically, we are adding new Questions 1 and 2, which seek information as to the applicant's eligibility for the Tribal Priority and direct applicants claiming the priority to prepare and attach an exhibit, to Section III. The instructions for Section III have been revised to assist applicants with completing the new questions and preparing the exhibit. Also, the Commission removed FCC Form 302–DTV, Application for Digital Television Broadcast Station License, and FCC Form 349, Application for Authority to Construct or Make Changes in an FM Translator or FM Booster Station, from this information collection to allow the Commission to more effectively manage the information collections.

OMB Control Number: 3060–0027.

OMB Approval Date: June 4, 2010.

Expiration Date: June 30, 2013.

Title: Application for Construction Permit for Commercial Broadcast Station.

Form Number: FCC Form 301.

Respondents: Business or other for-profit entities; Not-for-profit institutions; State, local or tribal government.

Number of Respondents and Responses: 4,453 respondents and 7,889 responses.

Estimated Time per Response: 3 to 6.25 hours.

Frequency of Response: On occasion reporting requirement; Third party disclosure requirement.

Obligation to Respond: Required to obtain or retain benefits. Statutory authority for this collection of information is contained in Sections 154(i), 303 and 308 of the Communications Act of 1934, as amended.

Total Annual Burden: 19,561 hours.

Total Annual Costs: $85,096,314.00.

Nature and Extent of Confidentiality: There is no need for confidentiality and respondents are not being asked to submit confidential information to the Commission.

Needs and Uses: On January 28, 2010, the Commission adopted a First Report and Order and Further Notice of Proposed Rulemaking (the "Order") in MB Docket No. 09–52, FCC 10–24, 25 FCC Rcd 1583 (2010). The Order adopts changes to certain procedures associated with the award of broadcast radio construction permits by competitive bidding, including modifications to the manner in which it awards preferences to applicants under the provisions of Section 307(b) of the Communications Act of 1934, as amended (the "Act"). With regard to AM application processing, the Commission adopted a proposal to explicitly prohibit the downgrading of proposed AM facilities that receive a dispositive preference under Section 307(b) of the Act and thus are not awarded through competitive bidding. Specifically, an AM applicant that receives a dispositive preference under Section 307(b) will not be allowed to later modify that proposal to serve a smaller population or otherwise negate the factors that led to the award of the preference. The Commission imposed these restrictions for a period of four years of on-air operations. These procedural safeguards are necessary to protect the integrity of our Section 307(b) analyses. Consistent with actions taken by the Commission in the Order, FCC Form 301 has been revised to add questions, specifically asking the applicant to certify that the construction permit application complies with the four year service requirements. The instructions for FCC Form 301 have been revised to assist applicants with completing the new questions.

OMB Control Number: 3060–0996.

OMB Approval Date: May 27, 2010.

Expiration Date: May 31, 2013.

Title: AM Auction Section 307(b) Submissions.

Form Number: N/A.

Respondents: Business or other for-profit entities; Not-for-profit institutions; State, local or tribal government.

Number of Respondents and Responses: 160 respondents and 160 responses.

Estimated Time per Response: 0.5 to 3 hours.

Frequency of Response: On occasion reporting requirement.

Obligation to Respond: Required to obtain or retain benefits. Statutory authority for this collection of information is contained in Sections 154(i), 307(b) and 309 of the Communications Act of 1934, as amended.

Total Annual Burden: 375 hours.

Total Annual Costs: $71,200.00.

Nature and Extent of Confidentiality: There is no need for confidentiality and respondents are not being asked to submit confidential information to the Commission.

Needs and Uses: On January 28, 2010, the Commission adopted a First Report and Order and Further Notice of Proposed Rulemaking (the "Order") in MB Docket No. 09–52, FCC 10–24, 25 FCC Rcd 1583 (2010). The Order adopts changes to certain procedures associated with the award of broadcast radio construction permits by competitive bidding, including modifications to the manner in which it awards preferences to applicants under the provisions of Section 307(b). In the Order, the Commission added a new Section 307(b) priority that would apply only to Native American and Alaska Native Tribes, tribal consortia, and majority tribal-owned entities proposing to serve tribal lands. The priority is only

available when all of the following conditions are met: (1) The applicant is either a federally recognized Tribe or tribal consortium, or an entity that is 51 percent or more owned or controlled by a Tribe or Tribes; (2) at least 50 percent of the daytime principal community contour of the proposed facilities will cover tribal lands, in addition to meeting all other Commission technical standards; (3) the specified community of license is located on tribal lands; and (4) in the commercial AM service, the applicant must propose first or second aural reception service or first local commercial tribal-owned transmission service to the proposed community of license, which must be located on tribal lands. Applicants claiming Section 307(b) preferences using these factors will submit information to substantiate their claims. The Commission will dismiss, without further processing, the previously filed AM auction filing window application and technical proposal of any applicant that fails to file an amendment addressing the Section 307(b) criteria, where required. Mutually exclusive AM applicants may not use this as an opportunity to change the technical proposal specified in the AM auction filing window application. The Section 307(b) showing must be based on the technical proposal as specified in the AM auction filing window application.

OMB Control Number: 3060–0031.

OMB Approval Date: May 27, 2010.

Expiration Date: May 31, 2013.

Title: Application for Consent to Assignment of Broadcast Station Construction Permit or License, FCC Form 314; Application for Consent to Transfer Control of Entity Holding Broadcast Station Construction Permit or License, FCC Form 315; Section 73.3580, Local Public Notice of Filing of Broadcast Applications.

Form Number: FCC Forms 314 and 315.

Respondents: Business or other for-profit entities; Not-for-profit institutions; State, local or tribal government.

Number of Respondents and Responses: 4,820 respondents and 12,520 responses.

Estimated Time per Response: 2 to 6 hours.

Frequency of Response: On occasion reporting requirement; Third party disclosure requirement.

Obligation to Respond: Required to obtain or retain benefits. Statutory authority for this collection of information is contained in Sections 154(i), 303(b) and 308 of the Communications Act of 1934, as amended.

Total Annual Burden: 18,443 hours.

Total Annual Costs: $36,168,450.00.

Nature and Extent of Confidentiality: There is no need for confidentiality and respondents are not being asked to submit confidential information to the Commission.

Needs and Uses: On January 28, 2010, the Commission adopted a First Report and Order and Further Notice of Proposed Rulemaking (the "Order") in MB Docket No. 09–52; FCC 10–24, 25 FCC Rcd 1583 (2010). The Order adopts rule changes designed to streamline and clarify certain procedures associated with the award of broadcast radio construction permits by competitive bidding. In the Order, the Commission also adopted a priority under Section 307(b) of the Communications Act of 1934, as amended, to assist federally recognized Native American Tribes and Alaska Native Villages ("Tribes"), enrolled members of Tribes, and entities primarily owned or controlled by Tribes or enrolled members of Tribes, in obtaining broadcast radio construction permits designed primarily to serve tribal lands (the "Tribal Priority"). Applicants affiliated with Tribes who meet certain conditions regarding tribal membership and signal coverage qualify for the Tribal Priority, which in most cases will enable the qualifying applicants to obtain construction permits without proceeding to competitive bidding, in the case of commercial stations, or to point system evaluation, in the case of noncommercial educational ("NCE") stations. Once a permit is obtained, it cannot be assigned or transferred to another person or entity for a period beginning with issuance of the construction permit until the station has completed four years of on-air operations, unless the assignee or transferee also qualifies for the Tribal Priority.

Consistent with actions taken by the Commission in the Order, the following changes are made to Forms 314 and 315: Section I of each form includes a new question asking applicants to indicate whether any of the authorizations involved in the transaction were obtained (or, in the case of non-reserved band commercial FM stations the allotment for the station was obtained) through the Tribal Priority. The instructions for Section I of Forms 314 and 315 have been revised to assist applicants with completing the new questions.

OMB Control Number: 3060–0009.

OMB Approval Date: May 27, 2010.

Expiration Date: May 31, 2013.

Title: Application for Consent to Assignment of Broadcast Station Construction Permit or License or Transfer of Control of Corporation Holding Broadcast Station Construction Permit or License.

Form Number: FCC Form 316.

Respondents: Business or other for-profit entities; Not-for-profit institutions; State, local or tribal government.

Number of Respondents and Responses: 750 respondents and 750 responses.

Estimated Time per Response: 1.5 to 4.5 hours.

Frequency of Response: On occasion reporting requirement.

Obligation to Respond: Required to obtain or retain benefits. Statutory authority for this collection of information is contained in Sections 154(i) and 310(d) of the Communications Act of 1934, as amended.

Total Annual Burden: 1,231 hours.

Total Annual Costs: $711,150.00.

Nature and Extent of Confidentiality: There is no need for confidentiality and respondents are not being asked to submit confidential information to the Commission.

Needs and Uses: On January 28, 2010, the Commission adopted a First Report and Order and Further Notice of Proposed Rulemaking (the "Order") in MB Docket No. 09–52, FCC 10–24, 25 FCC Rcd 1583 (2010). The Order adopts rule changes designed to streamline and clarify certain procedures associated with the award of broadcast radio construction permits by competitive bidding. To prevent unjust enrichment by parties that acquire broadcast construction permits through the use of a bidding credit in an auction, Section 73.5007(c) of the Rules requires reimbursement to the Commission of all or part of the bidding credit upon a subsequent assignment or transfer of control, if the proposed assignee or transferee is not eligible for the same percentage of bidding credit. The rule is routinely applied to "long form" assignment or transfer applications filed on FCC Forms 314 and 315. In the Order, the Commission also sought to clarify that the unjust enrichment payments to the government must be made even when an assignment or transfer is pro forma in nature and therefore filed on FCC Form 316. This ensures that applicants do not use the summary pro forma assignment and transfer procedures to circumvent the unjust enrichment requirements.

Consistent with actions taken by the Commission in the Order, FCC Form 316 has been revised to add the broadcast auction-based questions presently included on FCC Forms 314

and 315, specifically asking the applicants to certify that the proposed assignment or transfer complies with the unjust enrichment provisions of the Commission's competitive bidding rules. The instructions for FCC Form 316 have been revised to assist applicants with completing the new questions.

Federal Communications Commission.

Gloria Miles,

Federal Register Liaison.

[FR Doc. 2010–29671 Filed 11–29–10; 8:45 am]

BILLING CODE 6712–01–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 648

[Docket No. 100813358–0560–02]

RIN 0648–BA16

Fisheries of the Northeastern United States; Discard Provision for Herring Midwater Trawl Vessels Fishing in Groundfish Closed Area I

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

ACTION: Final rule.

SUMMARY: Through this action, NMFS removes a regulatory exemption for midwater trawl herring vessels, which was originally implemented by a November 2, 2009, final rule. The exemption allowed midwater trawl vessels with an All Areas and/or Areas 2 and 3 Atlantic herring limited access permit fishing in Northeast (NE) multispecies Closed Area I (CA I) to release fish that cannot be pumped from the net at the end of pumping operations, without those fish being sampled by a NMFS at-sea observer. As a result of this rule, vessels will be required to bring the fish on board the vessel and make them available to the at-sea observer for sampling. The publication of this action is part of a Court-approved joint motion to stay pending litigation.

DATES: Effective January 31, 2011.

FOR FURTHER INFORMATION CONTACT: Douglas Potts, Fishery Policy Analyst, (978) 281–9341, fax (978) 281–9135.

SUPPLEMENTARY INFORMATION:

Background

On September 4, 2009, NMFS published a proposed rule (74 FR 45798) to implement changes to access requirements for midwater trawl vessels fishing in CA I, at the request of the New England Fishery Management Council (Council), with the intended goal of collecting better information on bycatch in the midwater trawl fishery. A final rule was published on November 2, 2009 (74 FR 56562), that implemented regulations requiring 100-percent observer coverage of trips by vessels with limited access Atlantic herring All Areas and/or Areas 2 and 3 category permits fishing for herring in CA I with midwater trawl gear. The rule also prohibited these vessels from releasing fish from the codend of the net, transferring fish to another vessel that is not carrying an observer, or otherwise discarding fish at sea, unless the fish has first been brought on board the vessel and made available for sampling and inspection by the observer. The regulations implemented by the November 2, 2009, rule (74 FR 56562) provided the following exemptions to this prohibition:

- The vessel operator has determined there is a compelling safety reason; or
- A mechanical failure precludes bringing the fish aboard the vessel for inspection; or,
- After pumping of fish onto the vessel has begun, the vessel operator determines that pumping becomes impossible as a result of spiny dogfish clogging the pump intake. Under this scenario, the vessel operator must take reasonable measures (such as strapping and splitting the net) to remove all fish that can be pumped from the net prior to release; or
- When there are small amounts of fish that cannot be pumped and remain in the net at the completion of pumping operations.

Additionally, under these regulations, if a codend is released in accordance with one of the first three exemptions, the vessel operator must complete and sign an affidavit to NOAA's Office of Law Enforcement (OLE) stating the vessel name and permit number; the vessel trip report (VTR) serial number; where, when, and for what reason the catch was released; the total weight of fish caught on that tow; and the weight of fish released (if less than the full tow). Completed affidavits are to be submitted to OLE at the conclusion of the trip. Following a released codend under one of the first three exemptions, the vessel may not fish in CA I for the remainder of the trip.

The exception allowing small amounts of fish that cannot be pumped from the net (sometimes called operational discards) to be released unobserved from the net while still in the water was not specifically mentioned in the proposed rule. NMFS considered this exemption to be a logical outgrowth of the proposed rule that needed no further public comment because it addressed a foreseeable practical problem that a small amount of fish may be left in a net after pumping operations were completed.

However, following publication of the final rule three fishermen filed a lawsuit challenging the exemption allowing the release of small amounts of fish that remain after pumping (*Taylor et al.* v. *Locke,* 09–CV–02289–HHK). Plaintiffs alleged that this additional exemption violated the Administrative Procedure Act because it was not a "logical outgrowth" of the proposed rule and should have been subjected to public comment, and that it violated conservation requirements of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) by allowing fish to be released from herring nets unobserved. Plaintiffs also claimed that the terms "small amounts of fish" and "at the completion of pumping operations" were not adequately defined.

Without admitting any violation of applicable law in publishing the original final rule, NMFS and the plaintiffs agreed to stay the litigation while NMFS repromulgated the challenged provision, to solicit public comment. On September 7, 2010, NMFS published a proposed rule (75 FR 54292), that repromulgated the challenged provision (§ 648.80(d)(7)(ii)(D)) and solicited public comment on whether to retain, delete, or amend the additional exemption in question. The proposed rule sought comment on: Retaining the exemption as it currently exists (status quo); eliminating the exemption (Alternative 1); modifying the exemption by specifying a maximum of 200 lb (90.7 kg) of fish that could be released (Alternative 2); or modifying the exemption by requiring that the codend either be brought on board or lifted out of the water, at the captain's discretion, so the observer could better estimate the amount and type of fish being released (Alternative 3). Public comments were accepted through October 7, 2010. Comments received are summarized and responded to below.

Based on public comment received, NMFS is implementing "Alternative 1," and is removing the exemption for operational discards at § 648.80(d)(7)(ii)(D). Therefore, if fish remain in the net at the conclusion of pumping operations, those fish will have to be brought on board the vessel and made available for sampling and

inspection by the observer, unless one of the other three exemptions applies. Therefore, fish that have not been pumped on board the vessel may be released if the vessel operator finds that: Pumping the catch could compromise the safety of the vessel; mechanical failure precludes bringing some or all of a catch on board the vessel; or spiny dogfish have clogged the pump and consequently prevent pumping of the rest of the catch. If a net is released for any of these three reasons, the vessel operator must complete and sign a CA I Midwater Trawl Released Codend Affidavit stating where, when, and why the net was released, as well as a good-faith estimate of both the total weight of fish caught on that tow and the weight of fish released (if the tow had been partially pumped). The completed affidavit form must be submitted to NMFS within 48 hr of the completion of the trip.

Following the release of a net for one of the three exemptions, the vessel is required to exit CA I. The vessel may continue to fish, but may not fish in CA I for the remainder of the trip.

Comments and Responses

A total of 5,924 comments were received during the comment period for the proposed rule from: 2 representatives of the commercial herring midwater trawl industry; 2 coalitions of herring advocacy groups; 5 representatives of recreational fishing organizations; 4 commercial groundfish organizations; 2 state elected officials (MA State Senator Robert A. O'Leary and MA State Representative Sarah K. Peake); 1 U.S. Congressman (Representative William Delahunt, MA); 6 environmental organizations; 1 community organization; 2 agriculture and fishery advocacy groups; the Atlantic States Marine Fisheries Commission (ASMFC); and 5,898 individuals. One comment was received after the close of the comment period. The vast majority of comments were form letters submitted by environmental organizations. The two representatives from the commercial herring midwater trawl industry supported the status quo. All other comments received supported Alternative 1 in the proposed rule. Alternatives 2 or 3 were not supported by any commenters and were criticized as being impractical or ineffective.

Comment 1: The two representatives of the commercial midwater trawl herring industry supported the status quo measure and raised concerns about each of the proposed alternatives. To illustrate their concerns, they described current procedures and how these procedures are not compatible with the proposed alternatives. The commenters noted that, under current operations, a vessel typically brings the full net alongside the vessel, where the end of the net is hoisted aboard in order to attach the pump. The pump and net are then lowered back into the water and splitting lines and straps are used to move catch to the pump. When the pump is moving mostly water, with an occasional fish, pumping is stopped, and the pump is removed from the net, leaving the codend open and releasing any fish that are still in the net. The empty net is then brought aboard in order to reset clips and rings before being set out for the next tow. The commenters assert that it could be dangerous for a vessel to attempt to re-cinch the end of the net after pumping is concluded in order to then bring the net aboard with the remaining catch.

Response: NMFS acknowledges that some vessels may need to adjust their fishing practices in order to remove the fish pump from the net without releasing the remaining fish, so that the fish in the net can be brought aboard for the observer to sample. The time between publication of this rule and when it becomes effective can be used by these vessels to develop alternative methods that allow safe operation within these requirements. A vessel may continue to fish outside of CA I while new procedures are developed. NMFS believes the safety and other exemptions sufficiently address commenters' concerns regarding the practical and safety operational difficulties of bringing nets on board vessels after pumping operations while creating a disincentive to invoke the exemption without justification. For any safety problems in bringing the net on board for inspection after pumping operations are complete, the vessel operator may take advantage of the exemption allowing release of fish for vessel safety. However, the vessel would still need to abide by the requirements of this exemption, including leaving CA I for the remainder of that trip.

Comment 2: The two representatives of the commercial midwater trawl herring industry asserted that it is impossible for these vessels to safely bring full nets and brailers over the side or over the stern of the vessel. In contrast, several other commenters cited remarks from a member of the commercial herring midwater trawl industry at the July 15, 2010, meeting of the Council's Atlantic Herring Plan Development Team, that a midwater trawl vessel could not bring aboard a full net, but could bring aboard up to 1 ton (907.1 kg) of fish in the net. A commenter who claimed experience on both midwater trawl and purse seine herring vessels also asserted that up to 1 ton (907.1 kg) of fish could safely be brought on board a midwater trawl vessel.

Response: This action does not require full nets and brailers to be brought aboard a vessel. The intent of the subject exemption was the release of very small amounts of fish, perhaps a few hundred pounds per tow, which physically could not be pumped. It was not intended to cover the release of larger amounts of fish. Three other exemptions, for safety, mechanical failure, or spiny dogfish clogging the pump allow release of larger catches that cannot be pumped aboard.

Comment 3: The representatives of the commercial midwater trawl herring industry stated that the proposed alternatives are unnecessary because at-sea observers are currently provided nearly every opportunity to estimate the volume, and most often the species of fish, remaining in the net before it is released. Conversely, on this subject several individuals, commercial groundfish organizations, and coalitions of herring advocacy groups opposed observer sampling protocols that rely on such "visual access" to the codend to estimate catch that is released. These commenters supported Alternative 1 as the only way to accurately account for all catch by the midwater trawl vessels operating in CA I.

Response: When determining the volume of fish before release, the at-sea observer must often rely on the estimations provided by the vessel operator and crew who are much more familiar with the specific gear in use. Species identification of fish remaining in the net is not typically possible. Observers may be able to identify large-bodied organisms in the net, but are unable to reliably differentiate many fish to their species. Even if fish at the surface of the net are identifiable, the contents may not be homogeneous and the observer cannot determine the full composition of the net. Therefore, released catch is typically classified as "Fish, NK" (i.e., fish, species not known). The Council's request for increased observer coverage in CA I was intended in part to provide additional information on the total catch of this fishery that could then inform future management actions. In order to provide the most complete and valuable information for this purpose, it is important to record, as completely and accurately as possible, the catch of vessels subject to this increased observer coverage. The removal of this exemption may help to address continued questions regarding

stratification of catch within a net or whether the pump housing, which is primarily designed to keep the net out of the pump, might also exclude some larger bodied species.

Comment 4: The ASMFC supported Alternative 1, but suggested NMFS periodically review this measure to determine if the level of data collection continues to be necessary and if the burden to the industry is justified.

Response: This rule may be re-considered and even superseded by a future Council action modifying the catch monitoring program for the Atlantic herring fishery as a whole. If the Council does not choose to review and reevaluate the requirements for access to CA I, the regulations would still be subject to the normal periodic review process and could be changed to account for new information about the burden on the fishery if necessary or appropriate.

Comment 5: No commenter supported either Alternative 2 or Alternative 3. Representatives of the commercial herring midwater trawl industry, representatives of commercial groundfish industry, and environmental groups all criticized these proposed alternatives as being unworkable.

Response: As explained in the proposed rule, these alternatives were intended as examples of possible modification to the existing regulation. The limit on how much can be released in Alternative 2 would be difficult to estimate, and could put the observer in an enforcement role. Alternative 3 would require the vessel crew to re-cinch the net after pumping, which is one of the major hurdles to bringing the catch on board. In addition, raising the net out of the water does not address the question of catch composition within the net and may pose even more logistical problems than bringing the net and catch on board. Therefore, NMFS did not consider either of these as acceptable alternatives for this final rule.

Comment 6: Some commenters objected to the Council granting midwater trawl vessels access to CA I for various reasons, including that midwater trawl access to groundfish closed areas was authorized based on less research and analysis than was required for the establishment of the NE Multispecies CA I Hook Gear Haddock Special Access Program (SAP). These comments included opposition to all midwater trawling, requests that the 100 percent observer coverage requirements apply to all groundfish closed areas, questions on the use and enforcement of the Closed Area I Midwater Trawl Released Codend Affidavit, and objections to the Council's requirement that in order to access CA I vessels targeting groundfish through the NE Multispecies CA I, Hook Gear Haddock Special Access Program had to meet a higher hurdle in terms of documenting bycatch than did midwater trawl vessels.

Response: These comments question the underlying provision of allowing midwater trawl vessels access to CA I, and other attendant requirements, which is beyond the scope of this rule, and, therefore not addressed in this final rule.

Classification

Pursuant to section 304(b)(1)(A) of the Magnuson-Stevens Act, the NMFS Assistant Administrator has determined that this final rule is consistent with the Atlantic Herring and NE Multispecies FMPs, other provisions of the Magnuson-Stevens Act, and other applicable law.

This final rule has been determined to be not significant for purposes of Executive Order 12866.

The Chief Counsel for Regulation of the Department of Commerce certified to the Chief Counsel for Advocacy of the Small Business Administration during the proposed rule stage that this action would not have a significant economic impact on a substantial number of small entities. The factual basis for the certification was published in the proposed rule and is not repeated here. NMFS received no comments questioning or regarding this certification.

Dated: November 24, 2010.

Samuel D. Rauch III,

Deputy Assistant Administrator for Regulatory Programs, National Marine Fisheries Service.

■ For the reasons set out in the preamble, 50 CFR part 648 is amended as follows:

PART 648—FISHERIES OF THE NORTHEASTERN UNITED STATES

■ 1. The authority citation for part 648 continues to read as follows:

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

§ 648.80 [Amended]

■ 2. In § 648.80, remove paragraph (d)(7)(ii)(D).

[FR Doc. 2010–30152 Filed 11–29–10; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 679

[Docket No. 0910131362–0087–02]

RIN 0648–XA066

Fisheries of the Exclusive Economic Zone Off Alaska; Big Skate in the Central Regulatory Area of the Gulf of Alaska

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

ACTION: Temporary rule; closure.

SUMMARY: NMFS is prohibiting retention of big skate in the Central Regulatory Area of the Gulf of Alaska (GOA). This action is necessary because the 2010 total allowable catch (TAC) of big skate in the Central Regulatory Area of the GOA has been reached.

DATES: Effective 1200 hrs, Alaska local time (A.l.t.), November 24, 2010, through 2400 hrs, A.l.t., December 31, 2010.

FOR FURTHER INFORMATION CONTACT: Josh Keaton, 907–586–7228.

SUPPLEMENTARY INFORMATION: NMFS manages the groundfish fishery in the GOA exclusive economic zone according to the Fishery Management Plan for Groundfish of the Gulf of Alaska (FMP) prepared by the North Pacific Fishery Management Council under authority of the Magnuson-Stevens Fishery Conservation and Management Act. Regulations governing fishing by U.S. vessels in accordance with the FMP appear at subpart H of 50 CFR part 600 and 50 CFR part 679.

The 2010 TAC of big skate in the Central Regulatory Area of the GOA is 2,049 metric tons (mt) as established by the final 2010 and 2011 harvest specifications for groundfish of the GOA (75 FR 11749, March 12, 2010).

In accordance with § 679.20(d)(2), the Administrator, Alaska Region, NMFS (Regional Administrator), has determined that the 2010 TAC of big skate in the Central Regulatory Area of the GOA has been reached. Therefore, NMFS is requiring that big skate caught in the Central Regulatory Area of the GOA be treated as prohibited species in accordance with § 679.21(b).

Classification

This action responds to the best available information recently obtained from the fishery. The Assistant Administrator for Fisheries, NOAA

(AA), finds good cause to waive the requirement 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 requirement is impracticable and contrary to the public interest. This requirement is impracticable and contrary to the public interest as it would prevent NMFS from responding to the most recent fisheries data in a timely fashion and would delay prohibiting the retention of big skate in the Central Regulatory Area of the GOA. NMFS was unable to publish a notice providing time for public comment because the most recent, relevant data only became available as of November 22, 2010.

The AA also finds good cause to waive the 30-day delay in the effective date of this action under 5 U.S.C. 553(d)(3). This finding is based upon the reasons provided above for waiver of prior notice and opportunity for public comment.

This action is required by § 679.20 and § 679.21 and is exempt from review under Executive Order 12866.

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

Dated: November 24, 2010.

Emily H. Menashes,

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

[FR Doc. 2010–30144 Filed 11–24–10; 4:15 pm]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 679

[Docket No. 0910131362–0087–02]

RIN 0648–XA067

Fisheries of the Exclusive Economic Zone Off Alaska; Longnose Skate in the Western Regulatory Area of the Gulf of Alaska

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

ACTION: Temporary rule; closure.

SUMMARY: NMFS is prohibiting retention of longnose skate in the Western Regulatory Area of the Gulf of Alaska (GOA). This action is necessary because the 2010 total allowable catch (TAC) of longnose skate in the Western Regulatory Area of the GOA has been reached.

DATES: Effective 1200 hrs, Alaska local time (A.l.t.), November 24, 2010, through 2400 hrs, A.l.t., December 31, 2010.

FOR FURTHER INFORMATION CONTACT: Josh Keaton, 907–586–7228.

SUPPLEMENTARY INFORMATION: NMFS manages the groundfish fishery in the GOA exclusive economic zone according to the Fishery Management Plan for Groundfish of the Gulf of Alaska (FMP) prepared by the North Pacific Fishery Management Council under authority of the Magnuson-Stevens Fishery Conservation and Management Act. Regulations governing fishing by U.S. vessels in accordance with the FMP appear at subpart H of 50 CFR part 600 and 50 CFR part 679.

The 2010 TAC of longnose skate in the Western Regulatory Area of the GOA is 81 metric tons (mt) as established by the final 2010 and 2011 harvest specifications for groundfish of the GOA (75 FR 11749, March 12, 2010).

In accordance with § 679.20(d)(2), the Administrator, Alaska Region, NMFS (Regional Administrator), has determined that the 2010 TAC of longnose skate in the Western Regulatory Area of the GOA has been reached. Therefore, NMFS is requiring that longnose skate caught in the Western Regulatory Area of the GOA be treated as prohibited species in accordance with § 679.21(b).

Classification

This action responds to the best available information recently obtained from the fishery. The Assistant Administrator for Fisheries, NOAA (AA), finds good cause to waive the requirement 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 requirement is impracticable and contrary to the public interest. This requirement is impracticable and contrary to the public interest as it would prevent NMFS from responding to the most recent fisheries data in a timely fashion and would delay prohibiting the retention of longnose skate in the Western Regulatory Area of the GOA. NMFS was unable to publish a notice providing time for public comment because the most recent, relevant data only became available as of November 22, 2010.

The AA also finds good cause to waive the 30-day delay in the effective date of this action under 5 U.S.C. 553(d)(3). This finding is based upon the reasons provided above for waiver of prior notice and opportunity for public comment.

This action is required by § 679.20 and § 679.21 and is exempt from review under Executive Order 12866.

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

Dated: November 24, 2010.

Emily H. Menashes,

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

[FR Doc. 2010–30149 Filed 11–24–10; 4:15 pm]

BILLING CODE 3510–22–P

Proposed Rules

Federal Register
Vol. 75, No. 229
Tuesday, November 30, 2010

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.

FEDERAL DEPOSIT INSURANCE CORPORATION

12 CFR Part 327

RIN 3064–AD66

Assessments, Large Bank Pricing

AGENCY: Federal Deposit Insurance Corporation (FDIC).

ACTION: Notice of proposed rulemaking; correction.

SUMMARY: This document corrects the preamble to a proposed rule published in the **Federal Register** of November 24, 2010, regarding Assessments, Large Bank Pricing. This correction clarifies that the comment period for the Assessments, Large Bank Pricing ends January 3, 2011.

FOR FURTHER INFORMATION CONTACT: Lisa Ryu, Chief, Large Bank Pricing Section, Division of Insurance and Research, (202) 898–3538; Christine Bradley, Senior Policy Analyst, Banking and Regulatory Policy Section, Division of Insurance and Research, (202) 898–8951; Brenda Bruno, Senior Financial Analyst, Division of Insurance and Research, (630) 241–0359 x 8312; Robert L. Burns, Chief, Exam Support and Analysis, Division of Supervision and Consumer Protection (704) 333–3132 x 4215; Christopher Bellotto, Counsel, Legal Division, (202) 898–3801; Sheikha Kapoor, Counsel, Legal Division, (202) 898–3960.

Correction

In proposed rule FR Doc. 2010–29138, beginning on page 72612 in the issue of November 24, 2010, make the following correction, the **DATES** section is corrected to read:

''**DATES:** Comments must be received on or before January 3, 2011.''

Dated: November 24, 2010.

Federal Deposit Insurance Corporation,

Robert E. Feldman,

Executive Secretary.

[FR Doc. 2010–30077 Filed 11–29–10; 8:45 am]

BILLING CODE 6741–01–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 71

Proposed Modification of the Salt Lake City, UT, Class B Airspace Area; Public Meetings

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of meetings.

SUMMARY: This notice announces three fact-finding informal airspace meetings to solicit information from airspace users and others concerning a proposal to revise the Class B airspace area at Salt Lake City, UT. The purpose of these meetings is to provide interested parties an opportunity to present views, recommendations, and comments on the proposal. All comments received during these meetings will be considered prior to any revision or issuance of a notice of proposed rulemaking.

DATES: The informal airspace meetings will be held on Wednesday, January 26, 2011, from 6 p.m.–9 p.m.; Tuesday, February 1, 2011, from 6 p.m.–9 p.m.; and Thursday, February 3, 2011, from 6 p.m.–9 p.m. Comments must be received on or before March 15, 2011.

ADDRESSES: (1) The meeting on Wednesday, January 26, 2011, will be held in the Ogden Conference Room, Ogden Hinckley Airport Terminal, 3909 Airport Road, Ogden, UT, 84405. (2) The meeting on Tuesday, February 1, 2011, will be held in the Conference room in the Executive Terminal, 397 North 2370 West, Salt Lake City, UT 84116. (3) The meeting on Thursday, February 3, 2011, will be held at Utah Valley University Aviation Flight Center, Hanger A, 1158 Mike Jense Parkway, Provo, UT 84601.

Comments: Send comments on the proposal, in triplicate, to: John Warner, Manager, Operations Support Group, AJV–W2, Western Service Center, Air Traffic Organization, Federal Aviation Administration, 1601 Lind Avenue, SW., Renton WA 98057.

FOR FURTHER INFORMATION CONTACT: To obtain details including a graphic depiction regarding this proposal, please contact Ken Whitaker, FAA Support Manager Salt Lake City TRACON, Salt Lake City ATCT/TRACON, 1201 North 4000 West, Salt Lake City, UT 84116. (801) 325–9630.

SUPPLEMENTARY INFORMATION:

Meeting Procedures

(a) Doors open 30 minutes prior to the beginning of each meeting. The meetings will be informal in nature and will be conducted by one or more representatives of the FAA. A representative from the FAA will present a briefing on the planned modification to the Class B airspace at Salt Lake City, UT. Each participant will be given an opportunity to deliver comments or make a presentation, although a time limit may be imposed. Only comments concerning the plan to modify the Class B airspace area at Salt Lake City, UT, will be accepted.

(b) The meetings will be open to all persons on a space-available basis. There will be no admission fee or other charge to attend and participate.

(c) Any person wishing to make a presentation to the FAA panel will be asked to sign in and estimate the amount of time needed for such presentation. This will permit the panel to allocate an appropriate amount of time for each presenter. These meetings will not be adjourned until everyone on the list has had an opportunity to address the panel.

(d) Position papers or other handout material relating to the substance of these meetings will be accepted. Participants wishing to submit handout material should present an original and two copies (3 copies total) to the presiding officer. There should be additional copies of each handout available for other attendees.

(e) These meetings will not be formally recorded. However, a summary of comments made at the meeting will be filed in the docket.

Agenda for the Meetings

—Sign-in.

—Presentation of meeting procedures.

—FAA explanation of the planned Class B airspace area modifications.

—Solicitation of public comments.

—Closing comments.

Issued in Washington DC, November 22, 2010.

Edith V. Parish,

Manager, Airspace Regulation and ATC Procedures Group.

[FR Doc. 2010–30091 Filed 11–29–10; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

21 CFR Parts 1, 14, and 17

[Docket No. FDA–2010–N–0560]

RIN 0910–AG55

Amendments to General Regulations of the Food and Drug Administration

AGENCY: Food and Drug Administration, HHS.

ACTION: Proposed rule.

SUMMARY: The Food and Drug Administration (FDA) is proposing to amend certain of its general regulations to include tobacco products, where appropriate, in light of FDA's authority to regulate these products under the Family Smoking Prevention and Tobacco Control Act (Tobacco Control Act). With these amendments, tobacco products will be subject to the same general requirements that apply to other FDA-regulated products. This proposed rule is a companion document to the direct final rule published elsewhere in this issue of the **Federal Register**.

DATES: Submit either electronic or written comments by February 14, 2011.

ADDRESSES: You may submit comments, identified by Docket No. FDA–2010–N–0560 and/or RIN number 0910–AG55, by any of the following methods:

Electronic Submissions

Submit electronic comments in the following way:

- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the instructions for submitting comments.

Written Submissions

Submit written submissions in the following ways:

- *FAX:* 301–827–6870.
- *Mail/Hand delivery/Courier (for paper, disk, or CD–ROM submissions):* Division of Dockets Management (HFA–305), Food and Drug Administration, 5630 Fishers Lane, rm. 1061, Rockville, MD 20852.

Instructions: All submissions received must include the Agency name and docket number and Regulatory Information Number (RIN) for this rulemaking. All comments received may be posted without change to *http://www.regulations.gov,* including any personal information provided. For additional information on submitting comments, see the "Comments" heading of the **SUPPLEMENTARY INFORMATION** section of this document.

Docket: For access to the docket to read background documents or comments received, go to *http://www.regulations.gov* 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: Gerie A. Voss, Center for Tobacco Products, Food and Drug Administration, 9200 Corporate Blvd., rm. 240G, Rockville, MD 20850, 1–877–CTP–1373, *gerie.voss@fda.hhs.gov.*

SUPPLEMENTARY INFORMATION:

I. Why is this rule being issued as a companion proposed rule?

This proposed rule is a companion to the direct final rule regarding amendments to general regulations that is published in the final rules section of this issue of the **Federal Register**. The direct final rule and this companion proposed rule are identical. This companion proposed rule provides the procedural framework to finalize the rule in the event that the direct final rule receives any significant adverse comment and is withdrawn. We are publishing the direct final rule because the rule is noncontroversial, and we do not anticipate that it will receive any significant adverse comments. If no significant adverse comment is received in response to the direct final rule, no further action will be taken related to this proposed rule. Instead, we will publish a confirmation document within 30 days after the comment period ends confirming when the direct final rule will go into effect.

If we receive any significant adverse comment regarding the direct final rule, we will withdraw the direct final rule within 30 days after the comment period ends and proceed to respond to all of the comments under this companion proposed rule using usual notice-and-comment rulemaking procedures under the Administrative Procedure Act (APA) (5 U.S.C. 553). The comment period for this companion proposed rule runs concurrently with the direct final rule's comment period. Any comments received under this companion proposed rule will also be considered as comments regarding the direct final rule.

A significant adverse comment is defined as a comment that explains why the rule would be inappropriate, including challenges to the rule's underlying premise or approach, or would be ineffective or unacceptable without a change. In determining whether an adverse comment is significant and warrants terminating a direct final rulemaking, we will consider whether the comment raises an issue serious enough to warrant a substantive response in a notice-and-comment process in accordance with the APA. Comments that are frivolous, insubstantial, or outside the scope of the rule will not be considered significant or adverse under this procedure. For example, a comment recommending an additional change to the rule will not be considered a significant adverse comment, unless the comment states why the rule would be ineffective without the additional change. In addition, if a significant adverse comment applies to part of a rule and that part can be severed from the remainder of the rule, we may adopt as final those parts of the rule that are not the subject of a significant adverse comment.

You can find additional information about FDA's direct final rulemaking procedures in the guidance document entitled "Guidance for FDA and Industry: Direct Final Rule Procedures" (62 FR 62466, November 21, 1997). This guidance document may be accessed at *http://www.fda.gov/RegulatoryInformation/Guidances/ucm125166.htm.*

II. What is the background of the rule?

The Tobacco Control Act was enacted on June 22, 2009, amending the Federal Food, Drug, and Cosmetic Act (the FD&C Act) and providing FDA with the authority to regulate tobacco products (Pub. L. 11–31; 123 Stat. 1776). In enacting the Tobacco Control Act, Congress sought to ensure that FDA had authority to provide effective oversight and to impose appropriate regulatory controls on tobacco products. In order to effectuate these purposes, FDA is amending several provisions of its general regulations to reflect the Agency's new authority and mandate regarding tobacco products.

III. What does this companion proposed rule do?

FDA proposes to make the following amendments to its existing general regulations, reflecting the Agency's authority over tobacco products under the Tobacco Control Act:

1. Revising 21 CFR 1.1(b) to ensure the applicability of definitions contained in the Tobacco Control Act;

2. Removing the reference to "package" in 21 CFR 1.1(c), as this definition now also is covered by the Tobacco Control Act and is no longer provided solely by the Fair Packaging and Labeling Act;

3. Revising 21 CFR 1.20 to exclude from this definition of "package" the

term "package" as defined in section 900(13) of the Tobacco Control Act (21 U.S.C. 387q(13));

4. Adding paragraph (f) to 21 CFR 14.55 to identify the Tobacco Products Scientific Advisory Committee as a permanent statutory advisory committee; and

5. Adding paragraph (j) to 21 CFR 17.1 and revising 21 CFR 17.2 to reflect FDA's authority to impose civil monetary penalties on tobacco-related violations.

IV. What is the legal authority for this proposed rule?

FDA is issuing this proposed rule under provisions of the FD&C Act, as amended by the Tobacco Control Act (21 U.S.C. 321, 331, 333, 387, 387a, and 387q).

V. What is the environmental impact of this proposed rule?

The Agency has determined under 21 CFR 25.30(h) and (i) that this action is of a type that does not individually or cumulatively have a significant effect on the human environment. Therefore, neither an environmental assessment nor an environmental impact statement is required.

VI. What is the economic impact of this proposed rule?

FDA has examined the impacts of the proposed rule under Executive Order 12866 and the Regulatory Flexibility Act (5 U.S.C. 601–612), and the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4). Executive Order 12866 directs agencies to assess all costs and benefits of available regulatory alternatives and, when regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity). The Agency believes that this proposed rule is not a significant regulatory action under the Executive order.

The Regulatory Flexibility Act requires agencies to analyze regulatory options that would minimize any significant impact of a rule on small entities. Because the proposed rule would not impose any new requirements on tobacco product manufacturers, retailers, or distributors, the Agency proposes to certify that the rule will not have a significant economic impact on a substantial number of small entities.

Section 202(a) of the Unfunded Mandates Reform Act of 1995 requires that agencies prepare a written statement, which includes an assessment of anticipated costs and benefits, before proposing "any rule that includes any Federal mandate that may result in the expenditure by State, local, and tribal governments, in the aggregate, or by the private sector, of $100,000,000 or more (adjusted annually for inflation) in any one year." The current threshold after adjustment for inflation is $135 million, using the most current (2009) Implicit Price Deflator for the Gross Domestic Product. FDA does not expect this proposed rule to result in any 1-year expenditure that would meet or exceed this amount.

VII. Paperwork Reduction Act of 1995

FDA concludes that the regulatory revisions and amendments identified in this document are not subject to review by the Office of Management and Budget because they do not constitute a "collection of information" under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*).

VIII. What are the federalism impacts of this proposed rule?

FDA has analyzed this proposed rule in accordance with the principles set forth in Executive Order 13132. FDA has determined that the proposed rule, if finalized, would not contain policies that would 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. Accordingly, the Agency has concluded that the proposed rule does not contain policies that have federalism implications as defined in the Executive order and, consequently, a federalism summary impact statement is not required.

IX. How do you submit comments on this proposed rule?

Interested persons may submit to the Division of Dockets Management (*see* **ADDRESSES**) either electronic or written comments regarding this document. It is only necessary to send one set of comments. It is no longer necessary to send two copies of mailed comments. Identify comments with the docket number found in brackets in the heading of this document. Received comments may be seen in the Division of Dockets Management between 9 a.m. and 4 p.m., Monday through Friday.

List of Subjects

21 CFR Part 1

Cosmetics, Drugs, Exports, Food labeling, Imports, Labeling, Reporting and recordkeeping requirements.

21 CFR Part 14

Administrative practice and procedure, Advisory committees, Color additives, Drugs, Radiation protection.

21 CFR Part 17

Administrative practice and procedure, Penalties.

Therefore, under the Federal Food, Drug, and Cosmetic Act and under authority delegated to the Commissioner of Food and Drugs, it is proposed that 21 CFR parts 1, 14, and 17 be amended to read as follows:

PART 1—GENERAL ENFORCEMENT REGULATIONS

1. The authority citation for part 1 is revised to read as follows:

Authority: 15 U.S.C. 1453, 1454, 1455; 19 U.S.C. 1490, 1491; 21 U.S.C. 321, 331, 333, 334, 335a, 343, 350c, 350d, 352, 355, 360b, 362, 371, 374, 381, 382, 387, 387a, 393; 42 U.S.C. 216, 241, 243, 262, 264.

2. In § 1.1 revise paragraph (b); and in the first sentence of paragraph (c), remove "*package* in § 1.20 and of" to read as follows:

§ 1.1 General.

* * * * *

(b) The definitions and interpretations of terms contained in sections 201 and 900 of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 321 and 387) shall be applicable also to such terms when used in regulations promulgated under that act.

3. Amend § 1.20 by revising the introductory text to read as follows:

§ 1.20 Presence of mandatory label information.

Except as otherwise provided by section 900(13) of the Family Smoking Prevention and Tobacco Control Act (21 U.S.C. 387(13)) defining "package," the term *package* means any container or wrapping in which any food, drug, device, or cosmetic is enclosed for use in the delivery or display of such commodities to retail purchasers, but does not include:

* * * * *

PART 14—PUBLIC HEARING BEFORE A PUBLIC ADVISORY COMMITTEE

4. The authority citation for part 14 continues to read as follows:

Authority: 5 U.S.C. App. 2; 15 U.S.C. 1451–1461, 21 U.S.C. 41–50, 141–149, 321–394, 467f, 679, 821, 1034; 28 U.S.C. 2112; 42 U.S.C. 201, 262, 263b, 264; Pub. L. 107–109; Pub. L. 108–155

5. Amend § 14.55 by adding paragraph (f) to read as follows:

§ 14.55 Termination of advisory committees.

* * * * *

(f) The Tobacco Products Scientific Advisory Committee is a permanent statutory advisory committee established by section 917 of the Family Smoking Prevention and Tobacco Control Act (21 U.S.C. 387q) (Pub. L. 111–31) and is not subject to termination and renewal under paragraph (a) of this section.

PART 17—CIVIL MONEY PENALTIES HEARINGS

6. The authority citation for part 17 continues to read as follows:

Authority: 21 U.S.C. 331, 333, 337, 351, 352, 355, 360, 360c, 360f, 360i, 360j, 371; 42 U.S.C. 262, 263b, 300aa–28; 5 U.S.C. 554, 555, 556, 557.

7. Amend § 17.1 by adding paragraph (j) to read as follows:

§ 17.1 Scope.

* * * * *

(j) Section 303(f) of the act authorizing civil money penalties for any person who violates a requirement of the Family Smoking Prevention and Tobacco Control Act which relates to tobacco products.

8. Revise § 17.2 to read as follows:

§ 17.2 Maximum penalty amounts.

The following table shows maximum civil monetary penalties associated with the statutory provisions authorizing civil monetary penalties under the act or the Public Health Service Act.

CIVIL MONETARY PENALTIES AUTHORITIES ADMINISTERED BY FDA AND ADJUSTED MAXIMUM PENALTY AMOUNTS

U.S.C. section	Former maximum penalty amount (in dollars) [1]	Assessment method	Date of last penalty figure or adjustment	Adjusted maximum penalty amount (in dollars)
		21 U.S.C.		
333(b)(2)(A)	55,000	For each of the first two violations in any 10-year period	2008	60,000.
333(b)(2)(B)	1,100,000	For each violation after the second conviction in any 10-year period.	2008	1,200,000.
333(b)(3)	110,000	Per violation	2008	120,000.
333(f)(1)(A)	16,500	Per violation	2008	16,500 (not adjusted).
333(f)(1)(A)	1,100,000	For the aggregate of violations	2008	1,200,000.
333(f)(2)(A)	55,000	Per individual	2008	60,000.
333(f)(2)(A)	275,000	Per "any other person"	2008	300,000.
333(f)(2)(A)	550,000	For all violations adjudicated in a single proceeding	2008	600,000.
333(f)(3)(A)	10,000	For all violations adjudicated in a single proceeding	2007	10,000 (not adjusted).
333(f)(3)(B)	10,000	For each day the violation is not corrected after a 30-day period following notification until the violation is corrected.	2007	10,000 (not adjusted).
333(f)(4)(A)(i)	250,000	Per violation	2007	250,000 (not adjusted).
333(f)(4)(A)(i)	1,000,000	For all violations adjudicated in a single proceeding	2007	1,000,000 (not adjusted).
333(f)(4)(A)(ii)	250,000	For the first 30-day period (or any portion thereof) of continued violation following notification.	2007	250,000 (not adjusted).
333(f)(4)(A)(ii)	1,000,000	For any 30-day period, where the amount doubles for every 30-day period of continued violation after the first 30-day period.	2007	1,000,000 (not adjusted).
333(f)(4)(A)(ii)	10,000,000	For all violations adjudicated in a single proceeding	2007	10,000,000 (not adjusted).
333(f)(9)(A)	[1] N/A	Per violation	2009	15,000 (not adjusted).
333(f)(9)(A)	N/A	For all violations adjudicated in a single proceeding	2009	1,000,000 (not adjusted).
333(f)(9)(B)(i)(I)	N/A	Per violation	2009	250,000 (not adjusted).
333(f)(9)(B)(i)(I)	N/A	For all violations adjudicated in a single proceeding	2009	1,000,000 (not adjusted).
333(f)(9)(B)(i)(II)	N/A	For the first 30-day period (or any portion thereof) of continued violation following notification.	2009	250,000 (not adjusted).
333(f)(9)(B)(i)(II)	N/A	For any 30-day period, where the amount doubled for every 30-day period of continued violation after the first 30-day period.	2009	1,000,000 (not adjusted).
333(f)(9)(B)(i)(II)	N/A	For all violations adjudicated in a single proceeding	2009	10,000,000 (not adjusted).
333(f)(9)(B)(ii)(I)	N/A	Per violation	2009	250,000 (not adjusted).
333(f)(9)(B)(ii)(I)	N/A	For all violations adjudicated in a single proceeding	2009	1,000,000 (not adjusted).
333(f)(9)(B)(ii)(II)	N/A	For the first 30-day period (or any portion thereof) of continued violation following notification.	2009	250,000 (not adjusted).
333(f)(9)(B)(ii)(II)	N/A	For any 30-day period, where the amount doubled for every 30-day period of continued violation after the first 30-day period.	2009	1,000,000 (not adjusted).
333(f)(9)(B)(ii)(II)	N/A	For all violations adjudicated in a single proceeding	2009	10,000,000 (not adjusted).
333(g)(1)	250,000	For the first violation in any 3-year period	2007	250,000 (not adjusted).
333(g)(1)	500,000	For each subsequent violation in any 3-year period	2007	500,000 (not adjusted).
333 note	N/A	For the second violation (following a first violation with warning) within a 12-month period by a retailer with an approved training program.	2009	250 (not adjusted).
333 note	N/A	For the third violation within a 24-month period by a retailer with an approved training program.	2009	500 (not adjusted).
333 note	N/A	For the fourth violation within a 24-month period by a retailer with an approved training program.	2009	2,000 (not adjusted).
333 note	N/A	For the fifth violation within a 36-month period by a retailer with an approved training program.	2009	5,000 (not adjusted).

CIVIL MONETARY PENALTIES AUTHORITIES ADMINISTERED BY FDA AND ADJUSTED MAXIMUM PENALTY AMOUNTS—Continued

U.S.C. section	Former maximum penalty amount (in dollars) [1]	Assessment method	Date of last penalty figure or adjustment	Adjusted maximum penalty amount (in dollars)
333 note	N/A	For the six or subsequent violation within a 48-month period by a retailer with an approved training program.	2009	10,000 (not adjusted).
333 note	N/A	For the first violation by a retailer without an approved training program.	2009	250 (not adjusted).
333 note	N/A	For the second violation within a 12-month period by a retailer without an approved training program.	2009	500 (not adjusted).
333 note	N/A	For the third violation within a 24-month period by a retailer without an approved training program.	2009	1,000 (not adjusted).
333 note	N/A	For the fourth violation within a 24-month period by a retailer without an approved training program.	2009	2,000 (not adjusted).
333 note	N/A	For the fifth violation within a 36-month period by a retailer without an approved training program.	2009	5,000 (not adjusted).
333 note	N/A	For the six or subsequent violation within a 48-month period by a retailer without an approved training program.	2009	10,000 (not adjusted).
335b(a)	275,000	Per violation for an individual	2008	300,000.
335b(a)	1,100,000	Per violation for "any other person"	2008	1,200,000.
360pp(b)(1)	1,100	Per violation per person	2008	1,100 (not adjusted).
360pp(b)(1)	330,000	For any related series of violations	2008	355,000.
42 U.S.C.				
263b(h)(3)	11,000	Per violation	2008	11,000 (not adjusted).
300aa–28(b)(1)	110,000	Per occurrence	2008	120,000.

[1] Maximum penalties assessed under The Family Smoking Prevention and Tobacco Control Act do not have a "former maximum penalty."

Dated: November 23, 2010.

Leslie Kux,

Acting Assistant Commissioner for Policy.

[FR Doc. 2010–30040 Filed 11–29–10; 8:45 am]

BILLING CODE 4160–01–P

DEPARTMENT OF LABOR

Employee Benefits Security Administration

29 CFR Part 2550

RIN 1210–AB38

Target Date Disclosure

AGENCY: Employee Benefits Security Administration, Labor.

ACTION: Proposed regulation.

SUMMARY: The Department published in the **Federal Register** of October 24, 2007 a final regulation (the qualified default investment alternative regulation) providing relief from certain fiduciary responsibilities for fiduciaries of participant-directed individual account plans who, in the absence of directions from a participant, invest the participant's account in a qualified default investment alternative. On October 20, 2010, the Department published a final regulation that requires the disclosure of certain plan and investment-related information, including fee and expense information, to participants and beneficiaries in participant-directed individual account plans (the participant-level disclosure regulation). This document contains proposed amendments to the qualified default investment alternative regulation to provide more specificity as to the information that must be disclosed in the required notice to participants and beneficiaries concerning investments in qualified default investment alternatives, including target date or similar investments. This document also contains a proposed amendment to the participant-level disclosure regulation that would require the disclosure of the same information concerning target date or similar investments to all participants and beneficiaries in participant-directed individual account plans.

DATES: Written comments on the proposed regulation should be received by the Department of Labor no later than January 14, 2011.

ADDRESSES: To facilitate the receipt and processing of comments, EBSA encourages interested persons to submit their comments electronically to *e-ORI@dol.gov,* or by using the Federal eRulemaking portal *http://www.regulations.gov* (following instructions for submission of comments). Persons submitting comments electronically are encouraged not to submit paper copies. Persons interested in submitting comments on paper should send or deliver their comments (preferably three copies) to: Office of Regulations and Interpretations, Employee Benefits Security Administration, Room N–5655, U.S. Department of Labor, 200 Constitution Avenue, NW., Washington, DC 20210, Attention: Target Date Amendments. All comments will be available to the public, without charge, online at *http://www.regulations.gov* and *http://www.dol.gov/ebsa,* and at the Public Disclosure Room, Employee Benefits Security Administration, U.S. Department of Labor, Room N–1513, 200 Constitution Avenue, NW., Washington, DC 20210.

FOR FURTHER INFORMATION CONTACT: Kristen L. Zarenko, Office of Regulations and Interpretations, Employee Benefits Security Administration, (202) 693–8500. This is not a toll-free number.

SUPPLEMENTARY INFORMATION:

A. Background

Section 624(a) of the Pension Protection Act of 2006 (Pension Protection Act) added a new section 404(c)(5) to ERISA. Section 404(c)(5)(A) of ERISA provides that, for purposes of

section 404(c)(1) of ERISA, a participant in an individual account plan shall be treated as exercising control over the assets in the account with respect to the amount of contributions and earnings which, in the absence of an investment election by the participant, are invested by the plan in accordance with regulations prescribed by the Secretary of Labor. On October 24, 2007, the Department of Labor (Department) published a final regulation implementing the provisions of section 404(c)(5) of ERISA.[1] Correcting amendments to the final regulation were published on April 30, 2008.[2] A fiduciary of a plan that complies with the final regulation, as amended, will not be liable for any loss, or by reason of any breach, that occurs as a result of investment in a qualified default investment alternative. The regulation describes the types of investments that qualify as default investment alternatives under section 404(c)(5) of ERISA and the other requirements that must be satisfied in order for a fiduciary to obtain the relief from liability described above.

The final regulation provides that, in order for a fiduciary to obtain relief, participants and beneficiaries must receive information concerning the investments that may be made on their behalf. Specifically, paragraph (c)(3) of the final rule requires that participants and beneficiaries be furnished both an initial notice (generally thirty days in advance of a participant's eligibility to participate in the plan) and an annual notice for subsequent plan years. Paragraph (d) of the final rule sets forth the information that must be included in these notices. In addition to the notice requirement, paragraph (c)(4) of the final regulation required that fiduciaries provide certain investment-related information that must be disclosed under the Department's 404(c) regulation. Specifically, paragraph (c)(4) requires fiduciaries to provide to defaulted participants or beneficiaries the material described in sections 2550.404c–1(b)(2)(i)(B)(*1*)(*viii*) and (*ix*) and 2550.404c–1(b)(2)(i)(B)(*2*).

Since publication of the final rule, the Department has received many questions about the notice requirement, for example concerning the timing requirements for the notice and how much information must be disclosed concerning investment fees and expenses. The Department addressed these and other issues in a series of questions and answers concerning the final rule that was published in a Field Assistance Bulletin in April 2008.[3] With respect to the disclosure of investment fee and expense information, the Department indicated at that time that it was developing a regulation to establish disclosure requirements for all participant-directed individual account plans. The Department anticipated that furnishing the investment information required by such regulation, when finalized, would satisfy the investment-related fee and expense disclosures required by the qualified default investment alternative regulation. Nonetheless, the Department continues to receive requests for more formal guidance as to how the content requirements of the qualified default investment alternative notice may be satisfied. As discussed below, the Department proposes amending the qualified default investment alternative regulation to provide more specificity as to the information that must be disclosed.

In addition to questions about the notice requirement, recent attention has been paid to the increased use of "target date" or "lifecycle" funds and other similar investments (TDFs) as an investment alternative in participant-directed retirement plans, such as 401(k) plans.[4] The Department's final regulation included TDFs as one of the permissible categories of investment funds or products that may be used as a qualified default investment alternative, if all of the requirements of the final rule have been satisfied. The growing popularity of these products led to a focus in recent years on issues relating to the design, operation, and selection of TDFs for 401(k) plans, both as investment alternatives for plans generally and as qualified default investment alternatives for participants that do not provide investment direction. The designation of all investment alternatives, including TDFs, to be made available under a private sector retirement plan is governed by the fiduciary responsibility provisions of ERISA. Persons with this responsibility must prudently select and monitor investment alternatives, including alternatives intended to be qualified default investment alternatives.

In 2008, the Department's ERISA Advisory Council studied several aspects of TDFs as 401(k) plan investment alternatives, including the challenges and risks they may pose to participants who invest in TDFs, the different types of TDFs, and appropriate criteria for selecting and monitoring TDFs. In its report to the Secretary of Labor, the Council recommended that the Department provide additional guidance to both plan fiduciaries and plan participants to enhance understanding of TDFs and the risks associated with TDF investing.[5] In addition, there has been Congressional interest in target date fund issues.[6] In June 2009, the Department and the Securities and Exchange Commission (Commission) held a joint public hearing to explore issues related to TDFs, including how they are managed at the investment level, how they are selected by plan fiduciaries and by investors, and how information about them is disclosed to plan participants and investors.

Following the public hearing and extensive review of the testimony presented and supplemental materials concerning TDFs, the Department was persuaded that both plan fiduciaries and plan participants would benefit from additional guidance concerning TDFs. Accordingly, the Department and the Commission recently published a joint Investor Bulletin to better educate investors and plan participants who are considering investing in TDFs.[7] The Commission also recently proposed rules to address concerns regarding the potential for investor misunderstandings about TDFs.[8] The Department further intends to publish a series of tips intended to assist plan fiduciaries in obtaining and evaluating relevant information when selecting and monitoring TDFs as investment options for participant-directed retirement plans.

The Department also determined that improvements can be made in the information that is disclosed to participants and beneficiaries concerning their plan investment in TDFs, whether by their own investment direction or pursuant to the qualified default investment alternative regulation. To ensure that consistent information concerning TDFs is furnished to defaulted participants and to participants who give investment

[1] 72 FR 60452 (Oct. 24, 2007).

[2] 73 FR 23349 (Apr. 30, 2008).

[3] *See* Field Assistance Bulletin No. 2008–03 (April 29, 2008).

[4] Employee Benefits Research Institute Issue Brief #327, March 2009.

[5] See 2008 ERISA Advisory Council Working Group Report on Hard to Value Assets and Target Date Funds, found at: *http://www.dol.gov/ebsa/publications/2008ACreport1.html.*

[6] See *http://aging.senate.gov/record.cfm?id=308665&&; http://aging.senate.gov/hearing_detail.cfm?id=309027&* and *http://aging.senate.gov/hearing_detail.cfm?id=319426&.*

[7] The Investor Bulletin, published May 6, 2010, is available at: *http://www.dol.gov/ebsa/pdf/TDFInvestorBulletin.pdf.*

[8] Commission Release Nos. 33–9126, 34–62300, IC–29301, at *http://www.sec.gov/comments/s7-12-10/s71210.shtml.*

directions, the Department is publishing in this Notice proposed amendments to both the qualified default investment alternative regulation and the participant-level disclosure regulation. The amendment to the participant-level disclosure regulation, at § 2550.404a–5 (75 FR 64910, October 20, 2010), will be included in paragraph (i)(4) of that regulation, which was reserved for this purpose. More detailed information about the participant-level disclosure regulation, including the general investment-related disclosure requirements, can be found in the Supplementary Information for that regulation.

B. Description of Amendments

This proposal amends paragraphs (c)(4) and (d)(3), (4), and (5) of the qualified default investment alternative regulation to more specifically describe certain investment-related information that must be included in the required notice to participants and beneficiaries. This information is intended to complement the new investment-related disclosure requirements contained in the participant-level disclosure regulation.

Paragraph (c)(4) of the rule is being revised to reflect amendments to the Department's 404(c) regulation that were made as part of the participant-level disclosure regulation. Rather than referring to requirements previously contained in the 404(c) regulation, this paragraph of the qualified default investment alternative regulation now requires fiduciaries to provide the comparable materials that are described in section 2550.404a–5(d)(3) and (4) of the participant-level disclosure regulation.[9]

Paragraph (d)(3) of the rule requires that the notice include: "[a] Description of the qualified default investment alternative, including a description of the investment objectives, risk and return characteristics (if applicable), and fees and expenses attendant to the investment alternative[.]"[10] To ensure that plan fiduciaries understand the specific investment information that must be disclosed to defaulted participants and beneficiaries about qualified default investment alternatives, and to better conform these requirements to those of all participant-directed individual account plans pursuant to the Department's participant-level disclosure regulation, proposed paragraph (d)(3) contains six separate elements. The description of the qualified default investment alternative must first include the name of the investment's issuer. Second, the description must include the investment's objectives or goals. Third, the description must include the investment's principal strategies (including a general description of the types of assets held by the investment), and principal risks (*e.g.,* as required by Securities and Exchange Commission Form N–1A). Fourth, the description must include the investment's historical performance data (*e.g.,* 1-, 5-, and 10-year returns) and, if applicable, any fixed return, annuity, guarantee, death benefit, or other ancillary features; as well as a statement indicating that an investment's past performance is not necessarily an indication of how the investment will perform in the future. Fifth, the description must include the investment's attendant fees and expenses, including: Any fees charged directly against the amount invested in connection with acquisition, sale, transfer of, or withdrawal (*e.g.,* sales loads, sales charges, deferred sales charges, redemption fees, surrender charges, exchange fees, account fees, and purchase fees); any annual operating expenses (*e.g.,* expense ratio); and any ongoing expenses in addition to annual operating expenses (*e.g.,* mortality and expense fees). For purposes of these requirements to disclose an investment's objectives or goals, principal strategies and principal risks, historical performance, and fees and expenses, the Department requests comment on the extent to which these requirements should conform to the final participant-level disclosure regulation; for example, should the more specific standards for investment-related information contained in the participant-level disclosure regulation be incorporated by reference into the qualified default investment alternative regulation? The Department believes that conforming the requirements will make it easier for plan fiduciaries and administrators to comply and help to avoid confusion among participants and beneficiaries who will receive the required disclosures.

The sixth requirement will ensure that participants and beneficiaries obtain comprehensive information about TDFs that apply age or target retirement-based asset allocations, described in paragraph (e)(4)(i) of the qualified default investment alternative regulation. Specifically, to the extent the information is not already disclosed pursuant to the preceding requirements of paragraph (d)(3) of the rule, the description must satisfy three requirements. The first is an explanation of the asset allocation, how the asset allocation will change over time, and the point in time when the investment will reach its most conservative asset allocation, including a chart, table, or other graphical representation that illustrates such change in asset allocation over time and that does not obscure or impede a participant's or beneficiary's understanding of the information explained pursuant to this requirement. The Department understands that many investment issuers and service providers already include simple and straight-forward graphs, pie chart series, or other illustrations to assist investors by showing them how asset allocations in TDFs change over time. To the extent such illustrations are not already furnished to participants and beneficiaries, the Department is persuaded that any additional burden associated with preparation of a compliant illustration will prove highly beneficial to enhance participants' and beneficiaries' understanding of a TDF's asset allocation and how it will change over time.

The second requirement depends on whether the alternative is named, or otherwise described, with reference to a particular date (*e.g.,* a target date). For example, many funds include a target retirement date in the name itself (*e.g.,* a "2030 fund" or a "2040 fund"). In some cases the name of the alternative may not include a date, but a retirement or other target date may be referenced or implied in the description of the alternative's objectives or goals, or principal strategies or principal risks; this requirement applies to those alternatives as well. The notice must explain the age group for whom the investment is designed, the relevance of the date, and any assumptions about a participant's or beneficiary's contribution and withdrawal intentions on or after such date. The third requirement is a statement that the participant or beneficiary may lose money by investing in the qualified default investment alternative, including losses near and following retirement, and that there is no guarantee that investment in the qualified default investment alternative will provide adequate retirement income. All of the information required to be disclosed concerning TDFs and similar products is consistent with the analysis discussed in the Department's recent guidance to plan participants and expected guidance to plan fiduciaries

[9] Consistent with the participant-level disclosure regulation, the material required by section 2550.404a–5(d)(4), which is referred to in paragraph (c)(4) of this amendment, must be furnished upon request.

[10] § 2550.404(c)–5(d)(3).

concerning the factors that must be taken into account when selecting and monitoring, or investing in, these products. The Department is interested in comments as to whether, and to what extent, the final rule should include disclosure elements or concepts contained in the Commission's rulemaking.[11]

To ensure that all participants and beneficiaries in participant-directed individual account plans, not only participant and beneficiaries who are invested in a qualified default investment alternative, receive the same information about TDFs, the Department also is proposing in this Notice to include the same three disclosure requirements concerning TDFs in the participant-level disclosure regulation. Specifically, these new requirements, if adopted, will be added to paragraph § 2550.404a–5(i)(4) of the participant-level disclosure regulation, which was reserved for this purpose. To ensure consistency between these regulations, the Department expects that any changes made to the TDF disclosure requirements in response to comments on this Notice will be reflected in both the qualified default investment alternative regulation and the participant-level disclosure regulation.

Paragraph (d)(4) of the qualified default investment alternative regulation requires that the notice to participants contain a "description of the right of the participants and beneficiaries on whose behalf assets are invested in a qualified default investment alternative to direct the investment of those assets to any other investment alternative under the plan, including a description of any applicable restrictions, fees or expenses in connection with such transfer[.]"[12] In the proposal published today, this paragraph has been modified. If any such fees or restrictions are applicable, this paragraph would only require a statement that certain fees and limitations may apply in connection with such transfer. The requirement to disclose the fees and expenses themselves would be moved to paragraph (d)(3)(v), discussed above; if other limitations may apply, the notice must so state.

Finally, paragraph (d)(5) of the qualified default investment alternative regulation would be broadened to clarify that comprehensive information about the qualified default investment alternative, as well as the other investment alternatives available under the plan, is available to participants and beneficiaries. Currently, paragraph (d)(5) only requires "[a]n explanation of where the participants and beneficiaries can obtain investment information concerning the other investment alternatives available under the plan."[13] As amended by this proposal, this paragraph requires an explanation of where the participants and beneficiaries can obtain additional investment information concerning *the qualified default investment alternative and the other* investment alternatives available under the plan. The Department included this modification to conform to the participant-level disclosure regulation. Specifically, the Department expects that paragraph (d)(5), if adopted in final form, will ensure that defaulted participants and beneficiaries know where to obtain any additional investment information required to be disclosed pursuant to the final participant-level disclosure regulation concerning all of the plan's investment alternatives, including qualified default investment alternatives.

C. Furnishing Required Disclosures

In conjunction with the adoption of the final participant-level disclosure regulation, § 2550.404a–5 (75 FR 64910, October 20, 2010), the Department explained in the Supplementary Information that, given the differing views on the use of and standards for electronic disclosure, it would be undertaking a review of the safe harbor applicable to the use of electronic media for furnishing information to plan participants and beneficiaries (29 CFR 2520.104b–1(c)). The Department further indicated that, in the very near future, it will be publishing a **Federal Register** notice requesting public comments, views, and data relating to the electronic distribution of plan information to plan participants and beneficiaries. The Department also noted that, pending the completion of its review and the issuance of further guidance, the general disclosure regulation at 29 CFR 2520.104b–1 applies to material furnished under the participant-level disclosure regulation, including the safe harbor for electronic disclosures at paragraph (c) of the general disclosure regulation. The Department anticipates that resolution of the issues involved with the electronic disclosure of plan information will directly affect the manner in which materials required by the amendments contained in this notice may be furnished to participants and beneficiaries. Accordingly, interested persons are encouraged to participate in the Department's forthcoming solicitation of comments on the use of electronic media for furnishing plan information.

D. Effective Date

The Department proposes that the amendments to regulation sections 2550.404a–5 and 2550.404c–5 contained in this notice will be effective 90 days after publication of the final rule in the **Federal Register**. The Department invites comment on whether the final rule should be effective on a different date.

E. Regulatory Impact Analysis

Executive Order 12866 Statement

Under Executive Order 12866, the Department must determine whether a regulatory action is "significant" and therefore subject to the requirements of the Executive Order and subject to review by the Office of Management and Budget (OMB). Under section 3(f) of the Executive Order, a "significant regulatory action" is an action that is likely to result in a rule (1) Having an effect on the economy of $100 million or more in any one year, or adversely and materially affecting a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local or tribal governments or communities (also referred to as "economically significant"); (2) creating serious inconsistency or otherwise interfering with an action taken or planned by another agency; (3) materially altering the budgetary impacts of entitlement grants, user fees, or loan programs or the rights and obligations of recipients thereof; or (4) raising novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order. Although the Department believes that this regulatory action is not economically significant within the meaning of section 3(f)(1) of the Executive Order, the action has been determined to be significant within the meaning of section 3(f)(4) of the Executive Order, and accordingly, OMB has reviewed this notice of proposed rulemaking pursuant to the Executive Order. The Department provides the following assessment of the potential costs and benefits associated with the proposed regulation below.

Need for Regulatory Action

As discussed earlier in this preamble, on October 24, 2007, the Department published a final regulation implementing the provisions of section

[11] See footnote 8, above.

[12] § 2550.404(c)–5(d)(4).

[13] § 2550.404(c)–5(d)(5).

404(c)(5) of ERISA.[14] A fiduciary of a plan that complies with the final regulation, as amended, will not be liable for any loss, or by reason of any breach, that is the direct and necessary result of investing all or a part of a participant's or beneficiary's account in a qualified default investment alternative. As noted in the regulation, this relief does not apply to fiduciary duties or liability related to the selection or monitoring of particular qualified default investment alternatives. The regulation describes the types of investments that qualify as default investment alternatives under section 404(c)(5) of ERISA and the other requirements that must be satisfied in order for a fiduciary to obtain the relief from liability described above.

As discussed earlier, the Department's final qualified default investment alternative regulation includes TDFs as one of the permissible categories of investment funds or products that may be used as a qualified default investment alternative, if all of the requirements of the final rule have been satisfied. Since the issuance of the Department's final qualified default investment alternative regulation, plans have increased their use of TDFs as an investment alternative.[15] At the end of the first quarter of 2009, the amount of employer sponsored defined contribution plan assets invested in TDFs totaled $145 billion, compared to $37 billion in 2003.[16] A recent survey found that nearly 60 percent of plans have made TDFs the qualified default investment alternative for participants that do not provide investment direction and nearly 60 percent of participant-directed individual account plans, such as 401(k) plans, offer TDFs as an investment alternative.[17]

The financial market downturn that started in 2008 increased volatility and lowered returns of TDFs.[18] Many TDFs designed for people recently nearing or entering retirement suffered large losses. For example, on average, participants invested in TDFs dated 2010 and 2015 lost about a quarter of their value in 2008. Many of these funds typically held about half of the holdings in stocks, following glide paths that did not significantly reduce that percentage for 5 years or more after the average investor retired.[19] The Background discussion, above, summarizes responses to this development, for example from the U.S. Senate Special Committee on Aging, and activities undertaken by the Department and the Securities and Exchange Commission since then.

Experts within the investment community agree that TDF disclosures to participants and beneficiaries need to be improved. For example, the Investment Company Institute (ICI) Target Date Fund Disclosure Working Group reviewed existing TDF disclosures and in a June 2009 Report, recommended that TDFs display prominently five key pieces of information to help enhance investors' understanding such as the relevance of the target date used in a fund's name, the assumptions the fund makes regarding the investor's withdrawal intentions at and after the target date, the age group for whom the fund is designed, an illustration of the glide path that the TDF follows to reduce its equity exposure and become more conservative over time, and a statement that the risks associated with a TDF include the risk of loss near, at, or after the target date and that there is no guarantee that the fund will provide adequate income at and through the investor's retirement.[20]

Based on the foregoing, the Department is proposing to amend its final qualified default investment alternative and participant-level disclosure regulations to improve the information that is disclosed to participants and beneficiaries regarding TDFs.

Affected Entities

Based on the latest available information, the Department estimates that there are approximately 483,000 participant-directed individual account plans.[21] The Department's proposed amendment to its final qualified default investment alternative rule would affect the approximately 114,000 participant-directed individual account plans that use TDFs as their qualified default investment alternative and the proposed amendment to its participant-level disclosure final rule would affect 278,000 participant-directed individual account plans that offer TDFs as an investment alternative.[22] The Department also estimates that 43.6 million participants and beneficiaries are covered by plans using TDFs as an investment alternative.

Benefits

The Department expects that the enhanced disclosures required by the proposed regulation would benefit participants and beneficiaries by providing them with critical information they need to evaluate the quality of TDFs and how specific TDFs match their risk profile. This should lead to improved investment results and retirement planning decisions. The TDF disclosures would foster a better understanding of how TDFs operate and the glide path that is associated with each fund. The Department believes that the disclosures under this proposed regulation, combined with the greater transparency required by the Department's participant-level disclosure regulation, would allow participants and beneficiaries to determine whether the efficient way in which TDFs allow them to invest in a mix of asset classes and rebalance their asset allocation periodically is worth the price differential they generally pay for such funds.[23]

[14] 72 FR 60452 (Oct. 24, 2007). Correcting amendments to the final regulation were published on April 30, 2008 (73 FR 23349).

[15] Donahue, Andrew. Testimony Concerning Target Date Funds. *Before the United States Senate Special Committee on Aging.* October 28, 2009.

[16] Borzi, Phyllis. Testimony of Phyllis C. Borzi. *Before the United States Senate Special Committee on Aging.* October 28, 2009.

[17] Profit Sharing/401k Council of America, 52nd Annual Survey of Profit Sharing and 401(k) plans, for plan year 2008.

[18] Deloitte Financial Advisory Services LLP, *Target Date Funds: Historical Volatility/Return Profiles,* unpublished presentation to the U.S. Department of Labor, Employee Benefits Security Administration (Sept. 30, 2009). In particular, the research found that the 1-year volatility was generally greater than the 3-year volatility and the 1-year returns were lower than the 3-year returns. Deloitte also found that funds with target date 2010 were more volatile in 2008 than they were in 2007. In addition, Deloitte reports that volatility among 2010 TDFs correlated with the fraction of the funds that are invested in stock and small 2010 funds are more heterogeneous in rates of return and in volatility than large funds.

[19] Borzi, Phyllis. Testimony of Phyllis C. Borzi. Before the United States Senate Special Committee on Aging. October 28, 2009.

[20] See *e.g.* Principles to Enhance Understanding of Target Date Funds: Recommended by the ICI Target Date Fund Disclosure Working Group. June 18, 2009. *http://www.ici.org/pdf/ppr_09_principles.pdf.*

In order to address some of the deficiencies in communication relating to TDFs, the Investment Company Institute made a series of recommendations for disclosure, many of which overlap with the requirements contained in these proposed regulations. See *e.g.* Charlson, Josh et al. Target Date Series Research Paper: 2010 Industry Survey, *Morningstar,* 2010. *http://corporate.morningstar.com/US/documents/MethodologyDocuments/MethodologyPapers/TargetDateFundSurvey_2010.pdf.*

[21] Based on 2007 Form 5500 filings.

[22] The Department's estimate is based on the Profit Sharing/401k Council of America, 52nd Annual Survey of Profit Sharing and 401(k) plans, for plan year 2008. This survey finds that 57.7 percent of participant-directed individual account plans offer TDFs as an investment option (483,000 * .577 = 278,691). It also finds that 39.6 percent of participant-directed individual account plans have automatic enrollment and that 59.7 percent of those plans use TDFs as the QDIA (483,000 * .396 * .597 = 114,187).

[23] Collins, Margaret. Target-Date Funds May Miss Mark for Unsavvy Savers. Bloomberg *http://www.bloomberg.com/apps/news?pid=20603037&sid=aSGY6tmw7IXs.* The

Continued

Although the Department is unable to quantify the benefits associated with the proposed regulation, it is confident that the benefits justify their costs.

Costs

The Department estimates that the proposed regulation would result in 66.2 million TDF disclosures being distributed. The associated total hour burden for affected plans is estimated to be 29,000 hours with an equivalent cost of $1.8 million annually. The estimated cost burden for plans to distribute the notices is $4.1 million annually. Because these costs are associated with information collection requests covered by the Paperwork Reduction Act, the data and methodology used in developing the cost estimates are more fully discussed in the Paperwork Reduction Act section, below.

Paperwork Reduction Act

As part of its continuing effort to reduce paperwork and respondent burden, the Department of Labor conducts a preclearance consultation program to provide the general public and federal agencies with an opportunity to comment on proposed and continuing collections of information in accordance with the Paperwork Reduction Act of 1995 (PRA 95) (44 U.S.C. 3506(c)(2)(A)). This helps to ensure that requested data can be provided in the desired format, reporting burden (time and financial resources) is minimized, collection instruments are clearly understood, and the impact of collection requirements on respondents can be properly assessed.

Currently, EBSA is soliciting comments concerning the information collection request (ICR) included in the Proposed Rule on the Fiduciary Requirements for Disclosure and Default Investment Alternatives Under Participant Directed Individual Account Plans. A copy of the ICR may be obtained by contacting the PRA addressee shown below.

The Department has submitted a copy of the proposed rule to OMB in accordance with 44 U.S.C. 3507(d) for review of its information collections. The Department and OMB are particularly interested in comments that:

- Evaluate whether the collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;
- Evaluate the accuracy of the agency's estimate of the burden of the collection of information, including the validity of the methodology and assumptions used;
- Enhance the quality, utility, and clarity of the information to be collected; and
- Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, *e.g.,* permitting electronic submission of responses.

Comments should be sent to the Office of Information and Regulatory Affairs, Office of Management and Budget, Room 10235, New Executive Office Building, Washington, DC 20503; Attention: Desk Officer for the Employee Benefits Security Administration. OMB requests that comments be received within 30 days of publication of the proposed rule to ensure their consideration.

PRA Addressee: Address requests for copies of the ICR to G. Christopher Cosby, Office of Policy and Research, U.S. Department of Labor, Employee Benefits Security Administration, 200 Constitution Avenue, NW., Room N–5718, Washington, DC 20210.

Telephone (202) 693–8410; Fax: (202) 219–5333. These are not toll-free numbers. ICRs submitted to OMB also are available at *http://www.RegInfo.gov.*

(a) Proposed Amendment to Qualified Default Investment Alternative Regulation

Under the proposed amendment to paragraph (d)(3) of the Department's qualified default investment alternative regulation, the notice provided to participants and beneficiaries that use TDFs as a qualified default investment alternative (the QDIA notice) would be required to contain comprehensive information about TDFs. This information is described in detail earlier in this preamble, along with other changes to the information required to be disclosed in the QDIA notice that do not relate specifically to TDFs.

The Department understands that many investment issuers and service providers currently furnish straightforward graphs, pie chart series, and other illustrations to demonstrate to investors how asset allocations in TDFs change over time and other information that would be required to be disclosed in the QDIA notice by the proposed regulation. Therefore, the burden that would be imposed by this proposed regulation stems primarily from incorporating the more comprehensive TDF disclosure into the QDIA notice. The Department invites comments regarding this assumption.

The Department believes that a financial professional should be able to incorporate the TDF disclosures into the QDIA notice, on average, in approximately 15 minutes at a labor rate of approximately $63 per hour.[24] The Department estimates that the hour burden imposed on the approximately 114,000 affected plans would be 28,520 hours (114,079 plans * 0.25 hours) with an equivalent cost of $1.79 million (114,079 plans * .25 hours per plan * $62.81/hour).

The Department estimates that the disclosure would add two pages to the QDIA notice, and that an estimated 18.4 million participants would be required to receive the disclosures.[25] The Department expects that 38 percent of participants would receive the disclosure by electronic means, leaving an estimated 11.4 million paper disclosures that would be sent via mail. The Department estimates that 6.8 percent of participants are new to a plan[26] in a given year; therefore, 780,000[27] participants generally would be required to receive the QDIA notice at least 30 days in advance of the date of plan eligibility. No mailing costs are included in the cost estimates, because the TDF disclosure would be incorporated into the QDIA notice. In total, 12.2 million paper disclosures would be required. Assuming paper costs of $.05 per page, the Department estimates that the cost burden associated with this proposed regulation's amendment to the QDIA notice would be $1.2 million.

author finds that the median fee for TDFs is approximately .85 (depending on the age of the saver). However, some expense ratios are as low as .19 percent, while others are as high as 1.50 percent.

[24] EBSA estimates of labor rates include wages, other benefits, and overhead based on the National Occupational Employment Survey (May 2008, Bureau of Labor Statistics) and the Employment Cost Index (June 2009, Bureau of Labor Statistics).

[25] The Department estimate of 18.4 million participants is derived as follows: 76.6 percent of eligible workers participate in employer-sponsored pension plans. Based on 2007 Form 5500 data, the Department estimates that 59.6 million individuals are active participants in participant-directed individual account plans. Using those two numbers, the Department estimates that 77.8 million workers are eligible to participate in participant-directed individual account plans (77.8 million * .766 = 59.6 million). The Department estimates that 39.6 percent of plans have automatic enrollment, and 59.7 percent of these plans use TDFs as their QDIA (77.8 million*.396 * .597=18.4 million).

[26] These individuals receive the QDIA notice twice in their first year of participation: Once when they are eligible to participate in the plan and once when all participants receive the plan's annual QDIA notice.

[27] 18.4 million * .062 * .068=.78 million (rounded).

(b) Proposed Amendment to Participant-Level Disclosure Regulation

The proposed amendment to the Department's participant-level disclosure regulation would require participant-directed individual account plans that offer TDFs as a designated investment alternative to include the TDF disclosures as an appendix to the participant-level disclosures required by 29 CFR 2550.404a–5(d)(1) and (d)(2).

The Department assumes that plans would incur a de minimis cost to prepare the appendix, because, as stated above, investment issuers and service providers already have the TDF information readily available to provide to plans. No additional mailing costs are expected, because the TDF disclosures would be attached as an appendix to, and distributed with, the participant-level disclosure. Thus, the only anticipated additional costs would pertain to the additional paper costs associated with including the additional TDF appendix with the participant-level disclosure.

The TDF appendix is expected, on average, to add two pages to the participant-level disclosure. As discussed above, the Department estimates that 43.6 million participants are covered by participant-directed individual account plans that offer TDFs as an investment alternative.[28] The Department estimates that 6.8 percent of participants are new to a plan in a given year; therefore, 2.96 million additional disclosures would be required [29] resulting in a total of 46.5 million TDF fund appendices being distributed annually. The Department estimates that 38 percent of the disclosures would be distributed electronically at a de minimis cost, leaving 28.8 million paper disclosures to be distributed via mail. Assuming paper costs of $0.10 per participant ($.05 per page), the proposed amendment to the participant-level disclosure regulation would impose an additional cost of approximately $2.9 million to the participant-level disclosure.

(c) Summary

Overall, the proposed amendments to the qualified default investment alternative and participant-level disclosure regulations would result in approximately 66.2 million TDF disclosures being distributed. The total hour burden associated with the additional disclosures would be an estimated 29,000 hours with an equivalent cost of $1.8 million (all allocated to the qualified default investment alternative regulation). The Department estimates that the total cost burden for the disclosures would be $4.1 million ($1,217,000 (qualified default investment alternative); $2,884,000 (participant-level disclosure)).

These paperwork burden estimates are summarized as follows:

Type of Review: Revised collections.

Agency: Employee Benefits Security Administration, Department of Labor.

Title: Default Investment Alternatives Under Participant Directed Individual Account Plans (QDIA Regulation Amendment) and Fiduciary Requirements for Disclosure in Participant-Directed Individual Account Plans (Participant-Level Disclosure Regulation Amendment).

OMB Control Number: 1210–0132; 1210–0090.

Affected Public: Business or other for-profit; not-for-profit institutions.

Respondents: 114,000 (QDIA Regulation Amendment); 278,000 (Participant-Level Disclosure Amendment).

Responses: 66,157,539 (19,636,964 QDIA Regulation Amendment; 46,520,575 Participant-Level Disclosure Regulation Amendment).

Frequency of Response: Annually.

Estimated Total Annual Burden Hours: 29,000 hours (first year and subsequent years; all allocated to QDIA Regulation Amendment).

Estimated Total Annual Burden Cost: $4,102,000 (first year and subsequent years); $1,217,500 (QDIA Regulation Amendment); $2,884,500 (Participant-Level Disclosure Regulation Amendment).

Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) (RFA) imposes certain requirements with respect to Federal rules that are subject to the notice and comment requirements of section 553(b) of the Administrative Procedure Act (5 U.S.C. 551 *et seq.*) and which are likely to have a significant economic impact on a substantial number of small entities. Unless the head of an agency certifies that a proposed rule is not likely to have a significant economic impact on a substantial number of small entities, section 603 of the RFA requires that the agency present an initial regulatory flexibility analysis at the time of the publication of the notice of proposed rulemaking describing the impact of the rule on small entities and seeking public comment on such impact.

For purposes of the RFA, the Department continues to consider a small entity to be an employee benefit plan with fewer than 100 participants.[30] Further, while some large employers may have small plans, in general small employers maintain most small plans. Thus, the Department believes that assessing the impact of this proposed rule on small plans is an appropriate substitute for evaluating the effect on small entities. The definition of small entity considered appropriate for this purpose differs, however, from a definition of small business that is based on size standards promulgated by the Small Business Administration (SBA) (13 CFR 121.201) pursuant to the Small Business Act (15 U.S.C. 631 *et seq.*). The Department therefore requests comments on the appropriateness of the size standard used in evaluating the impact of this proposed rule on small entities.

The Department certifies, as required by the RFA, that while the proposed regulation would impact a substantial number of small entities, the economic impact of the proposed rule would not be significant. The Department estimates that the cost per plan to prepare the notice would be less than $20, because much of the required information is expected to be readily available from service providers. Moreover, the anticipated cost per participant for plans to send the qualified default investment alternative and participant-level fee TDF disclosures are estimated to be $0.20 annually.

Based on industry survey data, the Department believes that small plans would be less likely to be affected by this regulation, because while small plans are slightly more likely to be participant-directed, they are less likely to default participants into TDFs or provide access to such funds as an investment alternative. The survey showed that 56.3 percent of plans with 5,000 or more participants have automatic enrollment compared to just 15.8 percent of plans with 1–49 participants, and that while 64 percent of participant-directed plans with more than 5,000 participants offer TDFs as an investment option, only 47.9 percent of such plans with 1–49 participants offer TDFs as an investment option.[31] The

[28] The Department's estimate is based on the Profit Sharing/401k Council of America, 52nd Annual Survey of Profit Sharing and 401(k) plans, for plan year 2008.

[29] 43.6 million * .068 = 2.96 million.

[30] The basis for this definition is found in section 104(a)(2) of the Act, which permits the Secretary of Labor to prescribe simplified annual reports for pension plans that cover fewer than 100 participants..

[31] Profit Sharing/401k Council of America, 52nd Annual Survey of Profit Sharing and 401(k) Plans, for plan year 2008.

burden that would be imposed by the proposed regulation on small plans also would be mitigated by the fact that most of the information required for the TDF disclosures is expected to be readily available from service providers.

Congressional Review Act

The proposed rule is subject to the Congressional Review Act provisions of the Small Business Regulatory Enforcement Fairness Act of 1996 (5 U.S.C. 801 *et seq.*) and, if finalized, will be transmitted to Congress and the Comptroller General for review. The proposed rule is not a "major rule" as that term is defined in 5 U.S.C. 804, because it is not likely to result in (1) An annual effect on the economy of $100 million or more; (2) a major increase in costs or prices for consumers, individual industries, or Federal, State, or local government agencies, or geographic regions; or (3) significant adverse effects on competition, employment, investment, productivity, innovation, or on the ability of United States-based enterprises to compete with foreign-based enterprises in domestic and export markets.

Unfunded Mandates Reform Act

For purposes of the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4), as well as Executive Order 12875, the proposed rule does not include any Federal mandate that may result in expenditures by State, local, or tribal governments in the aggregate of more than $100 million, adjusted for inflation, or increase expenditures by the private sector of more than $100 million, adjusted for inflation.

Federalism Statement

Executive Order 13132 (August 4, 1999) outlines fundamental principles of federalism, and requires the adherence to specific criteria by Federal agencies in the process of their formulation and implementation of policies that have substantial direct effects on the States, the relationship between the national government and States, or on the distribution of power and responsibilities among the various levels of government. The proposed regulation does not have federalism implications because it has no 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. Section 514 of ERISA provides, with certain exceptions specifically enumerated, that the provisions of Titles I and IV of ERISA supersede any and all laws of the States as they relate to any employee benefit plan covered under ERISA. The requirements that would be implemented in the proposed rule do not alter the fundamental reporting and disclosure requirements of the statute with respect to employee benefit plans, and as such have no implications for the States or the relationship or distribution of power between the national government and the States.

List of Subjects in 29 CFR Part 2550

Employee benefit plans, Exemptions, Fiduciaries, Investments, Pensions, Prohibited transactions, Real estate, Securities, Surety bonds, Trusts and Trustees.

For the reasons set forth in the preamble, the Department of Labor proposes to amend 29 CFR part 2550 as follows:

PART 2550—RULES AND REGULATIONS FOR FIDUCIARY RESPONSIBILITY

1. The authority citation for part 2550 is revised to read as follows:

Authority: 29 U.S.C. 1135 and Secretary of Labor's Order No. 6–2009, 74 FR 21524 (May 7, 2009). Sec. 2550.401c–1 also issued under 29 U.S.C. 1101. Sec. 2550.404a–1 also issued under sec. 657, Pub. L. 107–16, 115 Stat. 38. Sections 2550.404c–1 and 2550.404c–5 also issued under 29 U.S.C. 1104. Sec. 2550.408b–1 also issued under 29 U.S.C. 1108(b)(1) and sec. 102, Reorganization Plan No. 4 of 1978, 5 U.S.C. App. 1. Sec. 2550.408b–19 also issued under sec. 611, Pub. L. 109–280, 120 Stat. 780, 972, and sec. 102, Reorganization Plan No. 4 of 1978, 5 U.S.C. App. 1. Sec. 2550.412–1 also issued under 29 U.S.C. 1112.

2. Amend § 2550.404a–5 by revising paragraph (i)(4) to read as follows:

§ 2550.404a–5 Fiduciary requirements for disclosure in participant-directed individual account plans.

* * * * *

(i) * * *

(4) *Target date or similar funds.* In the case of a designated investment alternative that is described in 29 CFR 2550.404c–5(e)(4)(1) (*e.g.,* "life-cycle" or "target date" funds) the plan administrator shall, in addition to the information required by paragraph (d)(1) and, if applicable, paragraph (i) of this section, furnish to each participant or beneficiary the following information as an appendix or appendices to the chart or similar document intended to satisfy paragraph (d)(2) of this section—

(i) An explanation of the alternative's asset allocation, how the asset allocation will change over time, and the point in time when the alternative will reach its most conservative asset allocation; including a chart, table, or other graphical representation that illustrates such change in asset allocation over time and that does not obscure or impede a participant's or beneficiary's understanding of the information explained pursuant to this paragraph (i)(4)(i);

(ii) If the alternative is named, or otherwise described, with reference to a particular date (*e.g.,* a target date), an explanation of the age group for whom the alternative is designed, the relevance of the date, and any assumptions about a participant's or beneficiary's contribution and withdrawal intentions on or after such date; and

(iii) A statement that the participant or beneficiary may lose money by investing in the alternative, including losses near and following retirement, and that there is no guarantee that the alternative will provide adequate retirement income.

* * * * *

3. Amend § 2550.404c–5 by revising paragraphs (c)(4), (d)(3), (d)(4), and (d)(5) to read as follows:

§ 2550.404c–5 Fiduciary relief for investments in qualified default investment alternatives.

* * * * *

(c) * * *

(4) A fiduciary provides to a participant or beneficiary the material set forth in 29 CFR 2550.404a–5(d)(3) and (4) relating to a participant's or beneficiary's investment in a qualified default investment alternative;

* * * * *

(d) * * *

(3) A description of the qualified default investment alternative, including:

(i) The name of the investment's issuer;

(ii) The investment's objectives or goals;

(iii) The investment's principal strategies (including a general description of the types of assets held by the investment) and principal risks;

(iv) The investment's historical performance data and a statement indicating that an investment's past performance is not necessarily an indication of how the investment will perform in the future; and, if applicable, a description of any fixed return, annuity, guarantee, death benefit, or other ancillary features;

(v) The investment's attendant fees and expenses, including:

(A) Any fees charged directly against the amount invested in connection with acquisition, sale, transfer of, or

withdrawal (*e.g.,* commissions, sales loads, sales charges, deferred sales charges, redemption fees, surrender charges, exchange fees, account fees, and purchase fees);

(B) Any annual operating expenses (*e.g.,* expense ratio); and

(C) Any ongoing expenses in addition to annual operating expenses (*e.g.,* mortality and expense fees); and

(vi) For an investment fund product or model portfolio intended to satisfy paragraph (e)(4)(i) of this section, and to the extent not already disclosed pursuant to this paragraph (d)(3):

(A) An explanation of the asset allocation, how the asset allocation will change over time, and the point in time when the qualified default investment alternative will reach its most conservative asset allocation; including a chart, table, or other graphical representation that illustrates such change in asset allocation over time and that does not obscure or impede a participant's or beneficiary's understanding of the information explained pursuant to this paragraph (d)(3)(vi)(A);

(B) If the qualified default investment alternative is named, or otherwise described, with reference to a particular date (*e.g.,* a target date), an explanation of the age group for whom the investment is designed, the relevance of the date, and any assumptions about a participant's or beneficiary's contribution and withdrawal intentions on or after such date; and

(C) If applicable, a statement that the participant or beneficiary may lose money by investing in the qualified default investment alternative, including losses near and following retirement, and that there is no guarantee that the investment will provide adequate retirement income.

(4) A description of the right of the participants and beneficiaries on whose behalf assets are invested in a qualified default investment alternative to direct the investment of those assets to any other investment alternative under the plan and, if applicable, a statement that certain fees and limitations may apply in connection with such transfer; and

(5) An explanation of where the participants and beneficiaries can obtain additional investment information concerning the qualified default investment alternative and the other investment alternatives available under the plan.

* * * * *

Signed at Washington, DC, this 16th day of November, 2010.

Phyllis C. Borzi

Assistant Secretary, Employee Benefits Security Administration, Department of Labor.

[FR Doc. 2010–29509 Filed 11–29–10; 8:45 am]

BILLING CODE 4510–29–P

DEPARTMENT OF LABOR

Mine Safety and Health Administration

30 CFR Parts 70, 71, 72, 75, and 90

RIN 1219–AB64

Lowering Miners' Exposure to Respirable Coal Mine Dust, Including Continuous Personal Dust Monitors

AGENCY: Mine Safety and Health Administration, Labor.

ACTION: Proposed rule; rescheduling of public hearings; correction.

SUMMARY: The Mine Safety and Health Administration (MSHA) is rescheduling the dates of two public hearings and announcing the date and location of an additional public hearing on the proposed rule addressing Lowering Miners' Exposure to Respirable Coal Mine Dust, Including Continuous Personal Dust Monitors. This notice also corrects one error in the preamble to the proposed rule. On November 15, 2010, MSHA published the dates and locations of six public hearings to be held on the proposed rule.

MSHA published the proposed rule on October 19, 2010; it is available on MSHA's Web site at *http://www.msha.gov/REGS/FEDREG/PROPOSED/2010PROP/2010-25249.pdf.* The proposed rule would revise the Agency's existing standards on miners' occupational exposure to respirable coal mine dust and lower miners' exposure to respirable coal mine dust.

DATES: The public hearing dates and locations are listed in the **SUPPLEMENTARY INFORMATION** section of this document.

Post-hearing comments must be received by midnight Eastern Standard Saving Time on February 28, 2011.

ADDRESSES: Comments must be identified with "RIN 1219–AB64" and may be sent by any of the following methods:

(1) *Federal e-Rulemaking Portal: http://www.regulations.gov.* Follow the instructions for submitting comments.

(2) *Electronic mail: zzMSHA-comments@dol.gov.* Include "RIN 1219–AB64" in the subject line of the message.

(3) *Facsimile:* 202–693–9441. Include "RIN 1219–AB64" in the subject line of the message.

(4) *Regular Mail:* MSHA, Office of Standards, Regulations, and Variances, 1100 Wilson Boulevard, Room 2350, Arlington, Virginia 22209–3939.

(5) *Hand Delivery or Courier:* MSHA, Office of Standards, Regulations, and Variances, 1100 Wilson Boulevard, Room 2350, Arlington, Virginia. Sign in at the receptionist's desk on the 21st floor.

MSHA will post all comments on the Internet without change, including any personal information provided. Comments can be accessed electronically at *http://www.msha.gov* under the "Rules & Regs" link. Comments may also be reviewed in person at the Office of Standards, Regulations, and Variances, 1100 Wilson Boulevard, Room 2350, Arlington, Virginia. Sign in at the receptionist's desk on the 21st floor.

MSHA maintains a list that enables subscribers to receive e-mail notification when the Agency publishes rulemaking documents in the **Federal Register**. To subscribe, go to *http://www.msha.gov/subscriptions/subscribe.aspx.*

FOR FURTHER INFORMATION CONTACT: Patricia W. Silvey, Director, Office of Standards, Regulations, and Variances, MSHA, at *Silvey.Patricia@dol.gov* (E-mail), 202–693–9440 (Voice), or 202–693–9441 (Fax).

SUPPLEMENTARY INFORMATION:

I. Public Hearings

On November 15, 2010, MSHA announced that it would hold six public hearings on the proposed rule (75 FR 69617). Due to a scheduling conflict and in response to requests from the public, to provide maximum opportunity for public participation in this rulemaking, MSHA is rescheduling two public hearings and adding an additional public hearing. The dates of public hearings that were scheduled in Washington, PA, and Arlington, VA, are changed to February 8, 2011, and February 15, 2011, respectively. The locations of these two hearings remain the same. MSHA will hold an additional public hearing on February 10, 2011, in Prestonsburg, Kentucky.

MSHA will accept post-hearing written comments and other appropriate information for the record from any interested party, including those not presenting oral statements. Comments must be received by midnight Eastern Standard Saving Time on February 28, 2011. For the convenience of interested parties, the chart below includes the dates and locations of all seven public hearings:

Date	Location	Contact No.
December 7, 2010	National Mine Health and Safety Academy, 1301 Airport Road, Beaver, WV 25813	304–256–3201
January 11, 2011	Marriott Evansville Airport, 7101 Highway, 41 North Evansville, IN 47725	812–867–7999
January 13, 2011	Sheraton Birmingham, 2101 Richard Arrington Jr., Blvd., North Birmingham, AL 35203	205–324–5000
January 25, 2011	Marriott Salt Lake City, 75 S West Temple, Salt Lake City, UT 84101	801–531–0800
February 8, 2011	The George Washington Hotel, 60 South Main Street, Washington, PA 15301	724–225–3200
February 10, 2011	Jenny Wiley State Resort Park, Wilkinson/Stumbo Conference Center, 75 Theatre Court, Prestonsburg, KY 41653.	606–889–1790
February 15, 2011	Mine Safety and Health Administration, 25th Floor Conference Room, 1100 Wilson Blvd., Arlington, VA 22209.	202–693–9440

II. Correction

MSHA published the proposed rule on October 19, 2010 (75 FR 64412); it is available on MSHA's Web site at *http://www.msha.gov/REGS/FEDREG/PROPOSED/2010PROP/2010-25249.pdf.* The following error in the preamble to the proposed rule is corrected to read as follows:

1. On page 64421, third column, first line, "mg^3" should read "m^3".

Dated: November 24, 2010.

Joseph A. Main,

Assistant Secretary of Labor for Mine Safety and Health.

[FR Doc. 2010–30099 Filed 11–29–10; 8:45 am]

BILLING CODE 4510–43–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 62

[EPA–R03–OAR–2010–0771; FRL–9233–5]

Approval and Promulgation of State Air Quality Plans for Designated Facilities and Pollutants; State of Delaware; Control of Emissions From Existing Hospital/Medical/Infectious Waste Incinerator (HMIWI) Units, Negative Declaration and Withdrawal of EPA Plan Approval

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: EPA proposes to approve the State of Delaware's negative declaration and request for EPA withdrawal of its section 111(d)/129 plan (the plan) approval for HMIWI units. Submittal of a negative declaration or state plan revision is a requirement of the Clean Air Act (CAA). In the Final Rules section of this **Federal Register**, EPA is approving the State of Delaware's negative declaration and request for EPA withdrawal of its plan approval for HMIWI units. A detailed rationale for the approval is set forth in the direct final rule. If no adverse comments are received in response to this action, no further activity is contemplated. If EPA receives adverse comments, the direct final rule will be withdrawn and all public comments received will be addressed in a subsequent final rule based on this proposed rule. EPA will not institute a second comment period. Any parties interested in commenting on this action should do so at this time.

DATES: Comments must be received in writing by December 30, 2010.

ADDRESSES: Submit your comments, identified by Docket ID Number EPA–R03–OAR–2010–0771 by one of the following methods:

A. *http://www.regulations.gov.* Follow the online instructions for submitting comments.

B. *E-mail: wilkie.walter@epa.gov.*

C. *Mail:* EPA–R03–OAR–2010–0771, Walter K. Wilkie, Associate Director, Air Protection, Division, Office of Air Monitoring and Analysis, Mailcode 3AP40, U.S. Environmental Protection Agency, Region III, 1650 Arch Street, Philadelphia, Pennsylvania 19103.

D. *Hand Delivery:* At the previously-listed EPA Region III address. Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments to Docket ID No. EPA–R03–OAR–2010–0771. EPA's policy is that all comments received will be included in the public docket without change, and may be made available online at *http://www.regulations.gov,* including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through *http://www.regulations.gov* or e-mail. The *http://www.regulations.gov* Web site is an "anonymous access" system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA without going through *http://www.regulations.gov,* your e-mail address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD–ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses.

Docket: All documents in the electronic docket are listed in the *http://www.regulations.gov* index. Although listed in the index, some information is not publicly available, *i.e.,* CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically in *http://www.regulations.gov* or in hard copy during normal business hours at the Air Protection Division, U.S. Environmental Protection Agency, Region III, 1650 Arch Street, Philadelphia, Pennsylvania 19103. Copies of the State agency submittals are available at the Delaware Department of Natural Resources and Environmental Control, 89 Kings Highway, P.O. Box 1401, Dover, Delaware 19903.

FOR FURTHER INFORMATION CONTACT: James B. Topsale, P.E., at (215) 814–2190, or by e-mail at *topsale.jim@epa.gov.* Please note that while questions may be posed via phone and e-mail, formal comments must be submitted in writing, as indicated in the **ADDRESSES** section of this document.

SUPPLEMENTARY INFORMATION: For further information, please see the information provided in the direct final action, with the same title, that is located in the"Rules and Regulations" section of this **Federal Register** publication.

Dated: November 17, 2010.

W.C. Early,

Acting Regional Administrator, EPA Region III.

[FR Doc. 2010–30103 Filed 11–29–10; 8:45 am]

BILLING CODE 6560–50–P

DEPARTMENT OF DEFENSE

Defense Acquisition Regulations System

48 CFR Part 252

Defense Federal Acquisition Regulation Supplement; Definition of Sexual Assault (DFARS Case 2010–D023)

AGENCY: Defense Acquisition Regulations System, Department of Defense (DoD).

ACTION: Proposed rule with request for comments.

SUMMARY: DoD is proposing to amend the Defense Federal Acquisition Regulation Supplement (DFARS), regarding Contractor Personnel Authorized to Accompany U.S. Armed Forces Deployed Outside the United States, to ensure contractor employees are aware of the DoD definition of "sexual assault" as defined in DoD Directive 6495.01, Sexual Assault Prevention and Response (SAPR) Program. In addition to ensuring an awareness of the definition, the proposed change will inform contractors that, for contractor employees accompanying U.S. Armed Forces, such offenses are covered under the Uniform Code of Military Justice.

DATES: Comments on this proposed rule should be submitted in writing to the address shown below on or before January 31, 2011, to be considered in the formation of the final rule.

ADDRESSES: You may submit comments, identified by DFARS Case 2010–D023, using any of the following methods:

- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the instructions for submitting comments.
- *E-mail: dfars@osd.mil.* Include DFARS Case 2010–D023 in the subject line of the message.
- *Fax:* 703–602–0350.
- *Mail:* Defense Acquisition Regulations System, Attn: Mr. Julian E. Thrash, OUSD (AT&L) DPAP/DARS, Room 3B855, 3060 Defense Pentagon, Washington, DC 20301–3060.
- Comments received generally will be posted without change to *http://www.regulations.gov,* including any personal information provided.
- To confirm receipt of your comment(s), please check *http://www.regulations.gov* approximately two to three days after submission to verify posting (except allow 30 days for posting of comments submitted by mail).

FOR FURTHER INFORMATION CONTACT: Mr. Julian E. Thrash, 703–602–0310.

SUPPLEMENTARY INFORMATION:

I. Background

DoD Inspector General audit D–2010–052, entitled "Efforts to Prevent Sexual Assault/Harassment Involving DoD Contractors During Contingency Operations," dated April 16, 2010, provided recommendations for the Under Secretary of Defense for Acquisition, Technology, and Logistics to develop requirements in all DoD contracts supporting contingency operations to ensure contractor employees accompanying U.S. Armed Forces are aware of the definition of "sexual assault," as defined in DoD Directive 6495.01, Sexual Assault Prevention and Response (SAPR) Program (*http://www.dtic.mil/whs/directives/corres/pdf/649501p.pdf.*)

This proposed change will add a new item for compliance with laws and regulations at DFARS 252.225–7040(d)(3). This change would require that contractor employees accompanying U.S. Armed Forces are aware of the DoD definition of "sexual assault" as defined in DoD Directive 6495.01, Sexual Assault Prevention and Response Program. It would also inform contractor employees accompanying U.S. Armed Forces, that such offenses are covered under the Uniform Code of Military Justice, Title 10, Chapter 47 (*http://www.constitution.org/mil/ucmj19970615.htm*).

II. Executive Order 12866

This is a significant regulatory action and therefore was subject to review under section 6(b) of Executive Order 12866, Regulatory Planning and Review, dated September 20, 1993. This is not a major rule under 5 U.S.C. 804.

III. Regulatory Flexibility Act

DoD does not expect this rule to 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, *et seq.,* because the rule does not impose any additional requirements on small businesses. DFARS 252.225–7040(e)(2)(iv) already informs contractors that contractor personnel authorized to accompany U.S. Armed Forces in the field are subject to the jurisdiction of the Uniform Code of Military Justice. This proposed change clarifies that sexual assault is an offense covered under the Uniform Code of Military Justice. Therefore, DoD has not performed an Initial Regulatory Flexibility Analysis.

DoD invites comments from small business concerns and other interested parties on the expected impact of this rule on small entities.

DoD will also consider comments from small entities concerning the existing regulations in subparts affected by this rule in accordance with 5 U.S.C. 610. Interested parties must submit such comments separately and should cite 5 U.S.C. 610 (DFARS case 2010–D023) in correspondence.

IV. Paperwork Reduction Act

The Paperwork Reduction Act does not apply, because the rule does not impose any information collection requirements that require the approval of the Office of Management and Budget under 44 U.S.C. 3501, *et seq.*

List of Subjects in 48 CFR Part 252

Government procurement.

Clare M. Zebrowski,

Editor, Defense Acquisition Regulations System.

Therefore, DoD proposes to amend 48 CFR part 252 as follows:

PART 252—SOLICITATION PROVISIONS AND CONTRACT CLAUSES

1. The authority citation for 48 CFR part 252 continues to read as follows:

Authority: 41 U.S.C. 421 and 48 CFR chapter 1.

2. Amend section 252.225–7040 by adding paragraph (d)(3), to read as follows:

252.225–7040 Contractor Personnel Authorized to Accompany U.S. Armed Forces Deployed Outside the United States.

* * * * *

(d) * * *

(3) The Contractor shall ensure contractor employees accompanying U.S. Armed Forces are aware of the DoD definition of "sexual assault" in DoDD 6495.01, Sexual Assault Prevention and Response Program, at *http://www.dtic.mil/whs/directives/corres/pdf/649501p.pdf,* and advise them that such offenses are covered under the Uniform Code of Military Justice (see paragraph (e)(2)(iv) of this clause).

* * * * *

[FR Doc. 2010–30090 Filed 11–29–10; 8:45 am]

BILLING CODE 5001–08–P

DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

49 CFR Part 571

[Docket No. NHTSA–2010–0132]

RIN 21217–AK17

Federal Motor Vehicle Safety Standards; New Pneumatic Tires for Motor Vehicles With a Gross Vehicle Weight Rating (GVWR) of More Than 4,536 Kilograms (10,000 Pounds) and Motorcycles

AGENCY: National Highway Traffic Safety Administration (NHTSA), Department of Transportation (DOT).

ACTION: Extension of comment period.

SUMMARY: NHTSA has received a petition asking the agency to extend the comment period for its proposal to upgrade the Federal motor vehicle safety standard (FMVSS) that applies to new pneumatic tires for use on vehicles with a gross vehicle weight rating (GVWR) greater than 10,000 pounds and motorcycles. In the proposal, NHTSA established a deadline for the submission of written comments of November 29, 2010. In light of that petition and the need to ensure that all interested parties have a sufficient amount of time to fully develop their comments, the agency is extending the deadline for the submission of written comments by 30 days.

DATES: Written comments must be received by December 29, 2010.

ADDRESSES: You may submit comments (identified by the NHTSA Docket ID Number above) by any of the following methods:

- *Federal eRulemaking Portal:* Go to *http://www.regulations.gov.* Follow the online instructions for submitting comments.
- *Mail:* Docket Management Facility: U.S. Department of Transportation, 1200 New Jersey Avenue, SE., West Building Ground Floor, Room W12–140, Washington, DC 20590–0001.
- *Hand Delivery or Courier:* West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue, SE., between 9 a.m. and 5 p.m. ET, Monday through Friday, except Federal holidays.
- *Fax:* 202–493–2251.

Privacy Act: Anyone is able to search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (65 FR 19477–78).

Docket: For access to the docket to read background documents or comments received, go to *http://www.regulations.gov* or the street address listed above. Follow the online instructions for accessing the dockets.

FOR FURTHER INFORMATION CONTACT: George Soodoo, NHTSA Office of Rulemaking (Telephone: 202–366–2720) (Fax: 202–493–2739) or Thomas Healy, NHTSA Office of Chief Counsel (Telephone: 202–366–7161) (Fax: 202–366–3820). The mailing address for these officials is: National Highway Traffic Safety Administration, U.S. Department of Transportation, 1200 New Jersey Avenue, SE., West Building, Washington, DC 20590.

SUPPLEMENTARY INFORMATION: NHTSA issued a notice of proposed rulemaking (NPRM) proposing to upgrade FMVSS No. 119 (49 CFR 571.119), which applies to new pneumatic tires for vehicles with a GVWR greater than 10,000 pounds and motorcycles. The NPRM was published on September 29, 2010 (75 FR 60037, Docket No. NHTSA–2010–0132). In the NPRM, among other matters, NHTSA proposed to amend FMVSS No. 119 to adopt a more stringent endurance test and a new high speed test for heavy vehicle tires with a load range of F, G, H, J, and L.

The Rubber Manufacturers Association (RMA), which represents manufacturers of finished rubber products, including tire manufacturers, has petitioned for an extension of the comment period on the NPRM. RMA said that it is requesting a 30-day extension so that its members can complete all of their additional testing to evaluate the more stringent endurance test proposed by the agency and to develop new data to demonstrate differences in outcomes with tire break-in versus no break-in for the new proposed high speed test. RMA indicated that it also intends to supplement its earlier test data submitted to the agency on April 14, 2009. RMA believes that the earlier data set submitted to the docket, combined with additional new data, will assist NHTSA in evaluating RMA's comments and arriving at a final rule. RMA maintains that its members require several weeks to complete even a small test program of the 47-hour endurance test. Therefore, RMA indicates that it is not possible for its members to complete all of their additional testing and have it ready for submittal by November 29, 2010.

In considering the extension request, NHTSA weighed the complexity and importance of this rulemaking and the basis for the request. We have decided there is good cause to grant the petition and extend the comment period 30 days. The extension is in the public interest since it will provide the public additional time to prepare and submit useful technical information that should benefit agency decision-making in this rulemaking action. Accordingly, NHTSA extends the period for the submission of written comments in this proceeding to December 29, 2010.

Authority: 49 U.S.C. 322, 30111, 30115, 30166 and 30177; delegation of authority at 49 CFR 1.50.

Issued: November 24, 2010.

Joseph S. Carra,

Acting Associate Administrator for Rulemaking.

[FR Doc. 2010–30096 Filed 11–24–10; 4:15 pm]

BILLING CODE 4910–56–P

Notices

Federal Register
Vol. 75, No. 229
Tuesday, November 30, 2010

This section of the FEDERAL REGISTER contains documents other than rules or proposed rules that are applicable to the public. Notices of hearings and investigations, committee meetings, agency decisions and rulings, delegations of authority, filing of petitions and applications and agency statements of organization and functions are examples of documents appearing in this section.

DEPARTMENT OF AGRICULTURE

Submission for OMB Review; Comment Request

November 23, 2010.

The Department of Agriculture has submitted the following information collection requirement(s) to OMB for review and clearance under the Paperwork Reduction Act of 1995, Public Law 104–13. Comments regarding (a) Whether the collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility; (b) the accuracy of the agency's estimate of burden including the validity of the methodology and assumptions used; (c) ways to enhance the quality, utility and clarity of the information to be collected; (d) ways to minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques and other forms of information technology should be addressed to: Desk Officer for Agriculture, Office of Information and Regulatory Affairs, Office of Management and Budget (OMB), *OIRA_Submission@OMB.EOP.GOV* or fax (202) 395–5806 and to Departmental Clearance Office, USDA, OCIO, Mail Stop 7602, Washington, DC 20250–7602. Comments regarding these information collections are best assured of having their full effect if received within 30 days of this notification. Copies of the submission(s) may be obtained by calling (202) 720–8681.

An agency may not conduct or sponsor a collection of information unless the collection of information displays a currently valid OMB control number and the agency informs potential persons who are to respond to the collection of information that such persons are not required to respond to the collection of information unless it displays a currently valid OMB control number.

Forest Service

Title: Publications Evaluation Card.

OMB Control Number: 0596–0163.

Summary of Collection: Executive Order 12862 issued September 11, 1993, directed Federal agencies to change the way they do business, to reform their management practices, to provide service to the public that matches or exceeds the best service available in the private sector, and to establish and implement customer service standards to carry out principles of the National Performance Review. In response to this Executive Order, the Forest Service (FS) Southern Research Station developed a "Publication Comment" Card for inclusion when distributing scientific research publications. FS has come to realize that some changes in their publications may be necessary to achieve their goals and wishes to elicit voluntary feedback from their readers to help determine the changes to make. FS will collect information using the comment card.

Need and Use of the Information: FS will collect information, which will ask the respondents to rate the publication that they received or read. The information will be used to improve the readability and usefulness of FS articles, papers, and books. The collected information will also help scientists and authors provide relevant information on effective, efficient, responsible land management. If the information is not collected FS will forgo any opportunity to learn if publications meet customers' expectations and address customers' needs.

Description of Respondents: Individuals or households.

Number of Respondents: 72,000.

Frequency of Responses: Reporting: On occasion.

Total Burden Hours: 4,800.

Forest Service

Title: Predecisional Objection Process for Hazardous Fuel Reduction Projects Authorized by Healthy Forest Restoration Act of 2003.

OMB Control Number: 0596–0172.

Summary of Collection: On December 3, 2003, President Bush signed into law the Healthy Forests Restoration Act of 2003 to reduce the threat of destructive wildfires while upholding environmental standards and encouraging early public input during review and planning processes. One of the provisions of the Act, in Section 105 requires that not later than 30 days after the date of the enactment of this Act, the Secretary of Agriculture shall promulgate interim final regulations to establish a predecisional administrative review process. This process services as the sole means by which a person can seek administrative review regarding an authorized hazardous fuel reduction project on Forest Service (FS) land.

Need and Use of the Information: Participants in the predecisional administrative review process must provide information the FS needs to respond to their concern. This written information needs to include the objector's name, address, phone number; the name of the project; name and title of the Responsible Official, the project location; and sufficient narrative description of those parts of the project that are objected to; specific issues related to the proposed decision, and suggested remedies which would resolve the objection. The collected information will be used by the Reviewing Officer in responding to those who participate in the objection process prior to a decision by the Responsible Official. FS could not meet the intent of Congress without collecting this information.

Description of Respondents: Individuals or households; State, Local or Tribal Government; Not-for-profit institutions.

Number of Respondents: 121.

Frequency of Responses: Reporting: On occasion.

Total Burden Hours: 968.

Forest Service

Title: Financial Information Security Request Form.

OMB Control Number: 0596–0204.

Summary of Collection: The majority of Forest Service's (FS) financial records are in databases stored at the National Finance Center (NFC). The Federal Information Security Reform Act of 2002 (Pub. L. 107–347) and Information Technology Management Reform Act of 1996 (Pub. L. 104–106) authorize the Forest Service to obtain information necessary for employees and contractors to access and maintain these records.

Need and Use of the Information: The Forest Service uses a paper and electronic version of its form FS–6500–

214 to gather name, work email, work telephone number, job title, etc. for a specific employee or contractor to apply to NFC for access. Prior to filling out the form, contractors must first complete specific training before a user may request access to certain financial systems. NFC grants access to users only at the request of Client Security Officers. The unit's Client Security Officer is responsible for management of access to computers and coordinates all requests for NFC. The information collected is shared with those managing or overseeing the financial systems used by the FS; this includes auditors.

Description of Respondents: Contracted Employees.

Number of Respondents: 50.

Frequency of Reponses: Reporting: Yearly.

Total Burden Hours: 75.

Charlene Parker,

Departmental Information Collection Clearance Officer.

[FR Doc. 2010–30011 Filed 11–29–10; 8:45 am]

BILLING CODE 3410–11–P

DEPARTMENT OF AGRICULTURE

Submission for OMB Review; Comment Request

November 23, 2010.

The Department of Agriculture has submitted the following information collection requirement(s) to OMB for review and clearance under the Paperwork Reduction Act of 1995, Public Law 104–13. Comments regarding (a) Whether the collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility; (b) the accuracy of the agency's estimate of burden including the validity of the methodology and assumptions used; (c) ways to enhance the quality, utility and clarity of the information to be collected; (d) ways to minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology should be addressed to: Desk Officer for Agriculture, Office of Information and Regulatory Affairs, Office of Management and Budget (OMB), *OIRA_Submission@OMB.EOP.GOV* or fax (202) 395–5806 and to Departmental Clearance Office, USDA, OCIO, Mail Stop 7602, Washington, DC 20250–7602. Comments regarding these information collections are best assured of having their full effect if received within 30 days of this notification. Copies of the submission(s) may be obtained by calling (202) 720–8681.

An agency may not conduct or sponsor a collection of information unless the collection of information displays a currently valid OMB control number and the agency informs potential persons who are to respond to the collection of information that such persons are not required to respond to the collection of information unless it displays a currently valid OMB control number.

Rural Utilities Service

Title: 7 CFR 1777, Section 306C Water & Waste Disposal (WWD) Loans & Grants.

OMB Control Number: 0572–0109.

Summary of Collection: Rural Utilities Service is authorized to make loans and grants under Section 306C of the Consolidated Farm and Rural Development Act (7 U.S.C. 1926c). This program funds facilities and projects in low income rural communities whose residents face significant health risks. These communities do not have access to or are not served by adequate affordable water supply systems or waste disposal facilities. The loans and grants will be available to provide water and waste disposal facilities and services to these communities.

Need and Use of the Information: Eligible applicants submit an application package and other information to Rural Development field offices to develop or improve community water and waste disposal systems. In one percent of the cases an applicant will use the funds to enable individuals to connect to the applicant's system or improve residences to use the water or waste disposal system. In this situation, an applicant will make loans and grants to individuals and the applicant will submit an implementation plan, memorandum of agreement and use of funds report.

Description of Respondents: Not-for-profit institutions; Individuals or households.

Number of Respondents: 1.

Frequency of Responses: Reporting: Annually.

Total Burden Hours: 9.

Rural Utility Service

Title: High Energy Cost Grants and State Bulk Fuel Revolving Grant Programs.

OMB Control Number: 0572–0136.

Summary of Collection: The Rural Electrification Act of 1936 (RE Act) (7 U.S.C. 901 *et seq.*) was amended in November 2000 to create new grant and loan authority to assist rural communities with extremely high energy costs (Pub. L. 106–472). This amendment gives authorization to Rural Utilities Service (RUS) to provide competitive grants for energy generation, transmission, or distribution facilities serving communities in which the national average is at least 275% for residential expenditure for home energy. All applicants are required to submit a project proposal containing the elements in the prescribed format.

Need and Use of the Information: USDA will collect information from applicants to confirm that the eligibility requirements and the proposals are consistent with the purposes set forth in the statute. Various forms and progress reports are used to monitor compliance with grant agreements, track expenditures of Federal funds and measure the success of the program. Without collecting the listed information, USDA will not be assured that the projects and communities served meet the statutory requirements for eligibility or that the proposed projects will deliver the intended benefits.

Description of Respondents: Not-for-profit institutions; Business or other for-profit; and State, Local or Tribal Government

Number of Respondents: 112.

Frequency of Responses: Recordkeeping: Reporting: On occasion.

Total Burden Hours: 1,365.

Charlene Parker,

Departmental Information Collection Clearance Officer.

[FR Doc. 2010–30014 Filed 11–29–10; 8:45 am]

BILLING CODE 3410–15–P

DEPARTMENT OF AGRICULTURE

Forest Service

Idaho Panhandle Resource Advisory Committee Meeting

AGENCY: Forest Service, USDA.

ACTION: Notice of meeting.

SUMMARY: Pursuant to the authorities in the Federal Advisory Committee Act (Pub. L. 92–463) and under the Secure Rural Schools and Community Self-Determination Act of 2000 (Pub. L. 110–343) the Idaho Panhandle Resource Advisory Committee will meet Friday, December 3, 2010, at 9 a.m. in Coeur d'Alene, Idaho for a business meeting. The business meeting is open to the public.

DATES: December 3, 2010.

ADDRESSES: The meeting location is the Idaho Panhandle National Forests'

Supervisor's Office, located at 3815 Schreiber Way, Coeur d'Alene, Idaho 83815.

FOR FURTHER INFORMATION CONTACT: Ranotta K. McNair, Forest Supervisor and Designated Federal Official, at (208) 765–7369.

SUPPLEMENTARY INFORMATION: The meeting agenda will focus on reviewing proposals for forest projects and recommending funding during the business meeting.

The public forum begins at 11 a.m.

Dated: November 22, 2010.

Ranotta K. McNair,

Forest Supervisor.

[FR Doc. 2010–30025 Filed 11–29–10; 8:45 am]

BILLING CODE 3410–11–M

DEPARTMENT OF COMMERCE

Submission for OMB Review; Comment Request

The Department of Commerce will submit to the Office of Management and Budget (OMB) for clearance the following proposal for collection of information under the provisions of the Paperwork Reduction Act (44 U.S.C. chapter 35).

Agency: National Institute of Standards and Technology (NIST).

Title: Manufacturing Extension Partnership Expanded Services Client Impact Survey.

OMB Control Number: None.

Form Number(s): None.

Type of Request: Regular submission (new information collection).

Burden Hours: 375.

Number of Respondents: 1,500.

Average Hours per Response: 15 Minutes.

Needs and Uses: The objective of the NIST Hollings Manufacturing Extension Partnership Program (HMEP) is to enhance productivity, technological performance, and strengthen the global competitiveness of small- and medium-sized U.S.-based manufacturing firms. Through this client impact survey, the MEP will collect data necessary for program accountability; analysis and research into the effectiveness of the MEP program; reports to stakeholders; Government Performance and Results Act; continuous improvement efforts; knowledge sharing across the MEP system; and identification of best practices. The collection of this data is needed in order to comply with the MEP charter, as mandated by Congress.

Affected Public: NIST MEP Competitive Award Recipients.

Frequency: Quarterly.

Respondent's Obligation: Voluntary.

OMB Desk Officer: Jasmeet Seehra, (202) 395–3123.

Copies of the above information collection proposal can be obtained by calling or writing Diana Hynek, Departmental Paperwork Clearance Officer, (202) 482–0266, Department of Commerce, Room 6616, 14th and Constitution Avenue, NW., Washington, DC 20230 (or via the Internet at *dHynek@doc.gov*).

Written comments and recommendations for the proposed information collection should be sent within 30 days of publication of this notice to, OMB Desk Officer, Jasmeet Seehra, (202) 395–3123, FAX Number (202) 395–5167, or *Jasmeet_K._Seehra@omb.eop.gov*).

Dated: November 24, 2010.

Gwellnar Banks,

Management Analyst, Office of the Chief Information Officer.

[FR Doc. 2010–30053 Filed 11–29–10; 8:45 am]

BILLING CODE 3510–13–P

DEPARTMENT OF COMMERCE

International Trade Administration Mission Statement

Application Deadline Extended; Secretarial Business India High Technology Mission

AGENCY: Department of Commerce.

ACTION: Notice.

SUMMARY: Secretary of Commerce Gary Locke will lead a senior-level business development trade mission to New Delhi, Mumbai and Bangalore, India, February 6–11, 2011. The overall focus of the trip will be commercial opportunities for U.S. companies, including joint ventures and export opportunities. In each city participants will have a market briefings followed by one-on-one appointments with potential buyers/partners and meetings with high level government officials.

DATES: The application deadline has been extended to Friday, December 3, 2010. Applications should be submitted to the Office of Business Liaison at *IndiaMission2011@doc.gov*. Applications received after that date will be considered only if space and scheduling constraints permit.

FOR FURTHER INFORMATION CONTACT: Office of Business Liaison; Room 5062; Department of Commerce; Washington, DC 20230; *Tel:* (202) 482–1360; *Fax:* (202) 482–4054.

Timeframe for Recruitment and Applications: Mission recruitment will be conducted in an open and public manner, including publication in the **Federal Register**, posting on the Commerce Department trade events page (*http://www.export.gov/tradeevents/*) and other Internet web sites, press releases to general and trade media, direct mail, broadcast fax, notices by industry trade associations and other multiplier groups, and publicity at industry meetings, symposia, conferences, and trade shows. The Commerce Department's Office of Business Liaison and the International Trade Administration will explore and welcome outreach assistance from other interested organizations, including other U.S. Government agencies.

Recruitment for this mission will begin immediately upon approval. Applications can be completed on-line at the India High Technology Development Missions' Web site at *http://www.trade.gov/IndiaMission2011* or can be obtained by contacting the U.S. Department of Commerce Office of Business Liaison (202–482–1360 or *IndiaMission2011@doc.gov*). The application deadline has been extended to Friday, December 3, 2010. Completed applications should be submitted to the Office of Business Liaison. Applications received after Friday, December 3, 2010 will be considered only if space and scheduling constraints permit.

General Information and Applications: The Office of Business Liaison, 1401 Constitution Avenue, NW., Room 5062, Washington, DC 20230, *Tel:* 202–482–1360, *Fax:* 202–482–4054, *E-mail: IndiaMission2011@doc.gov*.

Dated: November 24, 2010.

Jennifer Andberg,

Deputy Director, Office of Business Liaison, U.S. Department of Commerce.

[FR Doc. 2010–30120 Filed 11–29–10; 8:45 am]

BILLING CODE 3510–FP–P

DEPARTMENT OF COMMERCE

Foreign-Trade Zones Board

[Docket 67–2010]

Foreign-Trade Zone 72—Indianapolis, IN, Application for Subzone, GEA Bloomington Production Operations, LLC (Refrigerator Manufacturing), Bloomington, IN

An application has been submitted to the Foreign-Trade Zones Board (the Board) by the Indianapolis Airport Authority, grantee of FTZ 72, requesting special-purpose subzone status for the refrigerator manufacturing facility of GEA Bloomington Production Operations, LLC (GEA Bloomington), located in Bloomington, Indiana. The

application was submitted pursuant to the provisions of the Foreign-Trade Zones Act, as amended (19 U.S.C. 81a–81u), and the regulations of the Board (15 CFR part 400). It was formally filed on November 19, 2010.

The GEA Bloomington facility (500 employees, 80.0 acres, 800,000 unit capacity) is located at 301 N. Curry Pike, Bloomington, Indiana. The facility is used for the manufacture and distribution of refrigerators. Components and materials sourced from abroad (representing 50% of the value of the finished product) include: ABS resin, plastic fittings, rubber gaskets, screws, bolts, hinges, brackets, metal plates, compressors, filters, taps, valves, motors, inverters, wire harnesses, switches, plugs, sockets, electronic control boards, lamps, light dispensers, harness machines, conductors, and refrigerator parts (duty rate ranges from duty free to 8.6%).

FTZ procedures could exempt GEA Bloomington from customs duty payments on the foreign components used in export production. The company anticipates that less than 1% of the plant's shipments will be exported. On its domestic sales, GEA Bloomington would be able to choose the duty rates during customs entry procedures that apply to refrigerators and refrigerator parts (duty free) for the foreign inputs noted above. FTZ designation would further allow GEA Bloomington to realize logistical benefits through the use of weekly customs entry procedures. Customs duties also could possibly be deferred or reduced on foreign status production equipment. The request indicates that the savings from FTZ procedures would help improve the plant's international competitiveness.

In accordance with the Board's regulations, Maureen Hinman of the FTZ Staff is designated examiner to evaluate and analyze the facts and information presented in the application and case record and to report findings and recommendations to the Board.

Public comment is invited from interested parties. Submissions (original and 3 copies) shall be addressed to the Board's Executive Secretary at the address below. The closing period for their receipt is January 31, 2011. Rebuttal comments in response to material submitted during the foregoing period may be submitted during the subsequent 15-day period to February 14, 2011.

A copy of the application will be available for public inspection at the Office of the Executive Secretary, Foreign-Trade Zones Board, Room 2111, U.S. Department of Commerce, 1401 Constitution Avenue, NW., Washington, DC 20230–0002, and in the "Reading Room" section of the Board's Web site, which is accessible via *http://www.trade.gov/ftz.*

For further information, contact Maureen Hinman at *maureen.hinman@trade.gov* or (202) 482–0627.

Dated: November 19, 2010.

Andrew McGilvray,

Executive Secretary.

[FR Doc. 2010–30127 Filed 11–29–10; 8:45 am]

BILLING CODE 3510–DS–P

DEPARTMENT OF COMMERCE

Foreign-Trade Zones Board

[Docket 57–2010]

Foreign-Trade Zone 148—Knoxville, TN, Application for Subzone Toho, Tenax America, Inc., Extension of Comment Period

The comment period for the application for subzone status at the Toho Tenax America, Inc., facility in Rockwood, Tennessee, submitted by the Industrial Development Board of Blount County, Tennessee (75 FR 61696, 10/6/2010), is being extended to January 20, 2011, to allow interested parties additional time in which to comment. Rebuttal comments may be submitted during the subsequent 15-day period, until February 4, 2011. Submissions (original and one electronic copy) shall be addressed to the Board's Executive Secretary at: Foreign-Trade Zones Board, U.S. Department of Commerce, Room 2111, 1401 Constitution Ave., NW., Washington, DC 20230.

For further information, contact Diane Finver at *Diane.Finver@trade.gov* or (202) 482–1367.

Dated: November 22, 2010.

Andrew McGilvray,

Executive Secretary.

[FR Doc. 2010–30132 Filed 11–29–10; 8:45 am]

BILLING CODE 3510–DS–P

DEPARTMENT OF COMMERCE

International Trade Administration

[A–570–831]

Fresh Garlic From the People's Republic of China: Extension of Time Limit for Preliminary Results of Antidumping Duty New Shipper Reviews

AGENCY: Import Administration, International Trade Administration, Department of Commerce.

DATES: *Effective Date:* November 30, 2010.

FOR FURTHER INFORMATION CONTACT: Jacqueline Arrowsmith (Yantai Jinyan Trading, Inc.), Milton Koch (Jining Yifa Garlic Produce Co., Ltd.), Justin Neuman (Shenzhen Bainong Co., Ltd.), AD/CVD Operations, Office 6, Import Administration, International Trade Administration, Department of Commerce, Room 7866, 14th Street and Constitution Avenue, NW., Washington DC 20230; telephone: (202) 482–5255, (202) 482–2584, and (202) 482–0486, respectively.

Background

On July 7, 2010, the Department published the initiation of the new shipper reviews of the antidumping duty order on fresh garlic from the People's Republic of China for three exporters: Shenzhen Bainong Co., Ltd. (Bainong), Jining Yifa Garlic Produce Co., Ltd, (Yifa) and Yantai Jinyan Trading, Inc. (Jinyan). The period of review (POR) for Bainong and Yifa is November 1, 2009 through April 30, 2010. The POR for Jinyan is November 1, 2009 through May 31, 2010. *See Fresh Garlic From the People's Republic of China: Initiation of New Shipper Reviews,* 75 FR 38986 (July 7, 2010).

Extension of Time Limit for the Preliminary Results

Section 751(a)(2)(B)(iv) of the Tariff Act of 1930, as amended (the Act), and 19 CFR 351.214(i)(1) require the Department to issue the preliminary results of a new shipper review within 180 days after the date on which the review was initiated, and the final results of the review within 90 days after the date on which the preliminary results were issued. However, if the Department concludes that a new shipper review is extraordinarily complicated, section 751(a)(2)(B)(iv) of the Act and 19 CFR 351.214(i)(2) allow the Department to extend the 180-day period to 300 days, and to extend the 90-day period to 150 days. The current deadline for the preliminary results is December 27, 2010. The Department has determined that these new shipper reviews involve extraordinarily complicated methodological issues, which require the examination of importer and customer information for Bainong, Jinyan, and Yifa. Additional time is also required to ensure that the Department can fully examine whether the sales under review are *bona fide* for each of the three companies under review.

Therefore, the Department is extending the deadline for completion

of the preliminary results of these new shipper reviews to 300 days, in accordance with section 751(a)(2)(B)(iv) of the Act and 19 CFR 351.214(i)(2). Accordingly, the deadline for the completion of these preliminary results is now no later than April 26, 2011.

This notice is issued and published pursuant to sections 751(a)(3)(A) and 777(i)(1) of the Act.

Dated: November 22, 2010.

Susan H. Kuhbach,

Acting Deputy Assistant Secretary for Antidumping and Countervailing Duty Operations.

[FR Doc. 2010–30141 Filed 11–29–10; 8:45 am]

BILLING CODE 3510–DS–P

DEPARTMENT OF COMMERCE

International Trade Administration

[C–570–913]

Certain New Pneumatic Off-the-Road Tires From the People's Republic of China: Partial Rescission of Countervailing Duty Administrative Review

AGENCY: Import Administration, International Trade Administration, Department of Commerce.

SUMMARY: The Department of Commerce (the Department) is rescinding, in part, the administrative review of the countervailing duty order on certain new pneumatic off-the-road tires (OTR Tires) from the People's Republic of China (PRC) for the period January 1, 2009, through December 31, 2009, with respect to Guizhou Tyre Co., Ltd., Guizhou Advanced Rubber Co., Ltd., and Guizhou Tyre Import and Export Corporation (collectively, Guizhou Tyre). This partial rescission is based on the withdrawal by Guizhou Tyre of its request for a review.

DATES: *Effective Date:* November 30, 2010.

FOR FURTHER INFORMATION CONTACT: Emily Halle, AD/CVD Operations, Office 6, Import Administration, International Trade Administration, Department of Commerce, 14th Street and Constitution Avenue, NW., Washington, DC 20230; telephone: (202) 482–0176.

SUPPLEMENTARY INFORMATION:

Background

The Department published a notice of opportunity to request an administrative review of the countervailing duty order on OTR Tires from the PRC. *See Antidumping or Countervailing Duty Order, Finding, or Suspended Investigation; Opportunity To Request Administrative Review,* 75 FR 53635 (September 1, 2010). Guizhou Tyre timely requested an administrative review of the countervailing duty order on OTR Tires from the PRC for the period January 1, 2009, through December 31, 2009. In addition, the Department received timely requests from eight other companies: Tianjin United Tire and Rubber International Co., Ltd. (TUTRIC); Shandong Huitong Tyre Co., Ltd.; Qingdao Hengda Tyres Co., Ltd.; Qingdao Sinorient International Ltd.; Qingdao Qizhou Rubber Co., Ltd.; Techking Tires Limited; Qingda Etyre International Trade Co., Ltd.; and Wengdeng Sanfeng Tyre Co., Ltd. These eight companies only requested reviews of themselves. In accordance with section 751(a)(1) of the Tariff Act of 1930, as amended (the Act) and 19 CFR 351.221(c)(1)(i), the Department published a notice initiating an administrative review of the countervailing duty order. *See Initiation of Antidumping and Countervailing Duty Administrative Reviews,* 75 FR 66349 (October 28, 2010).

Rescission, in Part, of Countervailing Duty Administrative Review

The Department's regulations provide that the Department will rescind an administrative review if the party that requested the review withdraws its request for review within 90 days of the date of publication of the notice of initiation. *See* 19 CFR 351.213(d)(1). Guizhou Tyre timely withdrew its request within the 90-day deadline. Therefore, as no other party requested a review of Guizhou Tyre, in accordance with 19 CFR 351.213(d)(1), the Department is rescinding this administrative review of the countervailing duty order with respect to Guizhou Tyre. The Department will choose mandatory respondents from the remaining eight companies for which a review was requested: TUTRIC; Shandong Huitong Tyre Co., Ltd.; Qingdao Hengda Tyres Co., Ltd.; Qingdao Sinorient International Ltd.; Qingdao Qizhou Rubber Co., Ltd.; Techking Tires Limited; Qingda Etyre International Trade Co., Ltd.; and Wengdeng Sanfeng Tyre Co., Ltd.

Assessment

The Department will instruct U.S. Customs and Border Protection (CBP) to assess countervailing duties on all appropriate entries. For Guizhou Tyre, countervailing duties shall be assessed at rates equal to the cash deposit or bonding rate of the estimated countervailing duties required at the time of entry, or withdrawal from warehouse, for consumption, in accordance with 19 CFR 351.212(c)(1)(i). The Department intends to issue appropriate assessment instructions directly to CBP 15 days after publication of this notice.

Notification Regarding Administrative Protective Order

This notice serves as a final reminder to parties subject to administrative protective order (APO) of their responsibility concerning the disposition of proprietary information disclosed under APO in accordance with 19 CFR 351.305(a)(3), which continues to govern business proprietary information in this segment of the proceeding. Timely written notification of the return/destruction of APO materials or conversion to judicial protective order is hereby requested. Failure to comply with the regulations and terms of an APO is a violation which is subject to sanction.

This notice is issued and published in accordance with sections 751(a)(1) and 777(i)(1) of the Act, and 19 CFR 351.213(d)(4).

Dated: November 23, 2010.

Susan H. Kuhbach,

Acting Deputy Assistant Secretary for Antidumping and Countervailing Duty Operations.

[FR Doc. 2010–30147 Filed 11–29–10; 8:45 am]

BILLING CODE 3510–DS–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648–XA060

Endangered Species; Permit No. 15677

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

ACTION: Notice; receipt of application.

SUMMARY: Notice is hereby given that South Carolina Department of Natural Resources (hereinafter "Permit Holder"), P.O. Box 12559 Charleston, SC 29422 [Responsible Party/Principal Investigator: William C. Post] has applied in due form to take shortnose sturgeon (*Acipenser brevirostrum*) for purposes of scientific research.

DATES: Written, telefaxed, or e-mail comments must be received on or before December 30, 2010.

ADDRESSES: The application and related documents are available for review by selecting "Records Open for Public Comment" from the *Features* box on the Applications and Permits for Protected Species (APPS) home page, *https://*

apps.nmfs.noaa.gov/, and then selecting File No. 15677 from the list of available applications.

These documents are available upon written request or by appointment in the following offices:

• Permits, Conservation and Education Division, Office of Protected Resources, NMFS, 1315 East-West Highway, Room 13705, Silver Spring, MD 20910; phone (301) 713–2289; fax (301) 713–0376; and

• Southeast Region, NMFS, 263 13th Avenue South, Saint Petersburg, Florida 33701; phone (727) 824–5312; fax (727) 824–5309.

Written comments on this application should be submitted to the Chief, Permits, Conservation and Education Division.

• By e-mail to *NMFS.Pr1Comments@noaa.gov* (include the File No. in the subject line)

• By facsimile to (301) 713–0376, or

• At the address listed above.

Those individuals requesting a public hearing should submit a written request to the Chief, Permits, Conservation and Education Division at the address listed above. The request should set forth the specific reasons why a hearing on this application would be appropriate.

FOR FURTHER INFORMATION CONTACT: Malcolm Mohead or Colette Cairns, (301) 713–2289.

SUPPLEMENTARY INFORMATION: The subject permit is requested under the authority of the Endangered Species Act of 1973, as amended (ESA; 16 U.S.C. 1531 *et seq.*) and the regulations governing the taking, importing, and exporting of endangered and threatened species (50 CFR 222–226).

The applicant's goal is to assess presence, abundance, and distribution of shortnose sturgeon within South Carolina rivers (Savannah, Edisto, Cooper, Santee Rivers, Santee-Cooper Lakes, and Winyah Bay system). During 2011–2016, up to 134 shortnose sturgeon in all South Carolina rivers would be captured using gill nets, trammel nets and trawls. Annually, shortnose sturgeon would be taken in good condition and measured, weighed, sampled for genetic tissue analysis, and PIT tagged. Additionally, selected adults and juveniles would be captured, anesthetized, and implanted with an internal sonic transmitter. In addition, shortnose sturgeon sex would be determined from a sample of fish annually by either laparoscopy or tubular biopsy. Blood from known sexes would be collected and processed determining the level of endrocrine disrupters in the environment. Manual tracking and passive detections of telemetered fish at fixed receiver stations would be used to provide information about movements and habitat use. Recaptures of tagged fish may also be used for estimating abundance if appropriate.

Dated: November 23, 2010.

P. Michael Payne,

Chief, Permits, Conservation and Education Division, Office of Protected Resources, National Marine Fisheries Service.

[FR Doc. 2010–30173 Filed 11–29–10; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648–XA059

Atlantic Highly Migratory Species; Advisory Panel

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

ACTION: Notice.

SUMMARY: NMFS solicits nominations for the Advisory Panel (AP) for Atlantic Highly Migratory Species (HMS) Southeast Data, Assessment, and Review (SEDAR) Workshops (this AP is also called the "SEDAR Pool"). The SEDAR Pool is comprised of a group of individuals whom may be selected to review data and advise NMFS regarding the scientific information, including but not limited to data and models, used in stock assessments for oceanic sharks in the Atlantic Ocean, Gulf of Mexico, and Caribbean Sea. Nominations are being sought for a three-year appointment (2011–2014). Individuals with definable interests in the recreational and commercial fishing and related industries, environmental community, academia, and non-governmental organizations will be considered for membership on the SEDAR Pool.

DATES: Nominations must be received on or before December 30, 2010.

ADDRESSES: You may submit nominations and request the SEDAR Pool Statement of Organization, Practices, and Procedures by any of the following methods:

• *E-mail: SEDAR.pool@noaa.gov.*

• *Mail:* Karyl Brewster-Geisz, Highly Migratory Species Management Division, NMFS, 1315 East-West Highway, Silver Spring, MD 20910. Include on the envelope the following identifier: "SEDAR Pool Nomination."

• *Fax:* 301–713–1917.

Additional information on SEDAR and the SEDAR guidelines can be found at *http://www.sefsc.noaa.gov/sedar/.*

FOR FURTHER INFORMATION CONTACT: Karyl Brewster-Geisz, (301) 713–2347 ext. 111.

SUPPLEMENTARY INFORMATION:

Introduction

Section 302(g)(2) of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), 16 U.S.C. 1801 *et seq.,* states that each Council shall establish such advisory panels as are necessary or appropriate to assist it in carrying out its functions under the Act. For the purposes of this section, NMFS considers the Council provision to be applicable to the HMS Management Division as well. As such, NMFS has established the SEDAR Pool under this section. The SEDAR Pool currently consists of 28 individuals who can be selected to review data and advise NMFS regarding the scientific information, including but not limited to data and models, used in stock assessments for oceanic sharks in the Atlantic Ocean, Gulf of Mexico, and Caribbean Sea. While the SEDAR Pool was created specifically for Atlantic oceanic sharks, it may be expanded to include other HMS, as needed.

The primary purpose of the individuals in the SEDAR Pool is to review, at SEDAR workshops, the scientific information, including but not limited to data and models, used in stock assessments that are used to advise NMFS, as a delegate to the Secretary of Commerce (Secretary), about the conservation and management of the Atlantic HMS, specifically but not limited to, Atlantic sharks. Individuals in the SEDAR Pool, if selected, may participate in the various data, assessment, and review workshops during the SEDAR process of any HMS stock assessment. In order to ensure that the peer review is unbiased, individuals who participated in a data and/or assessment workshop for a particular stock assessment will not be allowed to serve as reviewers for the same stock assessment. However, these individuals may be asked to attend the review workshop to answer specific questions from the reviewers concerning the data and/or assessment workshops. Members of the SEDAR Pool may serve as members of other APs concurrent with, or following, their service on the SEDAR Pool.

Procedures and Guidelines

A. Participants

The SEDAR Pool is comprised of individuals representing the commercial and recreational fishing communities for Atlantic HMS, the environmental community active in the conservation and management of Atlantic HMS, and the academic community that have relevant expertise either with sharks or shark-like species and/or stock assessment methodologies for marine fish species. Members of the SEDAR Pool must have demonstrated experience in the fisheries, related industries, research, teaching, writing, conservation, or management of marine organisms. The distribution of representation among the interested parties is not defined or limited.

Additional members of the SEDAR Pool may also include representatives from each of the five Atlantic Regional Fishery Management Councils, each of the 18 constituent states, both the U.S. Virgin Islands and Puerto Rico, and each of the constituent interstate commissions: The Atlantic States Marine Fisheries Commission and the Gulf States Marine Fisheries Commission.

If NMFS requires additional members to ensure a diverse pool of individuals to draw from for data or assessment workshops, NMFS may request individuals to become members of the SEDAR Pool outside of the annual nomination period.

Panel members serve at the discretion of the Secretary. Not all members will attend each SEDAR workshop. Rather, NMFS will invite certain members to participate at specific stock assessment workshops dependent on their ability to participate, discuss, and recommend scientific decisions regarding the species being assessed. If an invited SEDAR Pool member is unable to attend the workshop, the member may send a designee who may represent them and participate in the activities of the workshop. In order to ensure the designee meets the requirements of participating in the data and/or assessment workshop, the designee must receive written approval of the Deputy Director of the Office of Sustainable Fisheries at least six weeks in advance of the beginning of the relevant data and/or assessment workshop. Written notification must include the name, address, telephone, e-mail, and position of the individual designated. A designee may not name another designee.

NMFS is not obligated to fulfill any requests (*e.g.,* requests for an assessment of a certain species) that may be made by the SEDAR Pool or its individual members. Members of the SEDAR Pool who are invited to attend stock assessment workshops will not be compensated for their services but may be reimbursed for their travel-related expenses to attend such workshops.

B. Nomination Procedures for Appointments to the SEDAR Pool

Member tenure will be for three years. Nominations are sought for terms beginning February 2011 and expiring January 2014. Nomination packages should include:

1. The name, address, phone number, and e-mail of the applicant or nominee;
2. A description of his/her interest in Atlantic shark stock assessments or the Atlantic shark fishery;
3. A statement of background and/or qualifications; and
4. A written commitment that the applicant or nominee shall participate actively and in good faith in the tasks of the SEDAR Pool, as requested.

C. Meeting Schedule

Individual members of the SEDAR Pool meet to participate in stock assessments at the discretion of the Office of Sustainable Fisheries, NMFS. Stock assessment timing, frequency, and relevant species will vary depending on the needs determined by NMFS and SEDAR staff. Meetings and meeting logistics will be determined according to the SEDAR Guidelines. All meetings are open for observation by the public.

Dated: November 24, 2010.

Emily H. Menashes,

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

[FR Doc. 2010–30176 Filed 11–29–10; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648–BA50

Fisheries of the Northeastern United States; Monkfish Fishery; Scoping Process

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

ACTION: Notice; intent to prepare an environmental impact statement (EIS) and scoping meetings; request for comments.

SUMMARY: The New England Fishery Management Council (NEFMC) announces its intent to prepare an amendment (Amendment 6) to the Fishery Management Plan (FMP) for monkfish (*Lophius americanus*) and an EIS to analyze the impacts of any proposed management measures. The purpose of Amendment 6 is to consider one or more catch share management approaches for the monkfish fishery, including, but not limited, to Individual Fishery Quotas (IFQs), sectors, and/or community quotas. The NEFMC is initiating a public process to determine the scope of issues and range of alternatives to be addressed in Amendment 6 and its EIS. The purpose of this notification is to alert the interested public of the commencement of the scoping process and to provide for public participation in compliance with environmental documentation requirements.

DATES: Written and electronic scoping comments must be received on or before 5 p.m., local time, February 15, 2011.

ADDRESSES: Written comments on Amendment 6 may be sent by any of the following methods:

- E-mail to the following address: *monkfisha6@noaa.gov;*
- Mail to Patricia A. Kurkul, Regional Administrator, NMFS, Northeast Regional Office, 55 Great Republic Drive, Gloucester, MA 01930. Mark the outside of the envelope "Scoping Comments on Monkfish Amendment 6;" or
- Fax to Patricia A. Kurkul, 978–281–9135.

Requests for copies of the scoping document and other information should be directed to Paul J. Howard, Executive Director, New England Fishery Management Council, 50 Water Street, Mill 2, Newburyport, MA 01950, telephone 978–465–0492. The scoping document is accessible electronically via the Internet at *http://www.nefmc.org.*

FOR FURTHER INFORMATION CONTACT: Paul J. Howard, Executive Director, New England Fishery Management Council, 978–465–0492.

SUPPLEMENTARY INFORMATION:

Background

The U.S. monkfish fishery is jointly managed by the New England and Mid-Atlantic Councils, with the NEFMC having the administrative lead. The Councils manage monkfish under a two-area program (northern and southern), primarily due to differences in the characteristics of the fisheries in the two areas, although no conclusive evidence exists supporting the idea that there are two biological stocks. The Monkfish FMP became effective on November 8, 1999. The Councils have modified the

management program several times since the original FMP was adopted, most recently in 2010 with the completion of Amendment 5, containing Annual Catch Limits, Annual Catch Targets (ACT) and specification of days-at-sea (DAS) allocations and trip limits for the 2011–2013 fishing years.

While a significant portion of the monkfish catch in both areas is incidental to other fishing activities, a directed fishery also exists. The Councils have adopted incidental catch possession limits for all non-directed fisheries, and currently manages the directed fishery through a combination of DAS allocations and trip limits designed to achieve the ACT.

Measures Under Consideration

The Councils are considering catch shares for the monkfish fishery as a way to improve the economic performance of the fishery by increasing flexibility, maintaining catch within set limits, achieving optimum yield, promoting safety, and reducing the regulatory burden on vessel operators. Additionally, nearly 75-percent of limited access monkfish permit holders also hold a limited access permit in the Northeast multispecies fishery, where a catch share program (in the form of sector management) has been implemented. As a consequence, many monkfish permit holders have requested that the Councils consider a catch share program in the monkfish fishery to coordinate the management and improve the performance of both fisheries.

"Catch shares" is a generic term for a fishery management program that allocates a specific portion of a total fishery catch to individuals, communities, or cooperatives (including sectors). In contrast to managing through effort or input controls such as DAS and trip limits, catch shares management focuses on allocating and monitoring the catch or output controls. Specific catch share approaches include, but are not limited to, IFQs, Individual Transferrable Quotas (ITQs), Community Quotas, Harvest Cooperatives (including "sectors" such as those as recently adopted in the Northeast Multispecies FMP), area-based fishing rights, and non-vessel allocations (*e.g.,* dealer or processor shares). At this stage in the amendment process, the Councils have not eliminated any of the various types of catch share management approaches from consideration. Rather, they intend to collect early comments from stakeholders and interested parties to guide them in the development of appropriate catch-share alternatives. The Councils are also interested in hearing from stakeholders what their concerns might be with various catch share elements, including, but not limited to, limits on accumulation of shares, costs of monitoring individual catch, barriers or incentives for new entrants, and the effect of consolidation on fishing communities.

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) authorizes and provides a regulatory framework for Councils to establish Limited Access Privilege Programs (LAPPs), of which ITQs are one type. In addition to the requirements and standards for all LAPPs, the MSA requires the NEFMC specifically to hold a referendum and gain approval of more than two-thirds of the voters for an IFQ program prior to submitting the plan to NMFS. The Councils will determine who is eligible to participate in the referendum from among the potential pool that includes permit holders and crew members who derive a significant part of their total income from the fishery. If an IFQ system is adopted, the Council would allocate individual proportions of the available catch to qualified participants who may then be allowed, under yet-unspecified terms and restrictions, to buy, sell, trade or otherwise transfer their shares to other entities or participants.

Scoping Process

All persons affected by or otherwise interested in monkfish fishery management are invited to participate in determining the scope and significance of issues to be analyzed by submitting written comments (*see* **ADDRESSES**) or by attending one of the meetings where scoping comments will be taken. Scoping consists of identifying the range of actions, alternatives (including taking no action), and impacts to be considered in developing an amendment that addresses the purposes and goals discussed in this notice. Impacts may be direct, indirect, or cumulative. This scoping process will also identify and eliminate from detailed analysis issues that are not significant, as well as alternatives that do not achieve the goals of the FMP or this amendment.

The scoping process for Amendment 5 to the Monkfish FMP (74 FR 7880; February 20, 2009) also considered the development of a catch share program for the monkfish fishery in the range of issues to be considered in that amendment. However, by September 2009, the Councils recognized that, due to their complexity, development of catch share alternatives would likely delay Amendment 5, and risk not meeting the statutory deadline for annual catch limits and accountability measures under the MSA. At that time, the Councils agreed to separate the catch shares portion of the amendment to focus on the remaining elements, and consider catch shares in the next management action. Any comments concerning the development of a catch share program for the monkfish fishery that were received in conjunction with the scoping process for Amendment 5 will be carried forward in the development of Amendment 6.

After the scoping process is completed, the NEFMC will identify the range of alternatives to be considered in the Amendment 6, and to be analyzed in the EIS. Once a draft amendment document, including a draft EIS, is completed, the NEFMC will hold public hearings to receive comments on the alternatives and the analysis of its impacts presented in the draft EIS. Following that public comment period, the NEFMC will identify its proposed action and complete a final amendment document that includes a final EIS, as well as documentation and analysis required by all other applicable laws. The NEFMC will then submit the amendment to NMFS for review, approval and implementation.

Scoping Hearing Schedule

At this time, only one scoping meeting is scheduled. The Councils will schedule additional meetings in the near future, and announce those meetings in the **Federal Register,** as well as on the Councils' Web site and through other channels. The first scheduled meeting is to be held in conjunction with the Mid-Atlantic Fishery Management Council meeting:

1. Wednesday, December 15, 2010, 4:30 p.m.; Hilton Beach Oceanfront, 3001 Atlantic Avenue, Virginia Beach, VA 23451, telephone: (757) 213–3000.

Special Accommodations

The meetings are accessible to people with physical disabilities. Requests for sign language interpretation or other auxiliary aids should be directed to Paul J. Howard (*see* **ADDRESSES**) at least 5 days prior to this meeting date.

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

Dated: November 24, 2010.

Emily H. Menashes,

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

[FR Doc. 2010–30179 Filed 11–29–10; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648–XAO29

Federal Aquatic Nuisance Species Research Risk Analysis Protocol

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

ACTION: Notice of availability of finalized research protocol.

SUMMARY: The National Oceanic and Atmospheric Administration (NOAA) announces the availability of the finalized Federal Aquatic Nuisance Species Research Risk Analysis Protocol (Protocol), developed by the Research Protocol Committee, a committee of the Aquatic Nuisance Species Task Force (ANSTF).

ADDRESSES: Electronic copies of the finalized Protocol are available on the ANSTF Web site, *http://anstaskforce.gov/documents.php.* To obtain a hard copy of the Protocol, see Document Availability under **SUPPLEMENTARY INFORMATION.**

FOR FURTHER INFORMATION CONTACT: Margaret M. (Peg) Brady, Phone: 301–713–0174; e-mail: *Peg.Brady@noaa.gov.*

SUPPLEMENTARY INFORMATION:

Introduction

The Aquatic Nuisance Species Task Force (ANSTF) is an intergovernmental organization dedicated to preventing and controlling aquatic nuisance species, and implementing the Non-indigenous Aquatic Nuisance Prevention and Control Act. The National Oceanic and Atmospheric Administration and U.S. Fish and Wildlife Service serve as co-chairs of the ANSTF. The ANSTF developed a research protocol as is required by the Non-indigenous Aquatic Nuisance Prevention and Control Act of 1990 (NANPCA, Public Law 101–646, 104 STAT. 4671, 16 U.S.C. 4701–4741), as amended by the National Invasive Species Act, 1996. Section 1202(f)(2) of NANPCA directs the ANSTF to establish a protocol ''to ensure that research activities carried out under [NANPCA] do not result in the introduction of aquatic nuisance species to waters of the United States.''

Responsibility for actual use of this Protocol is specified in section (f)(3) of the NANPCA: ''The Task Force shall allocate funds authorized under this Act for competitive research grants to study all aspects of aquatic nuisance species, which shall be administered through the National Sea Grant College Program and the Cooperative Fishery and Wildlife Research Units. Grants shall be conditioned to ensure that any recipient of funds follows the protocol established under paragraph (2) of this subsection.''

Throughout this document both the descriptors ''non-indigenous'' and/or ''nuisance'' are used when referring to aquatic species that are the target of this risk analysis. Language used in the NANPCA differentiates between a non-indigenous species and a nuisance species, with a ''non-indigenous'' label being solely based on the historic range of the species, while a ''nuisance'' designation is based on a species being both non-indigenous and potentially harmful (''threatens the diversity or abundance of native species or the ecological stability of infested waters, or commercial, agricultural, aquacultural or recreational activities dependent on such waters''). The ANSTF Research Committee adopted a precautionary approach by targeting this risk analysis to all aquatic non-indigenous species research, regardless of the ''nuisance'' designation. The intent of the procedures outlined herein is to minimize to the extent practicable the risk of release and spread of aquatic non-indigenous species into areas they do not yet inhabit, since any non-indigenous species may become a nuisance species. Not only is it often not possible to be sure that a species won't become a nuisance (as defined) in the future, the possession and/or release of non-indigenous species may be illegal under various Federal, State, or local laws, which may or may not differentiate between non-indigenous and nuisance species.

Background

The finalized document (''the Protocol'') will replace the previously established ''Protocol for Evaluating Research Proposals Concerning Aquatic Non-indigenous Species,'' adopted in draft form in 1992 and finalized and published by the ANSTF in July 1994. The 1994 protocol applies only to research involving aquatic non-indigenous species (ANS) and is designed to reduce the risk that research activities may cause introduction or spread of such aquatic species. Other potential means of introduction, such as bait movement, aquaria disposal, ballast water discharge, movement of recreational boats, movement of fishing gear, and horticultural sales, are not addressed in the 1994 protocol.

In 2008 the ANSTF requested the Research Committee (a Committee of the ANSTF) to evaluate and recommend revisions to the 1994 protocol, as needed. According to the Society for Risk Analysis (SRA, *http://www.sra.org*), the elements or components of a risk analysis include risk assessment, risk characterization, risk communication, risk management, and policy relating to risk. This revised Protocol incorporates three of those elements—it requires a risk assessment (Part I) and then, if needed, establishment and implementation of a risk management plan (Part II), with the combined results communicated to the funding agency as part of the proposal and funding process. Therefore, this revised Protocol is renamed ''Federal Aquatic Nuisance Species Research Risk Analysis Protocol.'' The draft was approved by the ANSTF on November 5, 2009. A notice of availability of the draft revised research protocol and request for comments was published in the **Federal Register** on August 31, 2010 (75 FR 53273). The period of public comment expired on October 15, 2010. During this time period one comment was received. The ANSTF reviewed and considered this comment and determined the statement was not pertinent to the Protocol; thus, further revision of the document was not necessary and the Protocol was accepted to be finalized.

The revised Protocol supplements, but does not replace, other existing Federal guidelines established to control activities with specific major classes of organisms. This document does not eliminate or in any way affect other legal requirements.

The Protocol encourages the incorporation of a Hazard Analysis and Critical Control Point (HACCP) approach for prevention planning within research activities. Information about the use of HACCP is available at *http://www.seagrant.umn.edu/ais/haccp.* A Web site detailing the application of HACCP to natural resource pathways, plus a link to download a HACCP wizard that helps create HACCP plans, can be found at *http://www.haccp-nrm.org.*

Document Availability

You may obtain copies of the Protocol by any one of the following methods:

- *Internet: http://anstaskforce.gov/documents.php*
- *Write:* Susan Pasko, National Oceanic and Atmospheric Administration. 1315 East West Highway, SSMC 3, Rm. 15531 Silver Spring, MD 20910; Telephone: (301) 713–0174 x 165; E-mail: *Susan.Pasko@noaa.gov.*

• *Mail or hand-delivery:* Susan Pasko, National Oceanic and Atmospheric Administration. 1315 East West Highway, SSMC 3, Rm. 15531 Silver Spring, MD 20910.

• *Fax:* (301) 713–1594.

Dated: November 23, 2010.

Patricia A. Montanio,

Director, Office of Habitat Conservation, National Marine Fisheries Service.

[FR Doc. 2010–30175 Filed 11–29–10; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648–XA065

New England Fishery Management Council; Public Meeting

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

ACTION: Notice; public meeting.

SUMMARY: The New England Fishery Management Council's (Council) Herring Committee will meet jointly with its Advisory Panel to consider actions affecting New England fisheries in the exclusive economic zone (EEZ).

DATES: The meeting will be held on Monday, December 20, 2010 at 9:30 a.m.

ADDRESSES: The meeting will be held at the Sheraton Harborside Hotel, 250 Market Street, Portsmouth, NH 03801; telephone: (603) 431–2300; fax: (603) 433–5649.

Council address: New England Fishery Management Council, 50 Water Street, Mill 2, Newburyport, MA 01950.

FOR FURTHER INFORMATION CONTACT: Paul J. Howard, Executive Director, New England Fishery Management Council; telephone: (978) 465–0492.

SUPPLEMENTARY INFORMATION: The items of discussion in the committee and advisory panel's agenda are as follows:

1. Continue development of alternatives for consideration in Amendment 5 to the Atlantic Herring Fishery Management Plan (FMP), with particular focus on management measures to address river herring bycatch;

2. Discuss alternatives for identifying river herring hotspots; consider streamlining and develop recommendations;

3. Discuss management alternatives to apply to river herring hotspots; consider streamlining and develop recommendations;

4. Discuss possible options for river herring catch caps;

5. Discuss alternatives for establishing criteria for herring vessel access to groundfish closed areas; and

6. Address other outstanding issues related to Amendment 5 as time permits.

Although non-emergency issues not contained in this agenda may come before this group for discussion, those issues may not be the subject of formal action during this meeting. Action will be restricted to those issues specifically identified in this notice and any issues arising after publication of this notice that require emergency action under section 305(c) of the Magnuson-Stevens Fishery Conservation and Management Act, provided the public has been notified of the Council's intent to take final action to address the emergency.

Special Accommodations

This meeting is physically accessible to people with disabilities. Requests for sign language interpretation or other auxiliary aids should be directed to Paul J. Howard (*see* **ADDRESSES**) at least 5 days prior to the meeting date.

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

Dated: November 23, 2010.

Tracey L. Thompson,

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

[FR Doc. 2010–30015 Filed 11–29–10; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648–XA068

Gulf of Mexico Fishery Management Council; Public Meetings

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

ACTION: Notice of public meetings.

SUMMARY: The Gulf of Mexico Fishery Management Council will convene a public meeting of the Florida/Alabama Habitat Protection Advisory Panel (AP).

DATES: The meeting will convene at 3 p.m. Central Time on Friday, December 17, 2010 and conclude no later than 4 p.m.

ADDRESSES: This meeting will be held via conference call. To listen to the teleconference call (1–888) 450–5996. At the prompt enter passcode 6273501.

Council address: Gulf of Mexico Fishery Management Council, 2203 North Lois Avenue, Suite 1100, Tampa, FL 33607.

FOR FURTHER INFORMATION CONTACT: Jeff Rester, Habitat Support Specialist, Gulf States Marine Fisheries Commission; telephone: (228) 875–5912.

SUPPLEMENTARY INFORMATION: At this meeting, the only item on the agenda is for the AP to review the Council's Essential Fish Habitat 5-Year Review Report.

The Florida/Alabama group is part of a three unit Habitat Protection Advisory Panel (AP) of the Gulf of Mexico Fishery Management Council. The principal role of the advisory panels is to assist the Council in attempting to maintain optimum conditions within the habitat and ecosystems supporting the marine resources of the Gulf of Mexico. Advisory panels serve as a first alert system to call to the Council's attention proposed projects being developed and other activities that may adversely impact the Gulf marine fisheries and their supporting ecosystems. The panels may also provide advice to the Council on its policies and procedures for addressing environmental affairs.

Although other issues not on the agenda may come before the panel for discussion, in accordance with the Magnuson-Stevens Fishery Conservation and Management Act, those issues may not be the subject of formal panel action during this meeting. Panel action will be restricted to those issues specifically identified in the agenda listed as available by this notice.

For more information about the meeting, please call (813) 348–1630. Special Accommodations.

This meeting is physically accessible to people with disabilities. Requests for auxiliary aids should be directed to Trish Kennedy at the Council (*see* **ADDRESSES**) at least 5 working days prior to the meeting.

Dated: November 24, 2010.

Tracey L. Thompson,

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

[FR Doc. 2010–30171 Filed 11–29–10; 8:45 am]

BILLING CODE 3510–22–P

CONSUMER PRODUCT SAFETY COMMISSION

[CPSC Docket No. 11–C0001]

Jake's Fireworks, Inc., Far East Imports, Inc., Wholesale Fireworks Enterprises LLC, Pacific Northwest Fireworks, Inc., Provisional Acceptance of a Settlement Agreement and Order

AGENCY: Consumer Product Safety Commission.

ACTION: Notice.

SUMMARY: It is the policy of the Commission to publish settlements which it provisionally accepts under the Consumer Product Safety Act in the **Federal Register** in accordance with the terms of 16 CFR 1118.20(e). Published below is a provisionally-accepted Settlement Agreement with Jake's Fireworks, Inc., Far East Imports, Inc., Wholesale Fireworks Enterprises LLC, Pacific Northwest Fireworks, Inc., containing a civil penalty of $100,000.00.

DATES: Any interested person may ask the Commission not to accept this agreement or otherwise comment on its contents by filing a written request with the Office of the Secretary by December 15, 2010.

ADDRESSES: Persons wishing to comment on this Settlement Agreement should send written comments to the Comment 11–C0001, Office of the Secretary, Consumer Product Safety Commission, 4330 East West Highway, Room 820, Bethesda, Maryland 20814–4408.

FOR FURTHER INFORMATION CONTACT: Michelle Faust Gillice, Trial Attorney, Division of Enforcement and Information, Office of the General Counsel, Consumer Product Safety Commission, 4330 East West Highway, Bethesda, Maryland 20814–4408; telephone (301) 504–7667.

SUPPLEMENTARY INFORMATION: The text of the Agreement and Order appears below.

Dated: November 24, 2010.

Todd A. Stevenson,

Secretary.

Settlement Agreement

1. In accordance with 16 CFR 1118.20, Jake's Fireworks, Inc., Far East Imports, Inc., Wholesale Fireworks Enterprises, LLC and Pacific Northwest Fireworks, Inc., and the staff ("Staff") of the United States Consumer Product Safety Commission ("Commission") enter into this Settlement Agreement ("Agreement"). This Agreement and the incorporated attached Order resolve the staff's allegations set forth below.

The Parties

2. The Staff is the staff of the Commission, an independent federal regulatory agency responsible for the enforcement of the Consumer Product Safety Act ("CPSA"), 15 U.S.C. 2051–2089 and the Federal Hazardous Substances Act ("FHSA"), 15 U.S.C. 1261–1278.

3. Jake's Fireworks, Inc. is a corporation organized and existing under the laws of Kansas, with its principal offices located in Pittsburg, Kansas. Far East Imports, Inc. and Wholesale Fireworks Enterprises, LLC are incorporated under the laws of Kansas and share the same address as Jake's Fireworks in Pittsburg, Kansas. Pacific Northwest Fireworks, Inc. is a Washington corporation located in Aberdeen, Washington. At all times relevant hereto, Jake's Fireworks, Inc., Far East Imports, Inc., Wholesale Fireworks Enterprises, LLC, and Pacific Northwest Fireworks, Inc. (hereinafter collectively referred to as the "Respondents") introduced or caused to be introduced into interstate commerce certain violative fireworks.

Staff Allegations

4. Between December 2006 and September 2007, Respondents imported over 200,000 fireworks that failed to comply with the Commission's fireworks regulations at 16 CFR 1500.17(a)(3) and 16 CFR Part 1507. (Fireworks subject to this Agreement and Order are identified in *Attachment A.)*

5. Between December 2006 and September 2007, Commission staff issued 98 separate Letters of Advice to Respondents notifying the firms that the fireworks devices sampled at import were in violation of the Commission's fireworks regulations. Of the 98 violations, 81 violations were for failure to comply with the regulation set forth at 16 CFR 1500.17(a)(3). Section 1500.17(a)(3) requires that fireworks intended to produce an audible effect contain no more than two (2) grains of pyrotechnic composition.

6. The fireworks devices referenced in paragraph 4 are banned hazardous substances pursuant to section 2(q)(1)(B) of the FHSA, 15 U.S.C. 1261(q)(1)(B), and 16 CFR 1500.17(a)(3).

7. Respondents knowingly introduced or caused the introduction into interstate commerce or received in interstate commerce and delivered or proffered delivery thereof for pay or otherwise, the banned hazardous substances referenced in paragraph 4 above, in violation of sections 4(a) and (c) of the FHSA, 15 U.S.C. 1263(a) and (c).

Respondents Response to Allegations

8. Respondents deny the allegations of the staff set forth in paragraphs 4 through 7 above.

Agreement of the Parties

9. The Commission has jurisdiction over this matter and over Respondents under the CPSA and the FHSA.

10. The parties enter this Agreement for settlement purposes only. The Agreement does not constitute an admission by Respondents nor a determination by the Commission that Respondents knowingly violated the FHSA.

11. In settlement of the staff's allegations, Respondents shall pay a civil penalty of one hundred thousand dollars ($100,000.00), for which all Respondents are jointly and severally liable, within twenty (20) calendar days of service of the Commission's final Order accepting this Agreement. The payment shall be by check and made payable to the order of the United States Treasury.

12. Within six (6) months of service of the Commission's final Order, Respondents shall destroy at their own cost, the inventory of all violative fireworks referenced in *Attachment A,* subject to the terms and conditions set forth in paragraphs 13 through 16. Destruction of the fireworks shall be in accordance with all federal, state and local laws and regulations.

13. Respondents shall provide the Commission staff with seven (7) days advance notice of the time and place of each destruction event so that a Commission investigator may witness the destruction. By witnessing a destruction event, CPSC does not prescribe nor approve specific methods of destruction as safe. At each destruction event, a principal or an employee authorized by a Respondent company principal shall complete and sign an affidavit of destruction, under the penalty of perjury. The affidavit shall identify the fireworks destroyed by model name, Commission sample number, and the number of units of destroyed. Respondents shall submit the signed Affidavit of Destruction to Michelle Gillice, Trial Attorney, Office of the General Counsel, U.S. Consumer Product Safety Commission, 4330 East West Highway, Bethesda, MD 20814, no later than seven (7) days after the destruction event.

14. Should Respondents fail to destroy the entire inventory of violative fireworks referenced in *Attachment A* within six (6) months of service of the final Order, they shall be subject to additional penalties as set forth in paragraphs 15 and 16.

15. Should Respondents fail to comply with the terms of destruction set forth in paragraphs 12 and 13 of this Agreement, Respondents shall pay a penalty of five thousand dollars ($5,000.00) in liquidated damages for each day such violation continues, for which all Respondents are jointly and severally liable, to the United States

Treasury. The amount of liquidated damages in this paragraph shall not exceed seven hundred and fifty thousand dollars ($750,000.00) in any one calendar year. The remedy in this paragraph shall be in addition to any other remedies available to the United States under the law.

16. The penalties referenced in paragraph 15 will not be imposed if Respondents fail to meet the deadline in performing hereunder if such delay or default is caused by the following events or conditions beyond its reasonable control: force majeure or "Acts of God", wars, insurrections, and Government restrictions, and Respondents notify the Commission within seven (7) days of such event or condition with documentation evidencing the occurrence. Force majeure does not refer to: staff shortages; sick leaves; late supplies or shortcomings on the part of a third party contracted by Respondents. In case of force majeure or one of the above referenced events or conditions, provided Respondents notify the Commission within the allotted time frame, the destruction obligation will be temporarily suspended during the event or condition period to the extent that such performance is reasonably affected thereby.

17. Upon the Commission's provisional acceptance of the Agreement, the Agreement shall be placed on the public record and published in the **Federal Register** in accordance with the procedures set forth in 16 CFR 1118.20(e). In accordance with 16 CFR 1118.20(f), if the Commission does not receive any written requests not to accept the Agreement within 15 calendar days, the Agreement shall be deemed finally accepted on the 16th calendar day after the date it is published in the **Federal Register**.

18. Upon the Commission's final acceptance of the Agreement and issuance of the final Order, Respondents knowingly, voluntarily and completely waive any rights they may have in this matter to the following: (i) An administrative or judicial hearing; (ii) judicial review or other challenge or contest of the validity of the Commission's Order or actions; (iii) a determination by the Commission as to whether Respondents failed to comply with the FHSA and the underlying regulations; (iv) a statement of findings of fact and conclusions of law; and (v) any claims under the Equal Access to Justice Act.

19. The Commission may publicize the terms of the Agreement and Order.

20. The Agreement and Order shall apply to, and be binding upon, Respondents and each of their successors and assigns.

21. The Commission issues the Order under the provisions of the FHSA, and a violation of the Order may subject those referenced in paragraph 20 above to appropriate legal action.

22. This Agreement may be used in interpreting the Order. Understandings, agreements, representations, or interpretations apart from those contained in the Agreement and the Order may not be used to vary or contradict their terms. The Agreement shall not be waived, amended, modified, or otherwise altered without written agreement thereto executed by the party against whom such waiver, amendment, modification, or alteration is sought to be enforced.

23. If any provision of this Agreement and Order is held to be illegal, invalid, or unenforceable under present or future laws effective during the terms of the Agreement and Order, such provision shall be fully severable. The balance of the Agreement and Order shall remain in full force and effect, unless the Commission and Respondents determine that severing the provision materially affects the purpose of the Agreement and Order.

RESPONDENTS

Dated: *10/5/10*

By: _____

Michael Marietta,
President, Jake's Fireworks, Inc., 2311 West 4th Street, Pittsburg, KS 66762.

_____

Michael Marietta,
President, Far East Imports, Inc., 2311 West 4th Street, Pittsburg, KS 66762.

_____

Jason Marietta,
Managing Member, Wholesale Fireworks Enterprises, LLC, 2311 West 4th Street, Pittsburg, KS 66762.

_____

Joan Ross,
President, Pacific Northwest Fireworks, Inc., 100 S. I Street, Aberdeen, Washington.

By: _____

Hal Stratton,
Counsel for Jake's Fireworks, Inc., Far East Imports, Inc., Wholesale Fireworks Enterprises, LLC, Pacific Northwest Fireworks, Inc., Brownstein Hyatt Farber Schreck, LLP, Albuquerque, NM 87102.

U.S. Consumer Product Safety Commission

Cheryl Falvey,
General Counsel.
Ronald G. Yelenik,
Assistant General Counsel, Office of the General Counsel.

Dated: *11/18/10*

By: _____

Michelle Faust Gillice,
Trial Attorney, Division of Compliance, Office of the General Counsel.

ATTACHMENT A—VIOLATIVE FIREWORKS

Sample No.	Model name
07–810–4038	Loyal To None.
07–810–4039	Megabanger Firecracker.
07–810–4042	One Bad Mother.
07–810–4044	One Bad Mother.
07–810–4045	Loyal To None.
07–810–4046	Megatron.
07–810–4103	Cooking with Gas.
07–810–4104	The Big Dog.
07–810–4106	One Bad Mother 16 Shot.
07–810–4111	Time Is On My Side.
07–810–4118	Loyal To None.
07–810–4119	Scorpions.
07–810–4212	Loyal To None.
07–810–4420	Megabanger Megatron.
07–810–4565	One Bad Mother.
07–810–4584	Extreme Machine.
07–810–4587	Vendicator.
07–810–4588	The Big Package.
07–810–4589	Return To Glory.
07–801–4590	One Bad Mother.
07–810–4624	Loyal To None.
07–810–4627	World Class Boom Boom.
07–810–4828	Loyal To None.
07–810–4830	Return To Glory.
07–810–4914	Catastrophic 9 Shot.
07–810–5008	Truckin Home.
07–810–5009	Professional 3 Pack.
07–810–5010	BF Assorted Cakes.
07–810–5012	Spyder, Brown Label.
07–810–5018	7 Wonders of the World.
07–810–5048	Not In My Yard.
07–810–5064	Loyal To None.
07–810–5066	Megatron.
07–810–5095	One Bad Mother.
07–810–5096	Loyal To None.
07–810–5098	Megatron.
07–810–5330	Spyder, Brown Label.
07–810–5332	Cocky.
07–810–5474	10 Ball Bang.
07–810–5475	Can You Handle It?
07–810–5476	Megabanger Megatron.
07–810–5481	One Bad Mother.
07–810–5482	Loyal To None.
07–810–5483	One Bad Mother.
07–810–5484	Loyal To None.
07–810–5490	Loyal To None.
07–810–5491	One Bad Mother.
07–810–5511	B.M.F.
07–810–5512	Big Sexy.
07–810–5514	Perfection.
07–810–5656	The Big Package.
07–810–5793	One Bad Mother.
07–810–5794	Red White & Blue Forever.
07–840–6029	Loyal To None.
07–840–6030	The Big Package.
07–840–6263	Multishot Shell.
07–840–6371	Hydrogen Bomb.
07–840–6542	Festival Balls.
07–840–6548	One Bad Mother.
07–840–6551	Premium Bottle Rocket.
07–840–6552	One Bad Mother.
07–840–6603	Loyal To None.
07–840–6681	One Bad Mother/Shell.
07–840–6682	Loyal To None/Shell.
07–840–6683	Megatron/Shell.
07–840–6737	Loyal To None.
07–840–6846	One Bad Mother.

ATTACHMENT A—VIOLATIVE FIREWORKS—Continued

Sample No.	Model name
07–840–6847	Merlin's Match.
07–840–6849	Vendicator.
07–840–6865	The Best of the Best.
07–840–6867	Flashing Thunder.
07–840–6869	Loyal To None.
07–840–6904	Loyal To None.
07–840–7267	The Big Package.
07–840–7269	One Bad Mother.
07–840–7283	One Bad Mother.
07–840–7291	One Bad Mother.
07–840–7292	Loyal To None.
07–840–7297	Instigator.
07–840–7304	Loyal To None.
07–840–7305	One Bad Mother.
07–840–7317	Saturn Missle Battery.
07–840–7319	Loyal To None.
07–840–7320	One Bad Mother.
07–840–7321	One Bad Mother.
07–840–7324	Red White & Blue Forever.
07–840–7328	Festival Balls.
07–840–7467	Loyal To None.
07–840–7468	So What Are You Looking At?
07–840–7486	Loyal To None.
07–840–7289	Whistling Chaser.
07–810–5036	Return To Glory.
07–810–5037	One Bad Mother 9 Shot.
07–810–5041	World Class Loyal To None.
07–840–6890	Grave Digger.
07–840–6891	Megabanger Megatron.
07–840–6892	Megabanger Just Bad.
07–840–7091	Loyal To None.
07–840–7197	One Bad Mother.
07–840–7207	Loyal To None.
07–840–7208	The Big Package.
07–840–7209	Jumbo Smoke Balls.
07–810–5494	Loyal To None.
07–810–5738	Loyal To None.
07–810–5739	Loyal To None.
07–810–5740	Loyal To None.
07–810–5781	So What Are You Looking At?
07–810–5782	Saturn Missle Battery.
07–810–5785	Loyal To None.
07–810–5786	The Big Dog.
07–810–5788	Extreme Machine.
07–810–5790	Loyal To None.
07–810–5791	Loyal to None.
07–810–5792	Loyal To None.
07–840–7282	Loyal To None.
07–840–7288	Loyal To None.

Order

Upon consideration of the Settlement Agreement entered into between Jake's Fireworks, Inc., Far East Imports, Inc., Wholesale Fireworks Enterprises, LLC and Pacific Northwest Fireworks, Inc., (hereinafter, "Respondents") and the staff of the United States Consumer Product Safety Commission ("Commission"), and the Commission having jurisdiction over the subject matter and over Respondents, and it appearing that the Settlement Agreement and Order are in the public interest, it is

Ordered, that the Settlement Agreement, be and hereby is, accepted; and it is

Further ordered, that Respondents shall pay a civil penalty in the amount of one hundred thousand dollars ($100,000.00) within twenty (20) calendar days of service of the Commission's final Order accepting the Agreement. The payment shall be made by check payable to the order of the United States Treasury. Upon the failure of Respondents to make the foregoing payment when due, interest on the unpaid amount shall accrue and be paid by Respondents at the federal legal rate of interest set forth at 28 U.S.C. 1961(a) and (b); and it is

Further ordered, that within six (6) months of service of the Final Order, in accordance with the terms set forth in the Settlement Agreement, Respondents shall destroy at their own cost, the entire inventory of violative fireworks referenced in *Attachment A* to the Settlement Agreement. Upon the failure of Respondents to comply with the terms of destruction set forth in the Settlement Agreement, the firm agrees to pay to the United States of America, five thousand dollars in liquidated damages for each day such violation continues. The amount of liquidated damages in this paragraph shall not exceed $750,000.00 in any one calendar year;

Provisionally accepted and provisional Order issued on the *24th* day of *November* 2010.

By Order of the Commission.

Todd A. Stevenson,
Secretary, U.S. Consumer Product Safety Commission.

[FR Doc. 2010–30073 Filed 11–29–10; 8:45 am]

BILLING CODE 6355–01–P

DEPARTMENT OF DEFENSE

Office of the Secretary

[Transmittal Nos. 10–24]

36(b)(1) Arms Sales Notification

AGENCY: Department of Defense, Defense Security Cooperation Agency.

ACTION: Notice.

SUMMARY: The Department of Defense is publishing the unclassified text of a section 36(b)(1) arms sales notification. This is published to fulfill the requirements of section 155 of Public Law 104–164 dated 21 July 1996.

FOR FURTHER INFORMATION CONTACT: Ms. B. English, DSCA/DBO/CFM, (703) 601–3740.

SUPPLEMENTARY INFORMATION: The following is a copy of a letter to the Speaker of the House of Representatives, Transmittals 10–24 with attached transmittal, and policy justification.

Dated: November 23, 2010.

Morgan F. Park,

Alternate OSD Federal Register Liaison Officer, Department of Defense.

BILLING CODE 5001–06–P

DEFENSE SECURITY COOPERATION AGENCY
201 12TH STREET SOUTH, STE 203
ARLINGTON, VA 22202-5408

NOV 18 2010

The Honorable Nancy Pelosi
Speaker
U.S. House of Representatives
Washington, DC 20515

Dear Madam Speaker:

Pursuant to the reporting requirements of Section 36(b)(1) of the Arms Export Control Act, as amended, we are forwarding herewith Transmittal No. 10-24, concerning the Department of the Army's proposed Letter(s) of Offer and Acceptance to the Kingdom of Saudi Arabia for defense articles and services estimated to cost $71 million. After this letter is delivered to your office, we plan to issue a press statement to notify the public of this proposed sale.

Sincerely,

Jeanne L. Farmer
Acting Deputy Director

Enclosures:
1. Transmittal
2. Policy Justification
3. Regional Balance (Classified Document Provided Under Separate Cover)

Transmittal No. 10-24

Notice of Proposed Issuance of Letter of Offer
Pursuant to Section 36(b)(1)
of the Arms Export Control Act

(i) Prospective Purchaser: Kingdom of Saudi Arabia

(ii) Total Estimated Value:

Major Defense Equipment*	$59 million
Other	$12 million
TOTAL	$71 million

(iii) Description and Quantity or Quantities of Articles or Services under Consideration for Purchase: 150 JAVELIN Guided Missiles, 12 Fly-to-Buy Missiles, 20 JAVELIN Command Launch Units (CLUs) with Integrated Day/Thermal Sight, containers, missile simulation rounds, Enhanced Producibility Basic Skills Trainer (EPBST), rechargeable and non-rechargeable batteries, battery dischargers, chargers, and coolant units, support equipment, spare and repair parts, publications and technical data, U.S. Government and contractor engineering and logistics personnel services, and other related elements of logistics support.

(iv) Military Department: Army (VBG)

(v) Prior Related Cases, if any: None

(vi) Sales Commission, Fee, etc., Paid, Offered, or Agreed to be Paid: None

(vii) Sensitivity of Technology Contained in the Defense Article or Defense Services Proposed to be Sold: None

(viii) Date Report Delivered to Congress: NOV 18 2010

* as defined in Section 47(6) of the Arms Export Control Act.

POLICY JUSTIFICATION

Kingdom of Saudi Arabia – JAVELIN Missiles

The Kingdom of Saudi Arabia has requested a possible sale of 150 JAVELIN Guided Missiles, 12 Fly-to-Buy Missiles, 20 JAVELIN Command Launch Units (CLUs) with Integrated Day/Thermal Sight, containers, missile simulation rounds, Enhanced Producibility Basic Skills Trainer (EPBST), rechargeable and non-rechargeable batteries, battery dischargers, chargers, and coolant units, support equipment, spare and repair parts, publications and technical data, U.S. Government and contractor engineering and logistics personnel services, and other related elements of logistics support. The estimated cost is $71 million.

This proposed sale will contribute to the foreign policy and national security of the United States by helping to improve the security of a friendly country which has been and continues to be an important force for political stability and economic progress in the Middle East.

The proposed sale will improve Saudi Arabia's capability to meet current and future threats. Saudi Arabia will use the enhanced capability as a deterrent to regional threats and to strengthen its homeland defense. Saudi Arabia currently does not have JAVELIN Anti-tank missiles in its inventory, but will have no difficulty absorbing these additional missiles.

The proposed sale of these defense articles to the Kingdom of Saudi Arabia will not alter the basic military balance in the region.

The prime contractors will be Javelin Joint Venture of Raytheon in Tucson, Arizona, and Lockheed Martin, in Orlando Florida. There are no known offset agreements proposed in connection with this potential sale.

Implementation of this sale will not require the assignment of any U.S. Government or contractor representatives to the Kingdom of Saudi Arabia.

There will be no adverse impact on U.S. defense readiness as a result of this proposed sale.

[FR Doc. 2010–30043 Filed 11–29–10; 8:45 am]
BILLING CODE 5001–06–C

DEPARTMENT OF DEFENSE

Office of the Secretary

[Transmittal Nos. 10–49]

36(b)(1) Arms Sales Notification

AGENCY: Department of Defense, Defense Security Cooperation Agency.

ACTION: Notice.

SUMMARY: The Department of Defense is publishing the unclassified text of a section 36(b)(1) arms sales notification. This is published to fulfill the requirements of section 155 of Public Law 104–164 dated 21 July 1996.

FOR FURTHER INFORMATION CONTACT: Ms. B. English, DSCA/DBO/CFM, (703) 601–3740.

SUPPLEMENTARY INFORMATION: The following is a copy of a letter to the Speaker of the House of Representatives, Transmittals 10–49 with attached transmittal, policy justification, and Sensitivity of Technology.

Dated: November 23, 2010.

Morgan F. Park,

Alternate OSD Federal Register Liaison Officer, Department of Defense.

BILLING CODE 5001–06–P

DEFENSE SECURITY COOPERATION AGENCY
201 12TH STREET SOUTH, STE 203
ARLINGTON, VA 22202-5408

NOV 18 2010

The Honorable Nancy Pelosi
Speaker
U.S. House of Representatives
Washington, DC 20515

Dear Madam Speaker:

Pursuant to the reporting requirements of Section 36(b)(1) of the Arms Export Control Act, as amended, we are forwarding herewith Transmittal No. 10-49, concerning the Department of the Air Force's proposed Letter(s) of Offer and Acceptance to Oman for defense articles and services estimated to cost $76 million. After this letter is delivered to your office, we plan to issue a press statement to notify the public of this proposed sale.

Sincerely,

Richard A. Genaille, Jr.
Deputy Director

Enclosures:
1. Transmittal
2. Policy Justification
3. Sensitivity of Technology
4. Regional Balance (Classified Document Provided Under Separate Cover)

Transmittal No. 10-49

Notice of Proposed Issuance of Letter of Offer
Pursuant to Section 36(b)(1)
of the Arms Export Control Act, as amended

(i) Prospective Purchaser: Oman

(ii) Total Estimated Value:

Major Defense Equipment*	$ 21 million
Other	$ 55 million
TOTAL	$ 76 million

(iii) Description and Quantity or Quantities of Articles or Services under Consideration for Purchase: logistics support and training for one (1) C-130J-30 aircraft being procured through a Direct Commercial Sale, 1 AN/AAQ-24(V) Large Aircraft Infrared Countermeasures System, 7 AN/AAR-54 Missile Approach Warning Systems, 2 AN/ALR-56M Radar Warning Receivers, 2 AN/ALE-47 Countermeasure Dispenser Sets, communication and navigation equipment, software support, repair and return, installation, aircraft ferry and refueling support, spare and repair parts, support and test equipment, publications and technical documentation, personnel training and training equipment, U.S. Government and contractor engineering, technical, and logistics support services, and related elements of logistical and program support.

(iv) Military Department: Air Force (QAH)

(v) Prior Related Cases, if any: None

(vi) Sales Commission, Fee, etc., Paid, Offered, or Agreed to be Paid: None

(vii) Sensitivity of Technology Contained in the Defense Article or Defense Services Proposed to be Sold: See Annex Attached

(viii) Date Report Delivered to Congress: NOV 18 2010

* as defined in Section 47(6) of the Arms Export Control Act.

POLICY JUSTIFICATION

Oman – Logistics Support and Training for 1 C-130J-30

The Government of Oman has requested a possible sale of logistics support and training for one (1) C-130J-30 aircraft being procured through a Direct Commercial Sale, 1 AN/AAQ-24(V) Large Aircraft Infrared Countermeasures System, 7 AN/AAR-54 Missile Approach Warning Systems, 2 AN/ALR-56M Radar Warning Receivers, 2 AN/ALE-47 Countermeasure Dispenser Sets, communication and navigation equipment, software support, repair and return, installation, aircraft ferry and refueling support, spare and repair parts, support and test equipment, publications and technical documentation, personnel training and training equipment, U.S. Government and contractor engineering, technical, and logistics support services, and related elements of logistical and program support. The estimated cost is $76 million.

This proposed sale will contribute to the foreign policy and national security of the United States by helping to improve the security of a friendly country that has been, and continues to be, an important force for political stability and economic progress in the Middle East.

The proposed sale will provide Oman the capability to meet current and future regional threats to the Sultanate of Oman. The support for the additional C-130J-30 aircraft will ensure operational capability and will facilitate movement within the region, as well as, support U.S interests. The Royal Flight of Oman currently operates two Boeing 747s and one Airbus A320 aircraft and will have no difficulty absorbing the support case for this aircraft into its armed forces.

The proposed sale of this equipment and support will not alter the basic military balance in the region.

The prime contractor will be Northrop Grumman Corporation in Rolling Meadows, Illinois. There are no known offset agreements proposed in connection with this potential sale.

Implementation of this proposed sale will require annual trips to Oman involving up to ten U.S. Government and ten contractor representatives for technical reviews/support, and program management for a period of approximately six years.

There will be no adverse impact on U.S. defense readiness as a result of this proposed sale.

Transmittal No. 10-49

Notice of Proposed Issuance of Letter of Offer
Pursuant to Section 36(b)(1)
of the Arms Export Control Act

Annex
Item No. vii

(vii) Sensitivity of Technology:

1. The AN/AAQ-24(V) is a stand-alone Directional Infrared Countermeasures (DIRCM) system that protects aircraft against ground launched infrared (IR) missiles. The AN/AAQ-24(V) is a small, passive/active, electro-optic, threat warning device used to detect surface-to-air missiles fired at helicopters and low-flying fixed-wing aircraft and automatically provide countermeasures, as well as audio and visual warning messages to the aircrew. The basic system consists of multiple Optical Sensor Converter (OSC) units, Small Laser Turret Assembly (SLTA), Computer Processor (CP), Control Indicator (CI), and a User Data Memory (UDM) containing the laser jam codes. The UDM card is loaded into CP prior to flight; when not in use the UDM card is removed from the CP and put in secure storage. The set of OSC units (AAR-54), which normally consist of four, is mounted on the aircraft exterior to provide omni-directional protection. The OSC detects the rocket plume of missiles and sends appropriate signals to the CP for processing. The CP analyses the data from each OSC and automatically deploys the appropriate countermeasures via the SLTA. The CP also contains comprehensive BIT circuitry. The CI displays the incoming threat, so that the pilot can take appropriate action. The hardware, software, and technical data and documentation to be provided are classified Secret.

2. The AN/ALR-56M Radar Warning Receiver (RWR) is designed to detect incoming radar signals, identify and characterize those signals to a specific threat, and alert the aircrew through the Tactical Electronic Warfare System display. The system consists of external antennae mounted on the fuselage and wingtips. The solid state ALR-56 is based on a digitally-controlled, dual channel receiver that scans within a specific frequency spectrum and is capable of adjusting to threat changes by modifications to the software. The RWR will not be provided In Country Reprogramming capability. The hardware and technical data and documentation to be provided are Unclassified. The software is Secret.

3. The AN/AAR-54 Missile Approach Warning System warns of threat missile approach by detecting radiation associated with the rocket motor and automatically initiates flare ejection. The AN/AAR-54 is a small, lightweight, passive, electro-optic, threat warning device used to detect surface-to-air missiles fired at helicopters and low-flying fixed-wing aircraft and automatically provide countermeasures, as well as audio and visual-sector warning messages to the aircrew. The basic system consists of multiple Optical

Sensor Converter (OSC) units, a Computer Processor (CP) and a Control Indicator (CI). The set of OSC units, which normally consist of four, is mounted on the aircraft exterior to provide omni-directional protection. The OSC detects the rocket plume of missiles and sends appropriate signals to the CP for processing. The CP analyses the data from each OSC and automatically deploys the appropriate countermeasures. The CP also contains comprehensive BIT circuitry. The CI displays the incoming direction of the threat, so that the pilot can take appropriate action. The hardware and technical data and documentation to be provided are Unclassified. The software is Secret.

4. The AN/ALE-47 Countermeasure Dispenser Set (CMDS) provides an integrated threat-adaptive, computer controlled capability for dispensing chaff, flares, and active radio frequency expendables. The AN/ALE-47 system enhances aircraft survivability in sophisticated threat environments. The threats countered by the CMDS include radar-directed anti-aircraft artillery (AAA), radar command-guided missiles, radar homing guided missiles, and infrared (IR) guided missiles. The system is internally mounted and may be operated as a stand-alone system or may be integrated with other on-board Electronic Warfare (EW) and avionics systems. The AN/ALE-47 uses threat data received over the aircraft interfaces to assess the threat situation and determine a response. Expendable routines tailored to the immediate aircraft and threat environment may be dispensed using one of four operational modes. The hardware and technical data and documentation to be provided are Unclassified. The software is Secret.

5. If a technologically advanced adversary were to obtain knowledge of the specific hardware in the proposed sale, the information could be used to develop countermeasures which might reduce weapon system effectiveness or be used in the development of a system with similar or advanced capabilities.

[FR Doc. 2010–30044 Filed 11–29–10; 8:45 am]
BILLING CODE 5001–06–C

DEPARTMENT OF DEFENSE

Office of the Secretary

[Docket ID: DOD–2010–OS–0156]

Privacy Act of 1974; System of Records

AGENCY: National Security Agency/Central Security Service, DoD.

ACTION: Notice To Alter a System of Records.

SUMMARY: The National Security Agency/Central Security Service is proposing to alter a system of records in its existing inventory of records systems subject to the Privacy Act of 1974, (5 U.S.C. 552a), as amended.

DATES: This proposed action will be effective without further notice on December 30, 2010 unless comments are received which result in a contrary determination.

ADDRESSES: You may submit comments, identified by docket number and/ Regulatory Information Number (RIN) and title, by any of the following methods:

- *Federal Rulemaking Portal: http://www.regulations.gov.* Follow the instructions for submitting comments.
- *Mail:* Federal Docket Management System Office, Room 3C843, 1160 Defense Pentagon, Washington, DC 20301–1160.

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: National Security Agency/Central Security Service, Freedom of Information Act and Privacy Act Office, 9800 Savage Road, Suite 6248, Ft. George G. Meade, MD 20755–6248, Ms. Anne Hill at (301) 688–6527.

SUPPLEMENTARY INFORMATION: The National Security Agency/Central Security Service system of records notices subject to the Privacy Act of 1974, (5 U.S.C. 552a), as amended, have been published in the **Federal Register** and are available from the **FOR FURTHER INFORMATION CONTACT** address above.

The proposed system report, as required by 5 U.S.C. 552a of the Privacy Act of 1974, as amended, was submitted on November 17, 2010, to the House Committee on Oversight and Government Reform, the Senate Committee on Homeland Security and Governmental Affairs, and the Office of Management and Budget (OMB) pursuant to paragraph 4c of Appendix I to OMB Circular No. A–130, "Federal Agency Responsibilities for Maintaining Records About Individuals, "dated February 8, 1996 (February 20, 1996, 61 FR 6427).

Dated: November 18, 2010.

Morgan F. Park,

Alternate OSD Federal Register Liaison Officer, Department of Defense.

GNSA 18

SYSTEM NAME:

Operations Files (January 3, 2002, 67 FR 309).

* * * * *

CHANGES:

SYSTEM NAME:

Change system name to "Operations Files."

* * * * *

CATEGORIES OF RECORDS IN THE SYSTEM:

Delete entry and replace with "Records include individual's name, Social Security Number (SSN); employee identification number; administrative information; biographic information; intelligence requirements, analysis and reporting; information

systems security analysis and reporting; operational records; articles; public-source data; and other published information on individuals and events of interest to NSA/CSS; actual or purported compromises of classified intelligence; countermeasures in connection therewith; and identification of classified source documents and distribution thereof."

AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

Delete entry and replace with "National Security Agency Act of 1959, as amended (Pub. L. 86–36) (codified at 50 U.S.C. 402 note); E.O. 12333, as amended, United States Intelligence Activities; E.O. 13526, Classified National Security Information; National Security Directive 42, National Policy for the Security of National Security Telecommunications and Information Systems; and E.O. 9397 (SSN), as amended."

* * * * *

STORAGE:

Delete entry and replace with "Paper records in file folders and electronic storage media."

RETRIEVABILITY:

Delete entry and replace with "Information is retrieved by individual's name, Social Security Number (SSN), and/or employee identification number."

* * * * *

SAFEGUARDS:

Delete entry and replace with "Buildings are secured by a series of guarded pedestrian gates and checkpoints. Access to facilities is limited to security-cleared personnel and escorted visitors only. Within the facilities themselves, access to paper and computer printouts is controlled by limited-access facilities and lockable containers. Access to electronic means is computer password protected."

RETENTION AND DISPOSAL:

Delete entry and replace with "Intelligence Reports: Permanent, transfer to the NSA/CSS Records Center when 5 years old and transfer to the National Archives and Records Administration when 50 years old.

Intelligence Products: Permanent, transfer to the NSA/CSS Records Center when 5 years old and transfer to the National Archives and Records Administration when 50 years old.

Intelligence Collection Records: Temporary, transfer to NSA/CSS Records Center annually, review every 5 years for destruction.

Production records: Temporary, review every 5 years for destruction.

Records are destroyed by pulping, burning, shredding, or erasure or destruction of magnet media."

* * * * *

NOTIFICATION PROCEDURE:

Delete entry and replace with "Individuals seeking to determine whether information about themselves is contained in this system should address written inquiries to the National Security Agency/Central Security Service, Freedom of Information Act/Privacy Act Office, 9800 Savage Road, Suite 6248, Ft. George G. Meade, MD 20755–6248.

Written inquiries should contain the individual's full name, address and telephone number."

RECORD ACCESS PROCEDURES:

Delete entry and replace with "Individuals seeking access to information about themselves contained in this system should address written inquiries to the National Security Agency/Central Security Service, Freedom of Information Act/Privacy Act Office, 9800 Savage Road, Suite 6248, Ft. George G. Meade, MD 20755–6248.

Written inquiries should contain the individual's full name, address and telephone number."

CONTESTING RECORD PROCEDURES:

Delete entry and replace with "The NSA/CSS rules for contesting contents and appealing initial determinations are published at 32 CFR part 322 or may be obtained by written request addressed to the National Security Agency/Central Security Service, Freedom of Information Act/Privacy Act Office, 9800 Savage Road, Suite 6248, Ft. George G. Meade, MD 20755–6248."

* * * * *

GNSA 18

SYSTEM NAME:

Operations Records.

SYSTEM LOCATION:

National Security Agency/Central Security Service, Ft. George G. Meade, MD 20755–6000.

CATEGORIES OF INDIVIDUALS COVERED BY THE SYSTEM:

Individuals identified in foreign intelligence, counterintelligence, or information system security reports and supportive materials, including individuals involved in matters of foreign intelligence interest, information systems security interest, the compromise of classified information, or terrorism.

CATEGORIES OF RECORDS IN THE SYSTEM:

Records include individual's name, Social Security Number (SSN), employee identification number; administrative information; biographic information; intelligence requirements, analysis and reporting; information systems security analysis and reporting; operational records; articles, public-source data, and other published information on individuals and events of interest to NSA/CSS; actual or purported compromises of classified intelligence; countermeasures in connection therewith; and identification of classified source documents and distribution thereof.

AUTHORITY FOR MAINTENANCE OF THE SYSTEM:

National Security Agency Act of 1959, as amended (Pub. L. 86–36) (codified at 50 U.S.C. 402 note); E.O. 12333, as amended, United States Intelligence Activities; E.O. 13526, Classified National Security Information; National Security Directive 42, National Policy for the Security of National Security Telecommunications and Information Systems; and E.O. 9397 (SSN), as amended.

PURPOSE(S):

To maintain records on foreign intelligence, counterintelligence, and information systems security matters relating to the mission of the National Security Agency.

ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:

In addition to those disclosures generally permitted under 5 U.S.C. 552a(b) of the Privacy Act of 1974, these records contained therein may specifically be disclosed outside the DoD as a routine use pursuant to 5 U.S.C. 552a(b)(3) as follows:

To U.S. Government agencies, and in some instances foreign government agencies or their representatives, to provide foreign intelligence, counterintelligence, information systems security information, and other information.

To U.S. Government officials regarding compromises of classified information including the document(s) apparently compromised, implications of disclosure of intelligence sources and methods, investigative data on compromises, and statistical and substantive analysis of the data.

To any U.S. Government organization in order to facilitate any security, employment, detail, liaison, or contractual decision by any U.S. Government organization.

Records may further be disclosed to agencies involved in the protection of

intelligence sources and methods to facilitate such protection and to support intelligence analysis and reporting.

The DoD 'Blanket Routine Uses' published at the beginning of the NSA/CSS' compilation of systems of records notices apply to this system.

POLICIES AND PRACTICES FOR STORING, RETRIEVING, ACCESSING, RETAINING, AND DISPOSING OF RECORDS IN THE SYSTEM:

STORAGE:

Paper records in file folders and electronic storage media.

RETRIEVABILITY:

Information is retrieved by individual's name, Social Security Number (SSN), and/or employee identification number.

SAFEGUARDS:

Buildings are secured by a series of guarded pedestrian gates and checkpoints. Access to facilities is limited to security-cleared personnel and escorted visitors only. Within the facilities themselves, access to paper and computer printouts are controlled by limited-access facilities and lockable containers. Access to electronic means is controlled by computer password protection.

RETENTION AND DISPOSAL:

Intelligence Reports: Permanent, transfer to the NSA/CSS Records Center when 5 years old and transfer to the National Archives and Records Administration when 50 years old.

Intelligence Products: Permanent, transfer to the NSA/CSS Records Center when 5 years old and transfer to the National Archives and Records Administration when 50 years old.

Intelligence Collection Records: Temporary, transfer to NSA/CSS Records Center annually, review every 5 years for destruction. Production records: Temporary, review every 5 years for destruction.

Records are destroyed by pulping, burning, shredding, or erasure or destruction of magnet media.

SYSTEM MANAGER(S) AND ADDRESS:

Director, National Security Agency/Central Security Service, Ft. George G. Meade, MD 20755–6000.

NOTIFICATION PROCEDURE:

Individuals seeking to determine whether information about themselves is contained in this system should address written inquiries to the National Security Agency/Central Security Service, Freedom of Information Act/Privacy Act Office, 9800 Savage Road, Suite 6248, Ft. George G. Meade, MD 20755–6248.

Written inquiries should contain the individual's full name, address and telephone number.

RECORD ACCESS PROCEDURES:

Individuals seeking access to information about themselves contained in this system should address written inquiries to the National Security Agency/Central Security Service, Freedom of Information Act/Privacy Act Office, 9800 Savage Road, Suite 6248, Ft. George G. Meade, MD 20755–6248.

Written inquiries should contain the individual's full name, address and telephone number.

CONTESTING RECORD PROCEDURES:

The NSA/CSS rules for contesting contents and appealing initial determinations are published at 32 CFR part 322 or may be obtained by written request addressed to the National Security Agency/Central Security Service, Freedom of Information Act/Privacy Act Office, 9800 Savage Road, Suite 6248, Ft. George G. Meade, MD 20755–6248.

RECORD SOURCE CATEGORIES:

Individuals themselves; U.S. agencies and organizations; media, including periodicals, newspapers, and broadcast transcripts; public and classified reporting; intelligence source documents; investigative reports; and correspondence.

EXEMPTIONS CLAIMED FOR THE SYSTEM:

Information specifically authorized to be classified under E.O. 12958, as implemented by DoD 5200.1–R, may be exempt pursuant to 5 U.S.C. 552a(k)(1).

Investigatory material compiled for law enforcement purposes, other than material within the scope of subsection 5 U.S.C. 552a(j)(2), may be exempt pursuant to 5 U.S.C. 552a(k)(2). However, if an individual is denied any right, privilege, or benefit for which he would otherwise be entitled by Federal law or for which he would otherwise be eligible, as a result of the maintenance of the information, the individual will be provided access to the information exempt to the extent that disclosure would reveal the identity of a confidential source. NOTE: When claimed, this exemption allows limited protection of investigative reports maintained in a system of records used in personnel or administrative actions.

Investigatory material compiled solely for the purpose of determining suitability, eligibility, or qualifications for federal civilian employment, military service, federal contracts, or access to classified information may be exempt pursuant to 5 U.S.C. 552a(k)(5), but only to the extent that such material would reveal the identity of a confidential source.

An exemption rule for this record system has been promulgated according to the requirements of 5 U.S.C. 553(b)(1), (2), and (3), (c) and (e) and published in 32 CFR part 322. For additional information contact the system manager.

[FR Doc. 2010–30042 Filed 11–29–10; 8:45 am]

BILLING CODE 5001–06–P

DEPARTMENT OF DEFENSE

Office of the Secretary

Renewal of Department of Defense Federal Advisory Committees

AGENCY: Department of Defense.

ACTION: Notice of renewal of Federal Advisory Committee.

SUMMARY: Under the provisions of 10 U.S.C. 1114 and the Federal Advisory Committee Act of 1972, (5 U.S.C. Appendix), the Government in the Sunshine Act of 1976 (5 U.S.C. 552b), and 41 CFR 102–3.50, the Department of Defense gives notice that it is renewing the charter for the Department of Defense Medicare-Eligible Retiree Health Care Board of Actuaries (hereafter referred to as the "Board").

The Board is a non-discretionary Federal advisory committee that shall provide independent advice and recommendations related to actuarial matters associated with the Department of Defense Medicare-Eligible Retiree Health Care Fund and on matters referred by the Secretary of Defense, including that regarding;

a. Valuations of the Fund under Title 10, United States Code, Section 1115(c);

b. Recommendations for such changes as in the Board's judgment are necessary to protect the public interest and maintain the Fund on a sound actuarial basis; and

c. Advice the Secretary of Defense on all actuarial matters necessary to make determinations in order to finance liabilities of the Fund on an actuarially sound basis.

The Secretary of Defense, through the Under Secretary of Defense (Personnel and Readiness), may act upon the Board's advice and recommendations.

The Board shall be composed of not three Board members appointed by the Secretary of Defense from among qualified professional actuaries who are members of the Society of Actuaries. Except for those member of the Board who were first appointed under Title 10, United States Code, Section, Section

1114(B), the Board members shall serve for a term of 15 years; except those Board members appointed to fill a vacancy occurring before the end of the term for which the predecessor was appointed shall serve only until the end of such term. Board members may serve after the end of the term until a successor has taken office. No Board member, other than those originally appointed for less than 15-year term or a Board member appointed to fill an unexpired term may be reappointed for successive terms.

Board members shall be appointed by the Secretary of Defense, and their membership shall be renewed by the Secretary of Defense on an annual basis. A member of the Board may be removed by the Secretary of Defense for misconduct or failure to perform functions vested in the Board, and for no other reason.

Board members appointed by the Secretary of Defense, who are not full-time or permanent part-time federal officers or employees, shall serve as special government employees under the authority of 5 U.S.C. 3109, and shall, under the authority of 10 U.S.C. 1114(a)(3), serve with compensation, to include travel and per diem for official travel, in accordance with Title 5, United States Code, Section 5703.

The Chairperson of the Board shall be designated by the Under Secretary of Defense (Personnel and Readiness), on behalf of the Secretary of Defense.

With DoD approval, the Board is authorized to establish subcommittees, as necessary and consistent with its mission. These subcommittees shall operate under the provisions of the Federal Advisory Committee Act of 1972, the Government in the Sunshine Act of 1976 (5 U.S.C. 552b), and other Governing Federal statutes and regulations.

Such subcommittees shall not work independently of the chartered Board, and shall report all their recommendations and advice to the Board for full deliberation and discussion. Subcommittees have no authority to make decisions on behalf of the chartered Board; nor can they report directly to the Department of Defense or any Federal officers or employees who are not Board members.

Subcommittee members who are not Board members, shall be appointed in the same manner as the Board members.

FOR FURTHER INFORMATION CONTACT: Contact Jim Freeman, Deputy Advisory Committee Management Officer for the Department of Defense, 703–601–6128.

SUPPLEMENTARY INFORMATION: The Board shall meet at the call of the Board's Designated Federal Officer, in consultation with the Chairperson. The estimated number of Board meetings is one per year.

The Designated Federal Officer, pursuant to DoD policy, shall be a full-time or permanent part-time DoD employee, and shall be appointed in accordance with governing DoD policies and procedures. In addition, the Designated Federal Officer is required to be in attendance at all Board and subcommittee meetings; however, in the absence of the Designated Federal Officer, the Alternate Designated Federal Officer shall attend the meeting.

Pursuant to 41 CFR 102–3.105(j) and 102–3.140, the public or interested organizations may submit written statements to the Department of Defense Medicare-Eligible Retiree Health Care Board of Actuaries' membership about the Board's mission and functions. Written statements may be submitted at any time or in response to the stated agenda of planned meeting of Department of Defense Medicare-Eligible Retiree Health Care Board of Actuaries.

All written statements shall be submitted to the Designated Federal Officer for the Department of Defense Medicare-Eligible Retiree Health Care Board of Actuaries, and this individual will ensure that the written statements are provided to the membership for their consideration. Contact information for the Department of Defense Medicare-Eligible Retiree Health Care Board of Actuaries Designated Federal Officer can be obtained from the GSA's FACA Database—*https://www.fido.gov/facadatabase/public.asp*.

The Designated Federal Officer, pursuant to 41 CFR 102–3.150, will announce planned meetings of the Department of Defense Medicare-Eligible Retiree Health Care Board of Actuaries. The Designated Federal Officer, at that time, may provide additional guidance on the submission of written statements that are in response to the stated agenda for the planned meeting in question.

Dated: November 18, 2010.

Morgan F. Park,

Alternate OSD Federal Register Liaison Officer, Department of Defense.

[FR Doc. 2010–30041 Filed 11–29–10; 8:45 am]

BILLING CODE 5001–06–P

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

[Recommendation 2010–1]

Safety Analysis Requirements for Defining Adequate Protection for the Public and the Workers

AGENCY: Defense Nuclear Facilities Safety Board.

ACTION: Notice, recommendation; correction

SUMMARY: Pursuant to 42 U.S.C. 2286a(a)(5), the Defense Nuclear Facilities Safety Board has made a recommendation to the Secretary of Energy requesting an amendment to the Department of Energy's nuclear safety rule, 10 CFR part 830. An incorrect electronic file was submitted to the **Federal Register** and published on November 15, 2010 (75 FR 69648). The corrected text of the recommendation approved by the Board is below. The Board is extending the public comment period to allow for consideration of this correction by all interested parties.

DATES: Comments, data, views, or arguments concerning the recommendation are due on or before December 30, 2010.

ADDRESSES: Send comments, data, views, or arguments concerning this recommendation to: Defense Nuclear Facilities Safety Board, 625 Indiana Avenue, NW., Suite 700, Washington, DC 20004–2901.

FOR FURTHER INFORMATION CONTACT: Brian Grosner or Andrew L. Thibadeau at the address above or telephone number (202) 694–7000.

Correction: In the **Federal Register** of November 15, 2010 (75 FR 69648), immediately following the signature block, the recommendation should read as follows:

Dated: November 23, 2010.

Peter S. Winokur,

Chairman.

Recommendation 2010–1 to the Secretary of Energy

Safety Analysis Requirements for Defining Adequate Protection for the Public and the Workers, Pursuant to 42 U.S.C. 2286a(a)(5), Atomic Energy Act of 1954, As Amended

Dated: October 29, 2010

Background

The Department of Energy's (DOE) nuclear safety regulations were developed as a result of a mandate by Congress in the Price Anderson Act Amendments of 1988. These regulations now appear in Parts 820, 830, and 835 of Title 10 in the Code of Federal Regulations (CFR). In this Recommendation, the Defense Nuclear Facilities Safety Board (Board) addresses recent changes in DOE's

"interpretation" of certain critical provisions of Title 10 CFR Part 830, *Nuclear Safety Management* (10 CFR Part 830), provisions that are intended to provide adequate protection of public health and safety. As explained below, in the Board's view this revised interpretative posture weakens the safety structure the rule is designed to hold firmly in place.

10 CFR Part 830 imposes a requirement that a documented safety analysis (DSA) is to be prepared for every DOE nuclear facility. This DSA, once approved by DOE, forms the regulatory basis for safety of the facility or operation. 10 CFR Part 830 does more, however: its Appendix A provides "safe harbors" for the preparation and approval of DSAs. These safe harbors are, in the main, references to detailed guidance issued by DOE. A DSA that is prepared following applicable guidance found in safe harbors should be found acceptable, meaning that the facility's safety systems are adequate to protect public health and safety from nuclear hazards.

One of the key safe harbor guides for the preparation of DSAs is DOE Standard 3009–94, *Preparation Guide for U.S. Department of Energy Nonreactor Nuclear Facility Safety Analysis Reports.*[1] First issued in July of 1994, this Standard was intended to provide guidance on meeting the requirements imposed by DOE Order 5480.23, Nuclear Safety Analysis Reports, a set of nuclear safety requirements that preceded and were supplanted by 10 CFR Part 830. The Standard stated that "Technical Standards, such as this document, support the guides by providing additional guidance into how the requirements [of Orders and Rules] should be met." As such, it did not contain any nuclear safety requirements. Five years after its initial issuance, DOE amended Standard 3009–94 by the addition of Appendix A, currently entitled "Evaluation Guideline." The guideline applies a dose criterion to the results of accident calculations found in DSAs. Stated broadly, the Standard mandates that safety class systems, structures, and components (SSCs) be installed if in a potential accident the unmitigated dose consequence calculations for a release scenario at the site boundary approach the Evaluation Guideline numerical value. The Evaluation Guideline value established in DOE–STD–3009–94 Appendix A is 25 rem Total Effective Dose Equivalent (TEDE). The Standard further states that although 25 rem is not considered an acceptable public exposure, it is generally accepted as a value indicative of no significant health effects.

When 10 CFR Part 830 was promulgated in final form in early 2001, the version of DOE Standard 3009–94 incorporated into Appendix A of the rule as a safe harbor included the Evaluation Guideline. This combination of the rule's requirement for an approved DSA and the application of the Evaluation Guideline of DOE Standard 3009–94 formed the basis upon which adequate protection of the public health and safety would be gauged. Whenever dose consequence calculations showed that an accident scenario would result in offsite doses approaching 25 rem TEDE, the expectation was that safety related SSCs would function as designed, ensuring that public doses would never exceed a small fraction of the Evaluation Guideline.

Developments Since 2001

As a safe harbor for 10 CFR Part 830, the Evaluation Guideline described in DOE Standard 3009–94 has been enforced and met for the majority of DOE's defense nuclear facilities, assuring adequate protection of the public, workers, and the environment. However, in December 2008, the National Nuclear Security Administration (NNSA) approved a DSA for the Plutonium Facility at Los Alamos National Laboratory that represented a significant departure from the accepted methodology, as discussed in the Board's Recommendation 2009–2, *Los Alamos National Laboratory Plutonium Facility Seismic Safety.* The Board followed up its Recommendation with a letter to the Deputy Secretary of Energy on March 15, 2010, that sought to determine whether DOE's current interpretation of 10 CFR Part 830 and DOE Standard 3009–94 still supports the principles of providing adequate protection of the public, workers, and the environment from the hazards of operating DOE's defense nuclear facilities. The Board's letter particularly expressed concern regarding the appearance that DOE's present interpretation is that the nuclear safety Evaluation Guideline established in DOE Standard 3009–94 does not have to be met.

DOE's June 10, 2010, response to the Board's letter states that DOE's utilization and implementation of DOE Standard 3009–94 has not changed since issuance of 10 CFR Part 830. DOE's response observes that DOE Standard 3009–94 "was not written as a prescriptive item-by-item requirements document; rather it provides an overall approach and guidance for preparing a DSA." DOE's response states that the Standard describes steps that the contractor may take if the postulated accident consequences cannot be mitigated below the Evaluation Guideline. DOE's response also cites guidance for DOE approval authorities contained in DOE Standard 1104–2009, *Review and Approval of Nuclear Facility Safety Basis and Safety Design Basis Documents*, and notes that the Safety Basis Approval Authority may prescribe interim controls and planned improvements if the Evaluation Guideline is exceeded. DOE's response closes by stating that its managers "are expected to carefully evaluate situations that fall short of expectations and only provide their approval of documented safety analyses when they are satisfied that operations can be conducted safely * * *, that options to meet DOE expectations have been evaluated, and that adequate commitments to achieve an appropriate safety posture in a timely manner have been made."

The lack of definitive statements in DOE's June 10, 2010, response illustrates the difficulties inherent in applying a guidance document as a safe harbor for implementing the requirements of a regulation. Furthermore, NNSA's approval of the DSA for the Los Alamos National Laboratory's Plutonium Facility in December 2008 demonstrates that, despite DOE's stated expectations, it is not always true that DOE's managers will ensure safety by imposing conditions of approval that address inadequacies in the safety basis. This is illustrated to a lesser extent at the other NNSA facilities—described in follow-up correspondence NNSA issued to the Board on June 30, 2010—which have not implemented controls or compensatory measures sufficient to reduce accident consequences below the Evaluation Guideline. DOE Standard 1104–2009 serves as a source of guidance for DOE Safety Basis Approval Authorities, but it, too, is a guidance document, unequivocally stating, "This Standard does not add any new requirements for DOE or its contractors."

DOE's standards-based regulatory system needs a clear and unambiguous set of nuclear safety requirements to ensure that adequate protection of the public, workers, and the environment is provided. Further, it is imperative that DOE provide clear direction to its Safety Basis Approval Authorities to ensure that, if nuclear safety requirements cannot be met prior to approval of a DSA, DOE imposes clear conditions of approval for compensatory measures for the short term and facility modifications for the longer term to achieve the required safety posture. This acceptance of risk and commitment to future upgrades must be approved at a level of authority within DOE that is high enough to control both the resources needed to accomplish the upgrades as well as the programmatic decision-making involved in determining that the risk of continuing operations is offset by sufficiently compelling programmatic needs.

Item 4 of the Recommendation below deserves a further word of explanation. The Board does not recommend lightly a change to DOE's nuclear safety regulations. But as explained above, DOE has chosen over the past several years to drift away from the principles that underlay the rule as originally intended. The Board has chosen to recommend a rule change because this action would tend, in the long run, to prevent future shifts in DOE safety policy that would once again have to be challenged and argued against. For these reasons, the Board recommends that the nuclear safety rule, 10 CFR Part 830, be amended as stated below.

Recommendation

Therefore, the Board recommends that DOE:

1. Immediately affirm the requirement that unmitigated, bounding-type accident scenarios will be used at DOE's defense nuclear facilities to estimate dose consequences at the site boundary, and that a sufficient combination of SSCs must be designated safety class to prevent exposures at the site boundary from approaching 25 rem TEDE.

2. For those defense nuclear facilities that have not implemented compensatory measures sufficient to reduce exposures at the site boundary below 25 rem TEDE, direct

[1] When DOE issued Change Notice 2, the title of this Standard was revised to *Preparation Guide for U.S. Department of Energy Nonreactor Nuclear Facility Documented Safety Analyses.*

the responsible program secretarial officer to develop a formal plan to meet this requirement within a reasonable timeframe.

3. Revise DOE Standard 3009–94 to identify clearly and unambiguously the requirements that must be met to demonstrate that an adequate level of protection for the public and workers is provided through a DSA. This should be accomplished, at a minimum, by:

a. Clearly defining methodologies and providing acceptability criteria for controls, parameters, processes, analytical tools, and other data that should be used in preparation of a DSA,

b. Delineating the criteria to be met for identification and analyses of an adequate set of Design Basis Accidents (for new facilities), or Evaluation Basis Accidents (for existing facilities),

c. Providing criteria that must be met by the safety-class SSCs to (i) mitigate the consequences to a fraction of the Evaluation Guideline, or (ii) prevent the events by demonstrating an acceptable reliability for the preventive features, and

d. Establishing a process and path forward to meeting (a) through (c) above through compensatory measures and planned improvements if the DSA cannot demonstrate compliance.

4. Amend 10 CFR Part 830 by incorporating the revised version of DOE Standard 3009–94 into the text as a requirement, instead of as a safe harbor cited in Table 2.

5. Formally establish the minimum criteria and requirements that govern federal approval of a DSA, by revision to DOE Standard 1104–2009 and other appropriate documents. The criteria and requirements should include:

a. The authorities that can be delegated, the required training and qualification of the approval authority, and the boundaries and limitations of the approval authority's responsibilities,

b. Actions to be taken if conditions are beyond the delegated approval authority's specified boundaries or limitations,

c. The organization or the individual who can approve a DSA that is beyond the delegated approval authority's specified boundaries or limitations,

d. The regulatory process that must be followed if conditions are beyond the delegated approval authority's specified boundaries or limitations, and any compensatory actions to be taken, and

e. The criteria an approval authority must use to quantify the acceptance of risk for continued operations when offsite dose consequences approach the Evaluation Guideline.

6. Formally designate the responsible organization and identify the processes for performing oversight to ensure that the responsibilities identified in Item 5 above are fully implemented.

Peter S. Winokur, Ph.D., Chairman

[FR Doc. 2010–30004 Filed 11–29–10; 8:45 am]

BILLING CODE 3670–01–P

DEPARTMENT OF EDUCATION

Notice of Submission for OMB Review

AGENCY: Department of Education.

ACTION: Comment Request.

SUMMARY: The Director, Information Collection Clearance Division, Regulatory Information Management Services, Office of Management invites comments on the submission for OMB review as required by the Paperwork Reduction Act of 1995 (Pub. L. 104–13).

DATES: Interested persons are invited to submit comments on or before December 30, 2010.

ADDRESSES: Written comments should be addressed to the Office of Information and Regulatory Affairs, Attention: Education Desk Officer, Office of Management and Budget, 725 17th Street, NW., Room 10222, New Executive Office Building, Washington, DC 20503, be faxed to (202) 395–5806 or e-mailed to *oira_submission@omb.eop.gov* with a cc: to *ICDocketMgr@ed.gov.* Please note that written comments received in response to this notice will be considered public records.

SUPPLEMENTARY INFORMATION: Section 3506 of the Paperwork Reduction Act of 1995 (44 U.S.C. chapter 35) requires that the Office of Management and Budget (OMB) provide interested Federal agencies and the public an early opportunity to comment on information collection requests. The OMB is particularly interested in comments which: (1) Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility; (2) Evaluate the accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used; (3) Enhance the quality, utility, and clarity of the information to be collected; and (4) Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology.

Dated: November 24, 2010.

Darrin A. King,

Director, Information Collection Clearance Division Regulatory Information Management Services Office of Management.

Institute of Education Sciences

Type of Review: New.

Title of Collection: Study of Schools Targeted for Improvement Using Title I Section 1003(g) Funds Provided Under the American Recovery and Reinvestment Act (Study of School Turnaround).

OMB Control Number: Pending.

Agency Form Number(s): N/A.

Frequency of Responses: Annually.

Affected Public: Not-for-profit institutions; State, Local, or Tribal Government, State Educational Agencies, Local Educational Agencies.

Total Estimated Number of Annual Responses: 8,463.

Total Estimated Annual Burden Hours: 3,803.

Abstract: The purpose of the Study of School Turnaround is to document over time the intervention models, approaches, and strategies adopted and implemented by a subset of 60 schools receiving federal School Improvement Grants (SIG), Title I Section 1003(g), provided under the American Recovery and Reinvestment Act. To this end, the evaluation will employ multiple data collection strategies, including telephone interviews with school principals, district administrators and state officials; site visits to case study schools; teacher surveys; and collection of fiscal data. Specifically, the study will conduct telephone interviews with building principals and will administer teacher surveys in 60 schools, over three years. This set of 60 SIG-awarded schools will include three nested subsamples: One set of 25 schools in which the study team will conduct in-depth case studies over three years, and two sets of 10 "special topics" schools in which the study team will collect interview, focus group, and survey data on topics of policy interest over a period of two years. The study will produce annual reports, accompanied by more focused research briefs on special topics related to the change process in the nation's lowest-performing schools.

Requests for copies of the information collection submission for OMB review may be accessed from the *RegInfo.gov* Web site at *http://www.reginfo.gov/public/do/PRAMain* or from the Department's Web site at *http://edicsweb.ed.gov,* by selecting the "Browse Pending Collections" link and by clicking on link number 4446. When you access the information collection, click on "Download Attachments " to view. Written requests for information should be addressed to U.S. Department of Education, 400 Maryland Avenue, SW., LBJ, Washington, DC 20202–4537. Requests may also be electronically mailed to the Internet address *ICDocketMgr@ed.gov* or faxed to 202–401–0920. Please specify the complete title of the information collection and

OMB Control Number when making your request.

Individuals who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1–800–877–8339.

[FR Doc. 2010–30128 Filed 11–29–10; 8:45 am]

BILLING CODE 4000–01–P

DEPARTMENT OF EDUCATION

Notice of Submission for OMB Review

AGENCY: Department of Education.

ACTION: Comment Request.

SUMMARY: The Director, Information Collection Clearance Division, Regulatory Information Management Services, Office of Management invites comments on the submission for OMB review as required by the Paperwork Reduction Act of 1995 (Pub. L. 104–13).

DATES: Interested persons are invited to submit comments on or before December 30, 2010.

ADDRESSES: Written comments should be addressed to the Office of Information and Regulatory Affairs, Attention: Education Desk Officer, Office of Management and Budget, 725 17th Street, NW., Room 10222, New Executive Office Building, Washington, DC 20503, be faxed to (202) 395–5806 or e-mailed to *oira_submission@omb.eop.gov* with a cc: to *ICDocketMgr@ed.gov.* Please note that written comments received in response to this notice will be considered public records.

SUPPLEMENTARY INFORMATION: Section 3506 of the Paperwork Reduction Act of 1995 (44 U.S.C. Chapter 35) requires that the Office of Management and Budget (OMB) provide interested Federal agencies and the public an early opportunity to comment on information collection requests. The OMB is particularly interested in comments which: (1) Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility; (2) Evaluate the accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used; (3) Enhance the quality, utility, and clarity of the information to be collected; and (4) Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology.

Dated: November 23, 2010.

Darrin A. King,

Director Information Collection Clearance Division, Regulatory Information Management Services Office of Management.

Institute of Education Sciences

Type of Review: New.

Title of Collection: Integrated Evaluation of ARRA Funding, Implementation and Outcomes, Recruitment Package.

OMB Control Number: 1850–NEW.

Agency Form Number(s): N/A.

Frequency of Responses: Once.

Affected Public: State, Local, or Tribal Government, State Educational Agencies or Local Educational Agencies.

Total Estimated Number of Annual Responses: 5,551.

Total Estimated Annual Burden Hours: 1,509.

Abstract: On February 17, 2009, President Obama signed the American Recovery and Reinvestment Act (ARRA) into law (Pub. L. 111–5). ARRA supports investments in innovative strategies that are intended to lead to improved results for students, long-term gains in school and local education agency (LEA) capacity for success, and increased productivity and effectiveness.

This evaluation will focus on answering four sets of policy/research questions:

- To what extent did ARRA funds go to the intended recipients?
- Is ARRA associated with the implementation of the key reform strategies it promoted?
- What implementation supports and challenges are associated with ARRA?
- Is ARRA associated with improved outcomes?

The integrated evaluation will draw on existing data, including ED data collections, ED ARRA program files, ARRA required reporting, and databases of achievement and other outcomes. The evaluation will also collect new information through surveys of (1) the 50 states and the District of Columbia, (2) a nationally representative sample of school districts, and (3) a nationally representative sample of schools within the sampled school districts. Surveys are planned for spring 2011, spring 2012, and spring 2013. Subsamples of school districts will also be drawn to receive a smaller set of questions (polls); these polls will be administered twice between 2011 and 2013.

A report will be prepared in the first year of the evaluation to describe the distribution of funding. A report and state tabulations will be prepared after each annual survey. The first report, based on the 2011 surveys, will focus on early ARRA implementation and strategies. The second report, based on the 2012 surveys, will expand upon strategies implemented under ARRA. The final report will draw upon existing data on outcomes as well as data from the 2013 surveys.

This collection is for the recruitment phase of the evaluation.

Requests for copies of the information collection submission for OMB review may be accessed from the *RegInfo.gov* Web site at *http://www.reginfo.gov/public/do/PRAMain* or from the Department's Web site at *http://edicsweb.ed.gov,* by selecting the "Browse Pending Collections" link and by clicking on link number 4385. When you access the information collection, click on "Download Attachments" to view. Written requests for information should be addressed to U.S. Department of Education, 400 Maryland Avenue, SW., LBJ, Washington, DC 20202–4537. Requests may also be electronically mailed to the Internet address *ICDocketMgr@ed.gov* or faxed to 202–401–0920. Please specify the complete title of the information collection and OMB Control Number when making your request.

Individuals who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1–800–877–8339.

[FR Doc. 2010–30131 Filed 11–29–10; 8:45 am]

BILLING CODE 4000–01–P

ELECTION ASSISTANCE COMMISSION

Procedural Manual for the Election Assistance Commission's Voting System Testing and Certification Program, Version 2.0

AGENCY: United States Election Assistance Commission (EAC).

ACTION: Notice; publication of Voting System Testing and Certification Manual, Version 2.0, for 60 day public comment period on EAC Web site.

SUMMARY: The U.S. Election Assistance Commission (EAC) is publishing a procedural manual for its Voting System Testing and Certification Program. This manual sets the administrative procedures for obtaining an EAC Certification for voting systems. Participation in the program is strictly voluntary. The program is mandated by the Help America Vote Act (HAVA) at 42 U.S.C. 15371.

DATES: Submit written or electronic comments on this draft procedural manual on or before 5 p.m. EDT on January 31, 2011.

ADDRESSES: Submit comments via e-mail to *VotingSystemGuidelines@eac.gov;* via mail to Brian Hancock, Director of Voting System Certification, U.S. Election Assistance Commission, 1201 New York Avenue, Suite 300, Washington, DC 20005; or via fax to 202–566–1392. An electronic copy of the proposed manual may be found on the EAC's Web site, *http://www.eac.gov/open/comment.aspx.*

FOR FURTHER INFORMATION CONTACT: Brian Hancock, Director, Voting System Certification, Washington, DC (202) 566–3100, Fax: (202) 566–1392.

SUPPLEMENTARY INFORMATION:

Background. HAVA requires that the EAC certify and decertify voting systems. Section 231(a)(1) of HAVA (42 U.S.C. 15371) specifically requires the EAC to "* * * provide for the testing, certification, decertification and recertification of voting system hardware and software by accredited laboratories." To meet this obligation, the EAC has created a voluntary program to test voting systems to Federal voting system standards. The Voting System Testing and Certification Manual, published below, will set the procedures for this program.

In creating the Certification Manual in 2006 the EAC sought input from experts and stakeholders. Specifically, the EAC conducted meetings with representatives from the voting system test laboratory and voting system manufacturing community. The Commission also held a public hearing in which it received testimony from State election officials, the National Institute of Standards and Technology, academics, electronic voting system experts and public interest groups. Finally, the EAC sought input from the public.

EAC is required to resubmit the Testing and Certification Manual for renewal in accordance with Paperwork Reduction Act of 1995 requirements. The Testing and Certification Division has updated sections of the manual to reflect proposed changes in certification procedures. These sections are highlighted for ease of review.

Comments. Please submit comments consistent with the information below. Comments should identify and cite the section of the manual at issue. Where a substantive issue is raised, please propose a recommended change or alternative policy.

This notice is published in accordance with the Paperwork Reduction Act of 1995, to request comments regarding the burden of responding to the information collection activities of the proposed manual; please refer to the EAC's Web site, *http://www.eac.gov,* for further information about the submission of comments regarding burden.

Alice Miller,

Chief Operating Officer, U.S. Election Assistance Commission.

[FR Doc. 2010–30101 Filed 11–29–10; 8:45 am]

BILLING CODE 6820–KF–P

DEPARTMENT OF ENERGY

Biomass Research and Development Technical Advisory Committee

AGENCY: Department of Energy, Office of Energy Efficiency and Renewable Energy.

ACTION: Notice of open meeting.

SUMMARY: This notice announces an open meeting of the Biomass Research and Development Technical Advisory Committee under Section 9008(d) of the Food, Conservation, and Energy Act of 2008. The Federal Advisory Committee Act requires that agencies publish these notices in the **Federal Register** to allow for public participation. This notice announces the meeting of the Biomass Research and Development Technical Advisory Committee.

DATES: December 15, 2010 at 8 a.m.-5:15 p.m. EDT

ADDRESSES: Williamsburg Room (104–A), USDA Whitten Building, 1400 Independence Ave., SW., Washington, DC 20250.

FOR FURTHER INFORMATION CONTACT: Laura McCann, Designated Federal Officer for the Committee, Office of Energy Efficiency and Renewable Energy, U.S. Department of Energy, 1000 Independence Avenue, SW., Washington, DC 20585, (202) 586–7766, *laura.mccann@ee.doe.gov;* or Chrissy Fagerholm, (202) 586–2933, *Christina.Fagerholm@ee.doe.gov.*

SUPPLEMENTARY INFORMATION:

Purpose of Meeting: To provide advice and guidance that promotes research and development leading to the production of biobased fuels and biobased products.

Tentative Agenda: Agenda will include the following:

- Update on USDA Biomass R&D Activities.
- Update on DOE Biomass R&D Activities.
- Presentation from the National Alliance for Advanced Biofuels and Bioproducts. (NAABB) Algae Consortium.
- Presentation on the Knowledge Discovery Framework.
- Presentation on USDA sustainability findings.

Public Participation: In keeping with procedures, members of the public are welcome to observe the business of the Biomass Research and Development Technical Advisory Committee. To attend the meeting and/or to make oral statements regarding any of the items on the agenda, you must contact Laura McCann at 202–586–7766; E-mail: *laura.mccann@ee.doe.gov* or Chrissy Fagerholm at (202) 586–2933; E-mail: *Christina.Fagerholm@ee.doe.gov at least 5 business days* prior to the meeting. Please note that this meeting will be held in a Federal building, and therefore a photo ID and advance notice will be required to enter. Members of the public will be heard in the order in which they sign up at the beginning of the meeting. Reasonable provision will be made to include the scheduled oral statements on the agenda. The Chair of the Committee will make every effort to hear the views of all interested parties. If you would like to file a written statement with the Committee, you may do so either before or after the meeting. The Chair will conduct the meeting to facilitate the orderly conduct of business.

Minutes: The minutes of the meeting will be available for public review and copying at *http://www.brdisolutions.com/publications/default.aspx#meetings.*

Issued at Washington, DC, on November 24, 2010.

Rachel Samuel,

Deputy Committee Management Officer.

[FR Doc. 2010–30070 Filed 11–29–10; 8:45 am]

BILLING CODE 6450–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. CP11–29–000]

CenterPoint Energy Gas Transmission Company; Notice of Application

November 22, 2010.

Take notice that on November 12, 2010, CenterPoint Energy Gas Transmission Company (CenterPoint), 1111 Louisiana Street, Houston, Texas 77002, filed in Docket No. CP11–29–000, a request for abandonment authority, pursuant to 18 CFR part 157

and section 7(b) of the Natural Gas Act, to abandon, in place, the Enid Compressor Station (Enid Station) located on Line 2 in Garfield County, Oklahoma. Specifically, CenterPoint proposes to abandon two 1,200 horsepower compressor units and one 1,350 horsepower compressor unit, fuel meter, compressor building and associated yard and station piping located at the Enid Station. CenterPoint states that the Enid Station has been inactive for several years, is no longer needed and no service will be abandoned or adversely affected, all as more fully set forth in the application, which is on file with the Commission and open to public inspection. The filing may also be viewed on the Web at *http://www.ferc.gov* using the "eLibrary" link. Enter the docket number excluding the last three digits in the docket number field to access the document. For assistance, contact FERC at *FERCOnlineSupport@ferc.gov* or call toll-free, (866) 208–3676 or TTY, (202) 502–8659.

Any questions regarding this application should be directed to B. Michelle Willis, Manager, Regulatory & Compliance CenterPoint Energy Gas Transmission Company, P.O. Box 21734, Shreveport, LA 71151, telephone no. (318) 429–3708, facsimile no. (318) 429–3133, and e-mail: *michelle.willis@centerpointenergy.com*; Lawrence O. Thomas, Senior Director, P.O. Box 21734, Shreveport, LA 71151, telephone no. (318) 429–2804, and e-mail: *larry.thomas@centerpointenergy.com*; and Mark C. Schroeder, Sr. VP and General Counsel, P.O Box 1700, Houston, TX 77210, telephone no. (713) 207–3395, facsimile no. (713) 207–0711, and e-mail: *mark.schroeder@centerpointenrgy.com.*

Pursuant to section 157.9 of the Commission's rules, 18 CFR 157.9, within 90 days of this Notice the Commission staff will either: complete its environmental assessment (EA) and place it into the Commission's public record (eLibrary) for this proceeding; or issue a Notice of Schedule for Environmental Review. If a Notice of Schedule for Environmental Review is issued, it will indicate, among other milestones, the anticipated date for the Commission staff's issuance of the final environmental impact statement (FEIS) or EA for this proposal. The filing of the EA in the Commission's public record for this proceeding or the issuance of a Notice of Schedule for Environmental Review will serve to notify federal and state agencies of the timing for the completion of all necessary reviews, and the subsequent need to complete all Federal authorizations within 90 days of the date of issuance of the Commission staff's FEIS or EA.

There are two ways to become involved in the Commission's review of this project. First, any person wishing to obtain legal status by becoming a party to the proceedings for this project should, on or before the comment date stated below file with the Federal Energy Regulatory Commission, 888 First Street, NE., Washington, DC 20426, a motion to intervene in accordance with the requirements of the Commission's Rules of Practice and Procedure (18 CFR 385.214 or 385.211) and the Regulations under the NGA (18 CFR 157.10). A person obtaining party status will be placed on the service list maintained by the Secretary of the Commission and will receive copies of all documents filed by the applicant and by all other parties. A party must submit 7 copies of filings made in the proceeding with the Commission and must mail a copy to the applicant and to every other party. Only parties to the proceeding can ask for court review of Commission orders in the proceeding.

However, a person does not have to intervene in order to have comments considered. The second way to participate is by filing with the Secretary of the Commission, as soon as possible, an original and two copies of comments in support of or in opposition to this project. The Commission will consider these comments in determining the appropriate action to be taken, but the filing of a comment alone will not serve to make the filer a party to the proceeding. The Commission's rules require that persons filing comments in opposition to the project provide copies of their protests only to the party or parties directly involved in the protest.

Persons who wish to comment only on the environmental review of this project should submit an original and two copies of their comments to the Secretary of the Commission. Environmental commentors will be placed on the Commission's environmental mailing list, will receive copies of the environmental documents, and will be notified of meetings associated with the Commission's environmental review process. Environmental commentors will not be required to serve copies of filed documents on all other parties. However, the non-party commentors will not receive copies of all documents filed by other parties or issued by the Commission (except for the mailing of environmental documents issued by the Commission) and will not have the right to seek court review of the Commission's final order.

The Commission strongly encourages electronic filings of comments, protests and interventions in lieu of paper using the "eFiling" link at *http://www.ferc.gov.* Persons unable to file electronically should submit an original and 14 copies of the protest or intervention to the Federal Energy regulatory Commission, 888 First Street, NE., Washington, DC 20426.

This filing is accessible on-line at *http://www.ferc.gov*, using the "eLibrary" link and is available for review in the Commission's Public Reference Room in Washington, DC. There is an "eSubscription" link on the Web site that enables subscribers to receive e-mail notification when a document is added to a subscribed docket(s). For assistance with any FERC Online service, please e-mail *FERCOnlineSupport@ferc.gov*, or call (866) 208–3676 (toll free). For TTY, call (202) 502–8659.

Comment Date: December 13, 2010.

Kimberly D. Bose,

Secretary.

[FR Doc. 2010–30028 Filed 11–29–10; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. CP11–36–000]

Tennessee Gas Pipeline Company; Notice of Application

November 23, 2010.

Take notice that on November 17, 2010, Tennessee Gas Pipeline Company (Tennessee), 1001 Louisiana Street, Houston, Texas 77002, filed in the above referenced docket an application pursuant to section 7(c) of the Natural Gas Act (NGA) for authorization to construct a new 2,000 horsepower compressor station along its 200 Line system in western Massachusetts in order to provide 6,100 dekatherms per day (Dth/d) of incremental transportation capacity to Bay State Gas Company and 4,300 Dth/d of incremental transportation capacity to the Berkshire Gas Company, all as more fully set forth in the application which is on file with the Commission and open to public inspection. The filing is available for review at the Commission in the Public Reference Room or may be viewed on the Commission's Web site web at *http://www.ferc.gov* using the "eLibrary" link. Enter the docket number excluding the last three digits in the

docket number field to access the document. For assistance, contact FERC at *FERCOnlineSupport@ferc.gov* or call toll-free, (886) 208–3676 or TYY, (202) 502–8659.

Any questions concerning this application may be directed to John E. Griffin, Counsel, Tennessee Gas Pipeline Company, 569 Brookwood Village, Suite 501, Birmingham, Alabama 35209, by telephone at (205) 425–7412, by facsimile at (205) 327–2253, or by e-mail at *john.e.griffin@elpaso.com;* or Thomas Joyce, Manager, Rates and Regulatory Affairs, Tennessee Gas Pipeline Company, 1001 Louisiana Street, Houston, Texas 77002, by telephone at (713) 420–3299, by facsimile at (713) 420–1605, or by e-mail at *tom.joyce@elpaso.com.*

There are two ways to become involved in the Commission's review of this project. First, any person wishing to obtain legal status by becoming a party to the proceedings for this project should, on or before the comment date stated below file with the Federal Energy Regulatory Commission, 888 First Street, NE., Washington, DC 20426, a motion to intervene in accordance with the requirements of the Commission's Rules of Practice and Procedure (18 CFR 385.214 or 385.211) and the Regulations under the NGA (18 CFR 157.10). A person obtaining party status will be placed on the service list maintained by the Secretary of the Commission and will receive copies of all documents filed by the applicant and by all other parties. A party must submit 14 copies of filings made in the proceeding with the Commission and must mail a copy to the applicant and to every other party. Only parties to the proceeding can ask for court review of Commission orders in the proceeding.

However, a person does not have to intervene in order to have comments considered. The second way to participate is by filing with the Secretary of the Commission, as soon as possible, an original and two copies of comments in support of or in opposition to this project. The Commission will consider these comments in determining the appropriate action to be taken, but the filing of a comment alone will not serve to make the filer a party to the proceeding. The Commission's rules require that persons filing comments in opposition to the project provide copies of their protests only to the party or parties directly involved in the protest.

Persons who wish to comment only on the environmental review of this project should submit an original and two copies of their comments to the Secretary of the Commission. Environmental commentors will be placed on the Commission's environmental mailing list, will receive copies of the environmental documents, and will be notified of meetings associated with the Commission's environmental review process. Environmental commentors will not be required to serve copies of filed documents on all other parties. However, the non-party commentors will not receive copies of all documents filed by other parties or issued by the Commission (except for the mailing of environmental documents issued by the Commission) and will not have the right to seek court review of the Commission's final order.

The Commission strongly encourages electronic filings of comments, protests and interventions in lieu of paper using the "eFiling" link at *http://www.ferc.gov*. Persons unable to file electronically should submit an original and 7 copies of the protest or intervention to the Federal Energy Regulatory Commission, 888 First Street, NE., Washington, DC 20426.

This filing is accessible on-line at *http://www.ferc.gov*, using the "eLibrary" link and is available for review in the Commission's Public Reference Room in Washington, DC. There is an "eSubscription" link on the Web site that enables subscribers to receive e-mail notification when a document is added to a subscribed docket(s). For assistance with any FERC Online service, please e-mail *FERCOnlineSupport@ferc.gov,* or call (866) 208–3676 (toll free). For TTY, call (202) 502–8659.

Comment Date: December 14, 2010.

Kimberly D. Bose,

Secretary.

[FR Doc. 2010–30155 Filed 11–29–10; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket Nos. CP11–31–000; PF10–16–000

Transcontinental Gas Pipeline Company, LLC; Notice of Application

November 23, 2010.

Take notice that on November 12, 2010, Transcontinental Gas Pipeline Company, LLC (Transco), 2800 Post Oak Boulevard, Houston, Texas 77056–6106, filed an application in Docket No. CP11–31–000 pursuant to sections 7(b) and 7(c) of the Natural Gas Act (NGA), and Part 157(A) of the Commission's regulations for a certificate of public convenience and necessity authorizing Transco to construct and operate its Mid-Atlantic Connector Expansion Project. This expansion project will provide 142,000 dekatherms per day (Dth/d) of incremental firm transportation service to Virginia Power Services Energy Corp. Inc., and Baltimore Gas and Electric Company (MAC Shippers). Specifically, Transco proposes to construct approximately 2.78 miles of new pipeline looping facilities and replacement pipeline facilities on Transco's existing mainline, 18,950 horsepower of additional compression at two existing compressor stations, and construction or modification of above-ground facilities. The project will also involve the retirement of four compressor units at Transco's existing Compressor Station 175 in Fluvanna County, Virginia and abandonment in place of approximately 0.12 miles of Mainline B pipeline in Fairfax County, Virginia. Transco seeks authorization under NGA section 7(b) and Part 157 of the Commission's regulations for the abandonment of these facilities. The application is on file with the Commission and open to public inspection. This filing is available for review at the Commission in the Public Reference Room or may be viewed on the Commission's Web site at *http://www.ferc.gov* using the "eLibrary" link. Enter the docket number excluding the last three digits in the docket number field to access the document. For assistance, please contact FERC Online Support at *FERCOnlineSupport@ferc.gov* or toll free at (866) 208–3676, or for TTY, contact (202) 502–8659.

Any questions regarding this application should be directed to Bela Patel, Regulatory Analyst, Transcontinental Gas Pipe Line Company, P.O. Box 1396, Houston, TX, 77251–1396, or by calling (713) 215–2659 (telephone).

Transco states that by letter dated April 23, 2010, in Docket No. PF10–16–000, the Commission's Office of Energy Projects granted Transco's April 15, 2010, request to utilize the National Environmental Policy Act (NEPA) Pre-Filing Process for the Projects. Transco has also submitted an applicant-prepared Draft Environmental Assessment that was prepared during the Pre-Filing Process that was included with this application. Now, as of the filing of this application on November 12, 2010, the NEPA Pre-Filing Process for this project has ended. From this time forward, this proceeding will be conducted in Docket No. CP11–31–000, as noted in the caption of this notice.

Pursuant to Section 157.9 of the Commission's rules, 18 CFR 157.9, within 90 days of this Notice the Commission staff will either: Complete its environmental assessment (EA) and place it into the Commission's public record (eLibrary) for this proceeding; or issue a Notice of Schedule for Environmental Review. If a Notice of Schedule for Environmental Review is issued, it will indicate, among other milestones, the anticipated date for the Commission staff's issuance of the final environmental impact statement (FEIS) or EA for this proposal. The filing of the EA in the Commission's public record for this proceeding or the issuance of a Notice of Schedule for Environmental Review will serve to notify federal and state agencies of the timing for the completion of all necessary reviews, and the subsequent need to complete all federal authorizations within 90 days of the date of issuance of the Commission staff's FEIS or EA.

There are two ways to become involved in the Commission's review of this project. First, any person wishing to obtain legal status by becoming a party to the proceedings for this project should, on or before the comment date stated below, file with the Federal Energy Regulatory Commission, 888 First Street, NE., Washington, DC 20426, a motion to intervene in accordance with the requirements of the Commission's Rules of Practice and Procedure (18 CFR 385.214 or 385.211) and the Regulations under the NGA (18 CFR 157.10). A person obtaining party status will be placed on the service list maintained by the Secretary of the Commission and will receive copies of all documents filed by the applicant and by all other parties. A party must submit 14 copies of filings made with the Commission and must mail a copy to the applicant and to every other party in the proceeding. Only parties to the proceeding can ask for court review of Commission orders in the proceeding.

However, a person does not have to intervene in order to have comments considered. The second way to participate is by filing with the Secretary of the Commission, as soon as possible, an original and two copies of comments in support of or in opposition to this project. The Commission will consider these comments in determining the appropriate action to be taken, but the filing of a comment alone will not serve to make the filer a party to the proceeding. The Commission's rules require that persons filing comments in opposition to the project provide copies of their protests only to the party or parties directly involved in the protest.

Persons who wish to comment only on the environmental review of this project should submit an original and two copies of their comments to the Secretary of the Commission. Environmental commentors will be placed on the Commission's environmental mailing list, will receive copies of the environmental documents, and will be notified of meetings associated with the Commission's environmental review process. Environmental commentors will not be required to serve copies of filed documents on all other parties. However, the non-party commentors will not receive copies of all documents filed by other parties or issued by the Commission (except for the mailing of environmental documents issued by the Commission) and will not have the right to seek court review of the Commission's final order.

The Commission strongly encourages electronic filings of comments, protests and interventions in lieu of paper using the "eFiling" link at *http://www.ferc.gov.* Persons unable to file electronically should submit an original and 14 copies of the protest or intervention to the Federal Energy regulatory Commission, 888 First Street, NE., Washington, DC 20426.

This filing is accessible on-line at *http://www.ferc.gov*, using the "eLibrary" link and is available for review in the Commission's Public Reference Room in Washington, DC. There is an "eSubscription" link on the Web site that enables subscribers to receive email notification when a document is added to a subscribed docket(s). For assistance with any FERC Online service, please e-mail *FERCOnlineSupport@ferc.gov,* or call (866) 208–3676 (toll free). For TTY, call (202) 502–8659.

Comment Date: December 14, 2010.

Kimberly D. Bose,

Secretary.

[FR Doc. 2010–30153 Filed 11–29–10; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. CP11–32–000]

Sabine Pass LNG, L.P.; Notice of Application

November 22, 2010.

Take notice that on November 12, 2010, Sabine Pass LNG, L.P. (Sabine Pass), 700 Milam Street, Suite 800, Houston, Texas 77002, filed in Docket No. CP11–32–000, an application, pursuant to section 3(a) of the Natural Gas Act (NGA), as amended, and Part 153 of the Commission's Regulations, to install, own, and operate a redundant high pressure boil off gas compressor at its existing Sabine Pass LNG Terminal, located in Cameron Parish, Louisiana, all as more fully set forth in the application which is on file with the Commission and open to public inspection.

Any questions regarding this application should be directed to Patricia Outtrim, Sabine Pass LNG, L.P., 700 Milam Street, Suite 800, Houston, Texas 77002, or call (713) 375–5212, or by e-mail *pat.outtrim@cheniere.com.* Or contact Lisa M. Tonery, Fulbright & Jaworski L.L.P., 666 Fifth Avenue, New York, NY 10103, or call (212) 318–3009, or by e-mail *ltonery@fulbright.com.*

Pursuant to section 157.9 of the Commission's rules, 18 CFR 157.9, within 90 days of this Notice the Commission staff will either: complete its environmental assessment (EA) and place it into the Commission's public record (eLibrary) for this proceeding; or issue a Notice of Schedule for Environmental Review. If a Notice of Schedule for Environmental Review is issued, it will indicate, among other milestones, the anticipated date for the Commission staff's issuance of the final environmental impact statement (FEIS) or EA for this proposal. The filing of the EA in the Commission's public record for this proceeding or the issuance of a Notice of Schedule for Environmental Review will serve to notify federal and state agencies of the timing for the completion of all necessary reviews, and the subsequent need to complete all Federal authorizations within 90 days of the date of issuance of the Commission staff's FEIS or EA.

There are two ways to become involved in the Commission's review of this project. First, any person wishing to obtain legal status by becoming a party to the proceedings for this project should, on or before the comment date stated below, file with the Federal Energy Regulatory Commission, 888 First Street, NE., Washington, DC 20426, a motion to intervene in accordance with the requirements of the Commission's Rules of Practice and Procedure (18 CFR 385.214 or 385.211) and the Regulations under the NGA (18 CFR 157.10). A person obtaining party status will be placed on the service list maintained by the Secretary of the Commission and will receive copies of all documents filed by the applicant and by all other parties. A party must submit an original and 7 copies of filings made with the Commission and must mail a

copy to the applicant and to every other party in the proceeding. Only parties to the proceeding can ask for court review of Commission orders in the proceeding.

However, a person does not have to intervene in order to have comments considered. The second way to participate is by filing with the Secretary of the Commission, as soon as possible, an original and two copies of comments in support of or in opposition to this project. The Commission will consider these comments in determining the appropriate action to be taken, but the filing of a comment alone will not serve to make the filer a party to the proceeding. The Commission's rules require that persons filing comments in opposition to the project provide copies of their protests only to the party or parties directly involved in the protest.

Persons who wish to comment only on the environmental review of this project should submit an original and two copies of their comments to the Secretary of the Commission. Environmental commentors will be placed on the Commission's environmental mailing list, will receive copies of the environmental documents, and will be notified of meetings associated with the Commission's environmental review process. Environmental commentors will not be required to serve copies of filed documents on all other parties. However, the non-party commentors will not receive copies of all documents filed by other parties or issued by the Commission (except for the mailing of environmental documents issued by the Commission) and will not have the right to seek court review of the Commission's final order.

The Commission strongly encourages electronic filings of comments, protests and interventions in lieu of paper using the "eFiling" link at *http://www.ferc.gov*. Persons unable to file electronically should submit an original and 7 copies of the protest or intervention to the Federal Energy regulatory Commission, 888 First Street, NE., Washington, DC 20426. This filing is accessible on-line at *http://www.ferc.gov*, using the "eLibrary" link and is available for review in the Commission's Public Reference Room in Washington, DC. There is an "eSubscription" link on the Web site that enables subscribers to receive e-mail notification when a document is added to a subscribed docket(s). For assistance with any FERC Online service, please e-mail *FERCOnlineSupport@ferc.gov*, or call (866) 208–3676 (toll free). For TTY, call (202) 502–8659.

Comment Date: December 7, 2010.

Kimberly D. Bose,

Secretary.

[FR Doc. 2010–30029 Filed 11–29–10; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

Combined Notice of Filings # 1

November 17, 2010.

Take notice that the Commission received the following electric corporate filings:

Docket Numbers: EC11–18–000.

Applicants: Ameren Illinois Company.

Description: Ameren Illinois Company's Request for Approval Pursuant to Section 203 of the Federal Power Act and for Expedited Consideration and a Shortened Notice Period.

Filed Date: 11/10/2010.

Accession Number: 20101110–5141.

Comment Date: 5 p.m. Eastern Time on Wednesday, December 1, 2010.

Take notice that the Commission received the following electric rate filings:

Docket Numbers: ER00–2529–004.

Applicants: Dow Pipeline Company.

Description: Dow Pipeline Company's Amendment to Updated Market Power Analysis.

Filed Date: 11/16/2010.

Accession Number: 20101116–5110.

Comment Date: 5 p.m. Eastern Time on Tuesday, December 7, 2010.

Docket Numbers: ER10–2068–004.

Applicants: Delaware City Refining Company LLC.

Description: Notice of Non-Material Change in Status of Delaware City Refining Company LLC.

Filed Date: 11/17/2010.

Accession Number: 20101117–5132.

Comment Date: 5 p.m. Eastern Time on Wednesday, December 8, 2010.

Docket Numbers: ER10–2077–003.

Applicants: PBF Power Marketing LLC.

Description: Notice of Non-Material Change in Status of PBF Power Marketing LLC.

Filed Date: 11/17/2010.

Accession Number: 20101117–5118.

Comment Date: 5 p.m. Eastern Time on Wednesday, December 8, 2010.

Docket Numbers: ER10–2710–005.

Applicants: PJM Interconnection, L.L.C.

Description: PJM Interconnection, L.L.C. submits an errata to their RAA baseline filing to make technical corrections, to be effective 9/17/2010.

Filed Date: 11/17/2010.

Accession Number: 20101117–5054.

Comment Date: 5 p.m. Eastern Time on Wednesday, November 24, 2010.

Docket Numbers: ER10–2990–001.

Applicants: Potomac Power Resources, Inc.

Description: Potomac Power Resources, Inc. submits tariff filing per 35: Compliance Filing to Correct MBR Baseline Filing to be effective 9/27/2010.

Filed Date: 11/17/2010.

Accession Number: 20101117–5208.

Comment Date: 5 p.m. Eastern Time on Wednesday, December 8, 2010.

Docket Numbers: ER10–2992–001.

Applicants: Pepco Energy Services, Inc.

Description: Pepco Energy Services, Inc. submits tariff filing per 35: Compliance Filing to Correct MBR Baseline Filing to be effective 9/27/2010.

Filed Date: 11/17/2010.

Accession Number: 20101117–5196.

Comment Date: 5 p.m. Eastern Time on Wednesday, December 8, 2010.

Docket Numbers: ER10–2997–001.

Applicants: Atlantic City Electric Company.

Description: Atlantic City Electric Company submits tariff filing per 35: Compliance Filing to Correct MBR Baseline Filing to be effective 9/27/2010.

Filed Date: 11/17/2010.

Accession Number: 20101117–5195.

Comment Date: 5 p.m. Eastern Time on Wednesday, December 8, 2010.

Docket Numbers: ER10–3003–001.

Applicants: Bethlehem Renewable Energy, LLC.

Description: Bethlehem Renewable Energy, LLC submits tariff filing per 35: Compliance Filing to Correct MBR Baseline Filing to be effective 9/27/2010.

Filed Date: 11/17/2010.

Accession Number: 20101117–5172.

Comment Date: 5 p.m. Eastern Time on Wednesday, December 8, 2010.

Docket Numbers: ER10–3012–001.

Applicants: Conectiv Energy Supply, Inc.

Description: Conectiv Energy Supply, Inc. submits tariff filing per 35: Compliance Filing to Correct MBR Baseline Filing to be effective 9/27/2010.

Filed Date: 11/17/2010.

Accession Number: 20101117–5166.

Comment Date: 5 p.m. Eastern Time on Wednesday, December 8, 2010.

Docket Numbers: ER10–3015–001.

Applicants: Eastern Landfill Gas, LLC.
Description: Eastern Landfill Gas, LLC submits tariff filing per 35: Compliance Filing to Correct MBR Baseline Filing to be effective 9/27/2010.
Filed Date: 11/17/2010.
Accession Number: 20101117–5131.
Comment Date: 5 p.m. Eastern Time on Wednesday, December 8, 2010.

Docket Numbers: ER10–3016–001.
Applicants: Fauquier Landfill Gas, LLC.
Description: Fauquier Landfill Gas, LLC submits tariff filing per 35: Compliance Filing to Correct MBR Baseline Filing to be effective 9/27/2010.
Filed Date: 11/17/2010.
Accession Number: 20101117–5139.
Comment Date: 5 p.m. Eastern Time on Wednesday, December 8, 2010.

Docket Numbers: ER10–3030–001.
Applicants: Potomac Electric Power Company.
Description: Potomac Electric Power Company submits tariff filing per 35: Compliance Filing to Correct MBR Baseline Filing to be effective 9/27/2010.
Filed Date: 11/17/2010.
Accession Number: 20101117–5214.
Comment Date: 5 p.m. Eastern Time on Wednesday, December 8, 2010.

Docket Numbers: ER10–3149–001.
Applicants: Galt Power, Inc.
Description: Galt Power, Inc. submits tariff filing per 35: Galt Power Inc Baseline Filing to be effective 11/17/2010.
Filed Date: 11/17/2010.
Accession Number: 20101117–5046.
Comment Date: 5 p.m. Eastern Time on Wednesday, December 8, 2010.

Docket Numbers: ER10–3189–001.
Applicants: CCES LLC.
Description: CCES LLC submits tariff filing per 35: CCES LLC Baseline Filing to be effective 11/17/2010.
Filed Date: 11/17/2010.
Accession Number: 20101117–5122.
Comment Date: 5 p.m. Eastern Time on Wednesday, December 8, 2010.

Docket Numbers: ER10–3234–001.
Applicants: Energy Cooperative Association of Pennsylvania.
Description: Energy Cooperative Association of Pennsylvania submits tariff filing per 35: Energy Cooperative Association of Pennsylvania Baseline Filing to be effective 11/17/2010.
Filed Date: 11/17/2010.
Accession Number: 20101117–5086.
Comment Date: 5 p.m. Eastern Time on Wednesday, December 8, 2010.

Docket Numbers: ER11–18–002.
Applicants: Central Hudson Gas & Electric Corporation.
Description: Central Hudson Gas & Electric Corporation submits tariff filing per 35: CHG&E Rate Schedule 31—Refile to be effective 10/5/2010.
Filed Date: 11/17/2010.
Accession Number: 20101117–5187.
Comment Date: 5 p.m. Eastern Time on Wednesday, December 8, 2010.

Docket Numbers: ER11–1881–001.
Applicants: Burley Butte Wind Park, LLC.
Description: Burley Butte Wind Park, LLC submits tariff filing per 35.17(b): Burley Butte Wind Park Supplement No. 1 to Market Based Rate Application to be effective 11/5/2010.
Filed Date: 11/17/2010.
Accession Number: 20101117–5125.
Comment Date: 5 p.m. Eastern Time on Wednesday, December 8, 2010.

Docket Numbers: ER11–1882–001.
Applicants: Golden Valley Wind Park, LLC.
Description: Golden Valley Wind Park, LLC submits tariff filing per 35.17(b): Golden Valley Wind Park Supplement No. 1 to Market Based Rate Application to be effective 11/5/2010.
Filed Date: 11/17/2010.
Accession Number: 20101117–5137.
Comment Date: 5 p.m. Eastern Time on Wednesday, December 8, 2010.

Docket Numbers: ER11–1883–001.
Applicants: Milner Dam Wind Park, LLC.
Description: Milner Dam Wind Park, LLC submits tariff filing per 35.17(b): Milner Dam Wind Park Supplement No. 1 to Market Based Rate Application to be effective 11/5/2010.
Filed Date: 11/17/2010.
Accession Number: 20101117–5138.
Comment Date: 5 p.m. Eastern Time on Wednesday, December 8, 2010.

Docket Numbers: ER11–1885–001.
Applicants: Oregon Trail Wind Park, LLC.
Description: Oregon Trail Wind Park, LLC submits tariff filing per 35.17(b): Oregon Trail Wind Park Supplement No. 1 to Market Based Rate Application to be effective 11/5/2010.
Filed Date: 11/17/2010.
Accession Number: 20101117–5140.
Comment Date: 5 p.m. Eastern Time on Wednesday, December 8, 2010.

Docket Numbers: ER11–1886–001.
Applicants: Pilgrim Stage Station Wind Park, LLC.
Description: Pilgrim Stage Station Wind Park, LLC submits tariff filing per 35.17(b): Pilgrim Stage Station Wind Park Supplement No.1 to Market Based Rate Application to be effective 11/5/2010.
Filed Date: 11/17/2010.
Accession Number: 20101117–5144.
Comment Date: 5 p.m. Eastern Time on Wednesday, December 8, 2010.

Docket Numbers: ER11–1887–001.
Applicants: Thousand Springs Wind Park, LLC.
Description: Thousand Springs Wind Park, LLC submits tariff filing per 35.17(b): Thousand Springs Wind Park Supplement No. 1 to Market Based Rate Application to be effective 11/5/2010.
Filed Date: 11/17/2010.
Accession Number: 20101117–5149.
Comment Date: 5 p.m. Eastern Time on Wednesday, December 8, 2010.

Docket Numbers: ER11–1889–001.
Applicants: Tuana Gulch Wind Park, LLC.
Description: Tuana Gulch Wind Park, LLC submits tariff filing per 35.17(b): Tuana Gulch Wind Park Supplement No. 1 to Market Based Rate Application to be effective 11/5/2010.
Filed Date: 11/17/2010.
Accession Number: 20101117–5155.
Comment Date: 5 p.m. Eastern Time on Wednesday, December 8, 2010.

Docket Numbers: ER11–1890–001.
Applicants: Camp Reed Wind Park, LLC.
Description: Camp Reed Wind Park, LLC submits tariff filing per 35.17(b): Camp Reed Wind Park Supplement No. 1 to Market Based Rate Application to be effective 11/5/2010.
Filed Date: 11/17/2010.
Accession Number: 20101117–5133.
Comment Date: 5 p.m. Eastern Time on Wednesday, December 8, 2010.

Docket Numbers: ER11–1892–001.
Applicants: Payne's Ferry Wind Park, LLC.
Description: Payne's Ferry Wind Park, LLC submits tariff filing per 35.17(b): Payne's Ferry Wind Park Supplement No. 1 to Market Based Rate Application to be effective 11/5/2010.
Filed Date: 11/17/2010.
Accession Number: 20101117–5142.
Comment Date: 5 p.m. Eastern Time on Wednesday, December 8, 2010.

Docket Numbers: ER11–1893–001.
Applicants: Salmon Falls Wind Park, LLC.
Description: Salmon Falls Wind Park, LLC submits tariff filing per 35.17(b): Salmon Falls Wind Park Supplement No. 1 to Market Based Rate Application to be effective 11/5/2010.
Filed Date: 11/17/2010.
Accession Number: 20101117–5146.
Comment Date: 5 p.m. Eastern Time on Wednesday, December 8, 2010.

Docket Numbers: ER11–1894–001.
Applicants: Yahoo Creek Wind Park, LLC.
Description: Yahoo Creek Wind Park, LLC submits tariff filing per 35.17(b): Yahoo Creek Wind Park Supplement No. 1 to Market Based Rate Application to be effective 11/5/2010.

Filed Date: 11/17/2010.
Accession Number: 20101117–5160.
Comment Date: 5 p.m. Eastern Time on Wednesday, December 8, 2010.

Docket Numbers: ER11–1939–000.
Applicants: AP Gas & Electric (PA), LLC.
Description: AP Gas & Electric, LLC submits amendment to October 29th Petition etc.
Filed Date: 11/10/2010.
Accession Number: 20101110–0015.
Comment Date: 5 p.m. Eastern Time on Monday, November 29, 2010.

Docket Numbers: ER11–2089–000.
Applicants: MidAmerican Energy Company.
Description: MidAmerican Energy Company submits tariff filing per 35.13(a)(2)(iii): Rate Schedule No. 116—Initial Filing to be effective 1/1/2011.
Filed Date: 11/04/2010.
Accession Number: 20101104–5151.
Comment Date: 5 p.m. Eastern Time on Friday, November 26, 2010.

Docket Numbers: ER11–2122–000.
Applicants: Arizona Public Service Company.
Description: Arizona Public Service Company submits tariff filing per 35.12: Service Schedule No. 307 to be effective 10/15/2010.
Filed Date: 11/15/2010.
Accession Number: 20101115–5090.
Comment Date: 5 p.m. Eastern Time on Monday, December 6, 2010.

Docket Numbers: ER11–2130–000.
Applicants: Ontario Power Generation Energy Trading, Inc.
Description: Ontario Power Generation Energy Trading, Inc. submits tariff filing per 35: OPGET ASM Filing to be effective 1/15/2011.
Filed Date: 11/16/2010.
Accession Number: 20101116–5045.
Comment Date: 5 p.m. Eastern Time on Tuesday, December 7, 2010.

Docket Numbers: ER11–2131–000.
Applicants: Entergy Arkansas, Inc.
Description: Entergy Arkansas, Inc. submits tariff filing per 35.13(a)(2)(iii: MSS–3 Spindletop Compliance Filing to be effective 11/16/2010.
Filed Date: 11/16/2010.
Accession Number: 20101116–5069.
Comment Date: 5 p.m. Eastern Time on Tuesday, December 7, 2010.

Docket Numbers: ER11–2132–000.
Applicants: Entergy Gulf States Louisiana, L.L.C.
Description: Entergy Gulf States Louisiana, L.L.C. submits tariff filing per 35.13(a)(2)(iii: MSS–3 Spindletop Compliance Filing to be effective 11/16/2010.
Filed Date: 11/16/2010.
Accession Number: 20101116–5073.
Comment Date: 5 p.m. Eastern Time on Tuesday, December 7, 2010.

Docket Numbers: ER11–2133–000.
Applicants: Entergy Louisiana, LLC.
Description: Entergy Louisiana, LLC submits tariff filing per 35.13(a)(2)(iii: MSS–3 Spindletop Compliance Filing to be effective 11/16/2010.
Filed Date: 11/16/2010.
Accession Number: 20101116–5077.
Comment Date: 5 p.m. Eastern Time on Tuesday, December 7, 2010.

Docket Numbers: ER11–2134–000.
Applicants: Entergy Mississippi, Inc.
Description: Entergy Mississippi, Inc. submits tariff filing per 35.13(a)(2)(iii: MSS–3 Spindletop Compliance Filing to be effective 11/16/2010.
Filed Date: 11/16/2010.
Accession Number: 20101116–5078.
Comment Date: 5 p.m. Eastern Time on Tuesday, December 7, 2010.

Docket Numbers: ER11–2135–000.
Applicants: Entergy New Orleans, Inc.
Description: Entergy New Orleans, Inc. submits tariff filing per 35.13(a)(2)(iii: MSS–3 Spindletop Compliance Filing to be effective 11/16/2010.
Filed Date: 11/16/2010.
Accession Number: 20101116–5079.
Comment Date: 5 p.m. Eastern Time on Tuesday, December 7, 2010.

Docket Numbers: ER11–2136–000.
Applicants: Entergy Texas, Inc.
Description: Entergy Texas, Inc. submits tariff filing per 35: MSS–3 Spindletop Compliance Filing to be effective 11/16/2010.
Filed Date: 11/16/2010.
Accession Number: 20101116–5080.
Comment Date: 5 p.m. Eastern Time on Tuesday, December 7, 2010.

Docket Numbers: ER11–2137–000.
Applicants: Midwest Independent Transmission System Operator, Inc.
Description: Midwest Independent Transmission System Operator, Inc. submits tariff filing per 35: G809 Compliance to be effective 12/31/9998.
Filed Date: 11/16/2010.
Accession Number: 20101116–5106.
Comment Date: 5 p.m. Eastern Time on Tuesday, December 7, 2010.

Docket Numbers: ER11–2138–000.
Applicants: PJM Interconnection, L.L.C.
Description: PJM Interconnection, L.L.C. submits tariff filing per 35.13(a)(2)(iii: ISA No. 2699, Queue V4–068, Solar Star North Carolina II, LLC & VEPCO to be effective 10/18/2010.
Filed Date: 11/17/2010.
Accession Number: 20101117–5087.
Comment Date: 5 p.m. Eastern Time on Wednesday, December 8, 2010.

Docket Numbers: ER11–2139–000.
Applicants: California Independent System Operator Corporation
Description: California Independent System Operator Corporation submits tariff filing per 35.13(a)(2)(iii: 2010–11–17 CAISO's LGIA for Manzana Wind Project with SCE to be effective 1/10/2011.
Filed Date: 11/17/2010.
Accession Number: 20101117–5090.
Comment Date: 5 p.m. Eastern Time on Wednesday, December 8, 2010.

Docket Numbers: ER11–2140–000.
Applicants: PJM Interconnection, L.L.C.
Description: PJM Interconnection, L.L.C. submits tariff filing per 35.13(a)(2)(iii: PJM submits amendments to Schedule 12–Appendix to update RTEP to be effective 2/15/2011.
Filed Date: 11/17/2010.
Accession Number: 20101117–5141.
Comment Date: 5 p.m. Eastern Time on Wednesday, December 8, 2010.

Docket Numbers: ER11–2141–000.
Applicants: PJM Interconnection, L.L.C.
Description: PJM Interconnection, L.L.C. submits tariff filing per 35.13(a)(2)(iii: ISA 2697, Queue No. R49, Paulding Wind Farm II, LLC & Ohio Power Company to be effective 10/18/2010.
Filed Date: 11/17/2010.
Accession Number: 20101117–5198.
Comment Date: 5 p.m. Eastern Time on Wednesday, December 8, 2010.

Any person desiring to intervene or to protest in any of the above proceedings must file in accordance with Rules 211 and 214 of the Commission's Rules of Practice and Procedure (18 CFR 385.211 and 385.214) on or before 5 p.m. Eastern time on the specified comment date. It is not necessary to separately intervene again in a subdocket related to a compliance filing if you have previously intervened in the same docket. Protests will be considered by the Commission in determining the appropriate action to be taken, but will not serve to make protestants parties to the proceeding. Anyone filing a motion to intervene or protest must serve a copy of that document on the Applicant. In reference to filings initiating a new proceeding, interventions or protests submitted on or before the comment deadline need not be served on persons other than the Applicant.

The Commission encourages electronic submission of protests and interventions in lieu of paper, using the FERC Online links at *http://www.ferc.gov.* To facilitate electronic service, persons with Internet access who will eFile a document and/or be

listed as a contact for an intervenor must create and validate an eRegistration account using the eRegistration link. Select the eFiling link to log on and submit the intervention or protests.

Persons unable to file electronically should submit an original and 14 copies of the intervention or protest to the Federal Energy Regulatory Commission, 888 First St. NE., Washington, DC 20426.

The filings in the above proceedings are accessible in the Commission's eLibrary system by clicking on the appropriate link in the above list. They are also available for review in the Commission's Public Reference Room in Washington, DC There is an eSubscription link on the Web site that enables subscribers to receive e-mail notification when a document is added to a subscribed dockets(s). For assistance with any FERC Online service, please e-mail *FERCOnlineSupport@ferc.gov.* or call (866) 208–3676 (toll free). For TTY, call (202) 502–8659.

Nathaniel J. Davis, Sr.,

Deputy Secretary.

[FR Doc. 2010–30059 Filed 11–29–10; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

Combined Notice of Filings #1

November 16, 2010.

Take notice that the Commission received the following electric rate filings:

Docket Numbers: ER10–64–003.

Applicants: CPV Keenan II Renewable Energy Company, Inc.

Description: Notification of Non-Material Change in Facts of CPV Keenan II Renewable Energy Company, LLC.

Filed Date: 11/15/2010.

Accession Number: 20101115–5168.

Comment Date: 5 p.m. Eastern Time on Monday, December 6, 2010.

Docket Numbers: ER10–1806–002.

Applicants: AP Holdings, LLC.

Description: AP Holdings, LLC submits Notification of Non-Material Change in Status.

Filed Date: 11/10/2010.

Accession Number: 20101110–0201.

Comment Date: 5 p.m. Eastern Time on Wednesday, December 1, 2010.

Docket Numbers: ER10–2062–001.

Applicants: New York Independent System Operator, Inc.

Description: New York Independent System Operator, Inc. submits tariff filing per 35: Compliance Filing—IBRT and RLS re September 29 Orders to be effective 10/21/2010.

Filed Date: 11/15/2010.

Accession Number: 20101115–5163.

Comment Date: 5 p.m. Eastern Time on Monday, December 6, 2010.

Docket Numbers: ER11–2078–000.

Applicants: PJM Interconnection, L.L.C.

Description: PJM Interconnection, L.L.C. submits tariff filing per 35.13(a)(2)(iii): WMPA No. 2646, Queue V3–011, SX Landfill Energy, LLC and JCP&L to be effective 9/10/2010.

Filed Date: 11/10/2010.

Accession Number: 20101110–5147.

Comment Date: 5 p.m. Eastern Time on Wednesday, December 1, 2010.

Docket Numbers: ER10–2250–001.

Applicants: Portland General Electric Company.

Description: Portland General Electric Company submits its Reserve Energy Service Baseline Filing, to be effective 8/17/2010.

Filed Date: 11/10/2010.

Accession Number: 20101110–5010.

Comment Date: 5 p.m. Eastern Time on Wednesday, December 1, 2010.

Docket Numbers: ER10–2624–001.

Applicants: New Dominion Energy Cooperative.

Description: New Dominion Energy Cooperative submits tariff filing per 35: Market-Based Tariff to be effective 9/14/2010.

Filed Date: 11/15/2010.

Accession Number: 20101115–5159.

Comment Date: 5 p.m. Eastern Time on Monday, December 6, 2010.

Docket Numbers: ER10–2735–001.

Applicants: Anthracite Power and Light Company.

Description: Anthracite Power and Light Company submits revised version of its Market-Based Authority Tariff, to be effective 9/17/2010.

Filed Date: 11/10/2010.

Accession Number: 20101110–5139.

Comment Date: 5 p.m. Eastern Time on Wednesday, December 1, 2010.

Docket Numbers: ER10–3153–001.

Applicants: City of Vernon, California.

Description: City of Vernon, California submits tariff filing per 35: Vernon Baseline TO Tariff—Supplemental Filing of TOC to be effective 1/1/2011.

Filed Date: 11/15/2010.

Accession Number: 20101115–5161.

Comment Date: 5 p.m. Eastern Time on Monday, November 29, 2010.

Docket Numbers: ER11–2078–000.

Applicants: PJM Interconnection, L.L.C.

Description: PJM Interconnection, L.L.C. submits tariff filing per 35.13(a)(2)(iii): WMPA No. 2646, Queue V3–011, SX Landfill Energy, LLC and JCP&L to be effective 9/10/2010.

Filed Date: 11/10/2010.

Accession Number: 20101110–5147.

Comment Date: 5 p.m. Eastern Time on Wednesday, December 1, 2010.

Docket Numbers: ER11–2079–000.

Applicants: Duke Energy Fayette II, LLC.

Description: Duke Energy Fayette II, LLC submits tariff filing per 35.1: MBR Filing to be effective 1/9/2011.

Filed Date: 11/10/2010.

Accession Number: 20101110–5148.

Comment Date: 5 p.m. Eastern Time on Wednesday, December 1, 2010.

Docket Numbers: ER11–2080–000.

Applicants: Duke Energy Commercial Asset Management.

Description: Duke Energy Commercial Asset Management, Inc. submits Notice of Succession notifying the Commission of a name change to DEAM, to be effective 10/14/2010.

Filed Date: 11/10/2010.

Accession Number: 20101110–5153.

Comment Date: 5 p.m. Eastern Time on Wednesday, December 1, 2010.

Docket Numbers: ER11–2081–000.

Applicants: California Pacific Electric Company, LLC.

Description: California Pacific Electric Company, LLC submits tariff filing per 35.1: Baseline Tariff for DCA and BCA to be effective 12/31/2010.

Filed Date: 11/10/2010.

Accession Number: 20101110–5154.

Comment Date: 5 p.m. Eastern Time on Wednesday, December 1, 2010.

Docket Numbers: ER11–2085–000.

Applicants: Calpine Corporation.

Description: Request for Limited Waiver of CAISO Tariff Appendix Y To Permit Full Recovery of Interconnection Financial Security of Calpine Corporation.

Filed Date: 11/10/2010.

Accession Number: 20101110–5186.

Comment Date: 5 p.m. Eastern Time on Wednesday, December 1, 2010.

Docket Numbers: ER11–2124–000.

Applicants: PacifiCorp.

Description: PacifiCorp submits tariff filing per 35.13(a)(2)(iii): Tri State Amended and Restated Transmission Agreement to be effective 11/30/2010.

Filed Date: 11/15/2010.

Accession Number: 20101115–5110.

Comment Date: 5 p.m. Eastern Time on Monday, December 6, 2010.

Docket Numbers: ER11–2125–000.

Applicants: Startrans IO, LLC.

Description: Startrans IO, LLC submits tariff filing per 35.13(a)(2)(iii): Startrans IO—2011 update to the TRBAA to be effective 1/1/2011.

Filed Date: 11/15/2010.
Accession Number: 20101115–5135.
Comment Date: 5 p.m. Eastern Time on Monday, December 6, 2010.

Docket Numbers: ER11–2126–000.
Applicants: Public Service Company of Colorado.
Description: Public Service Company of Colorado submits tariff filing per 35.13(a)(2)(iii): 20101115_Electric Coordination Tariff to be effective 1/14/2011.
Filed Date: 11/15/2010.
Accession Number: 20101115–5140.
Comment Date: 5 p.m. Eastern Time on Monday, December 6, 2010.

Docket Numbers: ER11–2127–000.
Applicants: Terra-Gen Dixie Valley, LLC.
Description: Terra-Gen Dixie Valley, LLC submits tariff filing per 35.1: Terra-Gen Dixie Valley, LLC Open Access Transmission Tariff to be effective 1/14/2011.
Filed Date: 11/15/2010.
Accession Number: 20101115–5156.
Comment Date: 5 p.m. Eastern Time on Monday, December 6, 2010.

Docket Numbers: ER11–2128–000.
Applicants: California Independent System Operator Corporation.
Description: California Independent System Operator Corporation submits tariff filing per 35: 2010–11–15 CAISO's Convergence Bidding Compliance Filing to be effective 2/1/2011.
Filed Date: 11/15/2010.
Accession Number: 20101115–5157.
Comment Date: 5 p.m. Eastern Time on Monday, December 6, 2010.

Docket Numbers: ER11–2129–000.
Applicants: Sierra Pacific Power Company.
Description: Notice of Cancellation of Service Agreement No. 3, Electric Service Agreement with PG&E.
Filed Date: 11/15/2010.
Accession Number: 20101115–5201.
Comment Date: 5 p.m. Eastern Time on Monday, December 6, 2010.

Docket Numbers: ER11–2130–000.
Applicants: Ontario Power Generation Energy Trading, Inc.
Description: Ontario Power Generation Energy Trading, Inc. submits tariff filing per 35: OPGET ASM Filing to be effective 1/15/2011.
Filed Date: 11/16/2010.
Accession Number: 20101116–5045.
Comment Date: 5 p.m. Eastern Time on Tuesday, December 7, 2010.

Docket Numbers: ER11–2131–000.
Applicants: Entergy Arkansas, Inc.
Description: Entergy Arkansas, Inc. submits tariff filing per 35.13(a)(2)(iii): MSS–3 Spindletop Compliance Filing to be effective 11/16/2010.
Filed Date: 11/16/2010.
Accession Number: 20101116–5069.
Comment Date: 5 p.m. Eastern Time on Tuesday, December 7, 2010.

Docket Numbers: ER11–2132–000.
Applicants: Entergy Gulf States Louisiana, L.L.C.
Description: Entergy Gulf States Louisiana, L.L.C. submits tariff filing per 35.13(a)(2)(iii): MSS–3 Spindletop Compliance Filing to be effective 11/16/2010.
Filed Date: 11/16/2010.
Accession Number: 20101116–5073.
Comment Date: 5 p.m. Eastern Time on Tuesday, December 7, 2010.

Docket Numbers: ER11–2133–000.
Applicants: Entergy Louisiana, LLC.
Description: Entergy Louisiana, LLC submits tariff filing per 35.13(a)(2)(iii): MSS–3 Spindletop Compliance Filing to be effective 11/16/2010.
Filed Date: 11/16/2010.
Accession Number: 20101116–5077.
Comment Date: 5 p.m. Eastern Time on Tuesday, December 7, 2010.

Docket Numbers: ER11–2134–000.
Applicants: Entergy Mississippi, Inc.
Description: Entergy Mississippi, Inc. submits tariff filing per 35.13(a)(2)(iii): MSS–3 Spindletop Compliance Filing to be effective 11/16/2010.
Filed Date: 11/16/2010.
Accession Number: 20101116–5078.
Comment Date: 5 p.m. Eastern Time on Tuesday, December 7, 2010.

Docket Numbers: ER11–2135–000.
Applicants: Entergy New Orleans, Inc.
Description: Entergy New Orleans, Inc. submits tariff filing per 35.13(a)(2)(iii): MSS–3 Spindletop Compliance Filing to be effective 11/16/2010.
Filed Date: 11/16/2010.
Accession Number: 20101116–5079.
Comment Date: 5 p.m. Eastern Time on Tuesday, December 7, 2010.

Docket Numbers: ER11–2136–000.
Applicants: Entergy Texas, Inc.
Description: Entergy Texas, Inc. submits tariff filing per 35: MSS–3 Spindletop Compliance Filing to be effective 11/16/2010.
Filed Date: 11/16/2010.
Accession Number: 20101116–5080.
Comment Date: 5 p.m. Eastern Time on Tuesday, December 7, 2010.

Any person desiring to intervene or to protest in any of the above proceedings must file in accordance with Rules 211 and 214 of the Commission's Rules of Practice and Procedure (18 CFR 385.211 and 385.214) on or before 5 p.m. Eastern time on the specified comment date. It is not necessary to separately intervene again in a subdocket related to a compliance filing if you have previously intervened in the same docket. Protests will be considered by the Commission in determining the appropriate action to be taken, but will not serve to make protestants parties to the proceeding. Anyone filing a motion to intervene or protest must serve a copy of that document on the Applicant. In reference to filings initiating a new proceeding, interventions or protests submitted on or before the comment deadline need not be served on persons other than the Applicant.

The Commission encourages electronic submission of protests and interventions in lieu of paper, using the FERC Online links at *http://www.ferc.gov.* To facilitate electronic service, persons with Internet access who will eFile a document and/or be listed as a contact for an intervenor must create and validate an eRegistration account using the eRegistration link. Select the eFiling link to log on and submit the intervention or protests.

Persons unable to file electronically should submit an original and 14 copies of the intervention or protest to the Federal Energy Regulatory Commission, 888 First St., NE., Washington, DC 20426.

The filings in the above proceedings are accessible in the Commission's eLibrary system by clicking on the appropriate link in the above list. They are also available for review in the Commission's Public Reference Room in Washington, DC. There is an eSubscription link on the Web site that enables subscribers to receive e-mail notification when a document is added to a subscribed docket(s). For assistance with any FERC Online service, please e-mail *FERCOnlineSupport@ferc.gov.* or call (866) 208–3676 (toll free). For TTY, call (202) 502–8659.

Nathaniel J. Davis, Sr.,

Deputy Secretary.

[FR Doc. 2010–30058 Filed 11–29–10; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

Combined Notice of Filings #1

November 18, 2010.

Take notice that the Commission received the following electric rate filings:

Docket Numbers: ER10–2933–001.
Applicants: ISO New England Inc.
Description: ISO New England Inc. submits tariff filing per 35: Notice of Effective Date for Unsecured Credit

Revisions ER10–2933 to be effective 1/26/2011.

Filed Date: 11/18/2010.

Accession Number: 20101118–5046.

Comment Date: 5 p.m. Eastern Time on Thursday, December 9, 2010.

Docket Numbers: ER10–3018–001.

Applicants: Delmarva Power & Light Company.

Description: Delmarva Power & Light Company submits compliance filing to remove First Revised Volume No. 1 designation on its Market Based Rate Tariff, to be effective 9/27/2010.

Filed Date: 11/18/2010.

Accession Number: 20101118–5000.

Comment Date: 5 p.m. Eastern Time on Thursday, December 9, 2010.

Docket Numbers: ER10–3150–001.

Applicants: Sunoco Power Generation LLC.

Description: Sunoco Power Generation LLC submits tariff filing per 35: Sunoco Power Generation Baseline Filing to be effective 11/18/2010.

Filed Date: 11/18/2010.

Accession Number: 20101118–5063.

Comment Date: 5 p.m. Eastern Time on Thursday, December 9, 2010.

Docket Numbers: ER10–3183–001.

Applicants: Sunoco Power Marketing, LLC.

Description: Sunoco Power Marketing, LLC submits tariff filing per 35: Sunoco Power Marketing Baseline Filing to be effective 11/18/2010.

Filed Date: 11/18/2010.

Accession Number: 20101118–5062.

Comment Date: 5 p.m. Eastern Time on Thursday, December 9, 2010.

Docket Numbers: ER11–44–001.

Applicants: Pacific Gas and Electric Company.

Description: Pacific Gas and Electric Company submits rate changes to their Transmission Owner Tariff, FERC Electric Tariff Volume No. 5, to update its Transmission Revenue Balancing Account etc., to be effective 3/1/2010.

Filed Date: 11/18/2010.

Accession Number: 20101118–5001.

Comment Date: 5 p.m. Eastern Time on Thursday, December 9, 2010.

Docket Numbers: ER11–125–000.

Applicants: Intercom Energy, Inc.

Description: Intercom Energy, Inc. submits supplement to Order No. 697 Compliance Filing and Request for Category 1 Status.

Filed Date: 11/17/2010.

Accession Number: 20101117–5219.

Comment Date: 5 p.m. Eastern Time on Wednesday, December 8, 2010.

Docket Numbers: ER11–1935–000.

Applicants: Madison Paper Industries.

Description: Madison Paper Industries submits tariff filing per 35: Baseline Filing to be effective 3/1/2009.

Filed Date: 10/28/2010.

Accession Number: 20101028–5136.

Comment Date: 5 p.m. Eastern Time on Friday, November 26, 2010.

Docket Numbers: ER11–2032–001.

Applicants: New Harvest Wind Project LLC.

Description: New Harvest Wind Project LLC submits tariff filing per 35.17(b): Amendment to Market-Based Rate Application to be effective 1/3/2011.

Filed Date: 11/18/2010.

Accession Number: 20101118–5028.

Comment Date: 5 p.m. Eastern Time on Thursday, December 9, 2010.

Docket Numbers: ER11–2112–001.

Applicants: Blue Creek Wind Farm LLC.

Description: Blue Creek Wind Farm LLC submits tariff filing per 35.17(b): Amendment to Market-Based Rate Application to be effective 1/14/2011.

Filed Date: 11/18/2010.

Accession Number: 20101118–5029.

Comment Date: 5 p.m. Eastern Time on Thursday, December 9, 2010.

Docket Numbers: ER11–2143–000.

Applicants: Northern Maine Independent System Administrator, Inc.

Description: Northern Maine Independent System Administrator, Inc. submits tariff filing per 35.1: Baseline Market Rules Refiling to be effective 9/30/2010.

Filed Date: 11/18/2010.

Accession Number: 20101118–5018.

Comment Date: 5 p.m. Eastern Time on Thursday, December 9, 2010.

Docket Numbers: ER11–2144–000.

Applicants: PacifiCorp.

Description: PacifiCorp submits tariff filing per 35.13(a)(2)(iii): Helper City Morgantown POD Construction Agreement to be effective 11/3/2010.

Filed Date: 11/18/2010.

Accession Number: 20101118–5032.

Comment Date: 5 p.m. Eastern Time on Thursday, December 9, 2010.

Docket Numbers: ER11–2145–000.

Applicants: Southern California Edison Company.

Description: Southern California Edison Company submits tariff filing per 35.13(a)(2)(iii): SGIA & Service Agmt with SCE–GBU 1.5MW-Site 18 Solar Project to be effective 11/19/2010.

Filed Date: 11/18/2010.

Accession Number: 20101118–5033.

Comment Date: 5 p.m. Eastern Time on Thursday, December 9, 2010.

Docket Numbers: ER11–2146–000.

Applicants: Vermont Transco, LLC.

Description: Vermont Transco, LLC submits tariff filing per 35.1: Baseline Filing of Rate Schedule No. 7 (Substation Participation Agreement) to be effective 11/18/2010.

Filed Date: 11/18/2010.

Accession Number: 20101118–5045.

Comment Date: 5 p.m. Eastern Time on Thursday, December 9, 2010.

Docket Numbers: ER11–2147–000.

Applicants: Southwest Power Pool, Inc.

Description: Southwest Power Pool, Inc. submits tariff filing per 35.13(a)(2)(iii): 1522R1 Kansas City Power & Light Company LGIA to be effective 10/20/2010.

Filed Date: 11/18/2010.

Accession Number: 20101118–5058.

Comment Date: 5 p.m. Eastern Time on Thursday, December 9, 2010.

Docket Numbers: ER11–2148–000.

Applicants: Ameren Illinois Company.

Description: Ameren Illinois Company submits tariff filing per 35.13(a)(2)(iii): Amendment C to Legacy Service Agreements to be effective 12/31/9998.

Filed Date: 11/18/2010.

Accession Number: 20101118–5064.

Comment Date: 5 p.m. Eastern Time on Thursday, December 9, 2010.

Docket Numbers: ER11–2149–000.

Applicants: Idaho Power Company.

Description: Idaho Power Company submits tariff filing per 35.12: Borah-Populus #2 Series Capacitor Maintenance Agreement to be effective 12/1/2010.

Filed Date: 11/18/2010.

Accession Number: 20101118–5072.

Comment Date: 5 p.m. Eastern Time on Thursday, December 9, 2010.

Any person desiring to intervene or to protest in any of the above proceedings must file in accordance with Rules 211 and 214 of the Commission's Rules of Practice and Procedure (18 CFR 385.211 and 385.214) on or before 5 p.m. Eastern time on the specified comment date. It is not necessary to separately intervene again in a subdocket related to a compliance filing if you have previously intervened in the same docket. Protests will be considered by the Commission in determining the appropriate action to be taken, but will not serve to make protestants parties to the proceeding. Anyone filing a motion to intervene or protest must serve a copy of that document on the Applicant. In reference to filings initiating a new proceeding, interventions or protests submitted on or before the comment deadline need not be served on persons other than the Applicant.

As it relates to any qualifying facility filings, the notices of self-certification [or self-recertification] listed above, do not institute a proceeding regarding qualifying facility status. A notice of self-certification [or self-recertification]

simply provides notification that the entity making the filing has determined the facility named in the notice meets the applicable criteria to be a qualifying facility. Intervention and/or protest do not lie in dockets that are qualifying facility self-certifications or self-recertifications. Any person seeking to challenge such qualifying facility status may do so by filing a motion pursuant to 18 CFR 292.207(d)(iii). Intervention and protests may be filed in response to notices of qualifying facility dockets other than self-certifications and self-recertifications.

The Commission encourages electronic submission of protests and interventions in lieu of paper, using the FERC Online links at *http://www.ferc.gov.* To facilitate electronic service, persons with Internet access who will eFile a document and/or be listed as a contact for an intervenor must create and validate an eRegistration account using the eRegistration link. Select the eFiling link to log on and submit the intervention or protests.

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Nathaniel J. Davis, Sr.,

Deputy Secretary.

[FR Doc. 2010–30057 Filed 11–29–10; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

Combined Notice of Filings #1

November 19, 2010.

Take notice that the Commission received the following electric rate filings:

Docket Numbers: ER06–1399–009.

Applicants: Sunbury Generation LP.

Description: Sunbury Generation LP submits supplement to its notice of non-material change in status pursuant to the Commission's regulation at 18 CFR, Section 35.42.

Filed Date: 11/18/2010.

Accession Number: 20101118–5136.

Comment Date: 5 p.m. Eastern Time on Thursday, December 09, 2010.

Docket Numbers: ER10–1556–001.

Applicants: Longview Power, LLC.

Description: Notice of Non-Material Change in Status of Longview Power, LLC.

Filed Date: 11/19/2010.

Accession Number: 20101119–5117.

Comment Date: 5 p.m. Eastern Time on Friday, December 10, 2010.

Docket Numbers: ER10–1602–002.

Applicants: Beech Ridge Energy LLC.

Description: Beech Ridge Energy LLC submits tariff filing per 35: Supplemental Category 1 Exemption Filing to be effective 10/30/2010.

Filed Date: 11/19/2010.

Accession Number: 20101119–5034.

Comment Date: 5 p.m. Eastern Time on Friday, December 10, 2010.

Docket Numbers: ER10–2256–000; ER10–2256–001.

Applicants: The Trustees of the University of Pennsylvania.

Description: McNees Wallace & Nurick LLC council to The Trustees of the University of PA, a PA Non-Profit Corp requests a shortened comments period of 14 days.

Filed Date: 11/17/2010.

Accession Number: 20101118–0002.

Comment Date: 5 p.m. Eastern Time on Wednesday, December 01, 2010.

Docket Numbers: ER10–2719–001; ER10–2570–001; ER10–2578–001; ER10–2633–001; ER10–2717–001; ER10–2718–001; ER10–3140–001.

Applicants: Cogen Technologies Linden Venture, L.P., Fox Energy Company LLC, Birchwood Power Partners, L.P., Shady Hills Power Company, L.L.C., East Coast Power Linden Holding, LLC, EFS Parlin Holdings, LLC, Inland Empire Energy Center, LLC.

Description: Notice of Non-Material Change in Status of East Coast Power Linden Holding, LLC, et. al.

Filed Date: 11/10/2010.

Accession Number: 20101110–5188.

Comment Date: 5 p.m. Eastern Time on Wednesday, December 01, 2010.

Docket Numbers: ER10–2897–001.

Applicants: Krayn Wind LLC.

Description: Krayn Wind LLC submits tariff filing per 35: Compliance Filing—Baseline eTariff to be effective 9/23/2010.

Filed Date: 11/19/2010.

Accession Number: 20101119–5064.

Comment Date: 5 p.m. Eastern Time on Friday, December 10, 2010.

Docket Numbers: ER10–3182–001.

Applicants: Clean Currents LLC.

Description: Clean Currents LLC submits tariff filing per 35: Clean Currents Baseline Filing to be effective 11/19/2010.

Filed Date: 11/19/2010.

Accession Number: 20101119–5019.

Comment Date: 5 p.m. Eastern Time on Friday, December 10, 2010.

Docket Numbers: ER10–3319–000.

Applicants: Astoria Energy II LLC.

Description: Astoria Energy II Files Letter Per Staff Under ER10–3319 (11–18–2010) with App. B and Privileged Supplement

Filed Date: 11/18/2010.

Accession Number: 20101118–5167.

Comment Date: 5 p.m. Eastern Time on Thursday, December 09, 2010.

Docket Numbers: ER11–2071–001.

Applicants: Southwest Power Pool, Inc.

Description: Southwest Power Pool, Inc. submits tariff filing per 35.17(b): Amendment to Changes to Pricing Zone Rates—OMPA to be effective 7/26/2010.

Filed Date: 11/19/2010.

Accession Number: 20101119–5021.

Comment Date: 5 p.m. Eastern Time on Friday, December 10, 2010.

Docket Numbers: ER11–2085–000.

Applicants: Calpine Corporation.

Description: Request for Limited Waiver of CAISO Tariff Appendix Y To Permit Full Recovery of Interconnection Financial Security of Calpine Corporation.

Filed Date: 11/10/2010.

Accession Number: 20101110–5186.

Comment Date: 5 p.m. Eastern Time on Wednesday, December 01, 2010.

Docket Numbers: ER11–2150–000.

Applicants: Northern Maine Independent System Administrator, Inc.

Description: Northern Maine Independent System Administrator, Inc. submits tariff filing per 35.1: Baseline Tariff Filing to be effective 9/30/2010.

Filed Date: 11/19/2010.

Accession Number: 20101119–5010.

Comment Date: 5 p.m. Eastern Time on Friday, December 10, 2010.

Docket Numbers: ER11–2151–000.

Applicants: Southern California Edison Company.

Description: Southern California Edison Company submits tariff filing per 35.13(a)(2)(iii): SGIA & Service Agmt with SS San Antonio West 1.5MW–Solar Project to be effective 11/22/2010.

Filed Date: 11/19/2010.

Accession Number: 20101119–5020.

Comment Date: 5 p.m. Eastern Time on Friday, December 10, 2010.

Docket Numbers: ER11–2152–000.
Applicants: ISO New England Inc., New England Power Pool Participants Comm.
Description: ISO New England Inc. submits tariff filing per 35.13(a)(2)(iii): Tariff Revisions to Reflect Change in Transmission Line Nomenclature to be effective 12/1/2010.
Filed Date: 11/19/2010.
Accession Number: 20101119–5061.
Comment Date: 5 p.m. Eastern Time on Friday, December 10, 2010.

Docket Numbers: ER11–2153–000.
Applicants: PacifiCorp.
Description: PacifiCorp submits tariff filing per 35.13(a)(2)(iii: BPA Cooperative Communications Agreement to be effective 10/1/2010.
Filed Date: 11/19/2010.
Accession Number: 20101119–5070.
Comment Date: 5 p.m. Eastern Time on Friday, December 10, 2010.

Docket Numbers: ER11–2154–000.
Applicants: Twin Eagle Resource Management, LLC.
Description: Twin Eagle Resource Management, LLC submits tariff filing per 35.12: Twin Eagle Resource Management, LLC MBR Tariff Application to be effective 1/1/2011.
Filed Date: 11/19/2010.
Accession Number: 20101119–5071.
Comment Date: 5 p.m. Eastern Time on Friday, December 10, 2010.

Docket Numbers: ER11–2155–000.
Applicants: Midwest Independent Transmission System Operator, Inc.
Description: Midwest Independent Transmission System Operator, Inc. submits tariff filing per 35.13(a)(2)(iii: C002 FCA Filing to be effective 11/20/2010.
Filed Date: 11/19/2010.
Accession Number: 20101119–5073.
Comment Date: 5 p.m. Eastern Time on Friday, December 10, 2010.

Docket Numbers: ER11–2156–000.
Applicants: Alabama Power Company.
Description: Alabama Power Company submits tariff filing per 35.13(a)(2)(i): MUN–1 Small Rate Increase Filing to be effective 1/1/2011.
Filed Date: 11/19/2010.
Accession Number: 20101119–5106.
Comment Date: 5 p.m. Eastern Time on Friday, December 10, 2010.

Docket Numbers: ER11–2157–000.
Applicants: EWO Marketing, Inc.
Description: EWO Marketing, Inc. submits tariff filing per 35.13(a)(2)(iii: EWOM Long-Term Boomerang Agreement to be effective 2/1/2012.
Filed Date: 11/19/2010.
Accession Number: 20101119–5143.
Comment Date: 5 p.m. Eastern Time on Friday, December 10, 2010.

Docket Numbers: ER11–2158–000.
Applicants: Entergy Power, LLC.
Description: Entergy Power, LLC submits tariff filing per 35.13(a)(2)(iii: EPI–EWO Ritchie Contract to be effective 2/1/2012.
Filed Date: 11/19/2010.
Accession Number: 20101119–5146.
Comment Date: 5 p.m. Eastern Time on Friday, December 10, 2010.

Any person desiring to intervene or to protest in any of the above proceedings must file in accordance with Rules 211 and 214 of the Commission's Rules of Practice and Procedure (18 CFR 385.211 and 385.214) on or before 5 p.m. Eastern time on the specified comment date. It is not necessary to separately intervene again in a subdocket related to a compliance filing if you have previously intervened in the same docket. Protests will be considered by the Commission in determining the appropriate action to be taken, but will not serve to make protestants parties to the proceeding. Anyone filing a motion to intervene or protest must serve a copy of that document on the Applicant. In reference to filings initiating a new proceeding, interventions or protests submitted on or before the comment deadline need not be served on persons other than the Applicant.

As it relates to any qualifying facility filings, the notices of self-certification [or self-recertification] listed above, do not institute a proceeding regarding qualifying facility status. A notice of self-certification [or self-recertification] simply provides notification that the entity making the filing has determined the facility named in the notice meets the applicable criteria to be a qualifying facility. Intervention and/or protest do not lie in dockets that are qualifying facility self-certifications or self-recertifications. Any person seeking to challenge such qualifying facility status may do so by filing a motion pursuant to 18 CFR 292.207(d)(iii). Intervention and protests may be filed in response to notices of qualifying facility dockets other than self-certifications and self-recertifications.

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Nathaniel J. Davis, Sr.,

Deputy Secretary.

[FR Doc. 2010–30048 Filed 11–29–10; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

Combined Notice of Filings #1

November 22, 2010.

Take notice that the Commission received the following electric corporate filings:

Docket Numbers: EC11–21–000.
Applicants: Alta Wind I, LLC, Alta Wind I Holding Company, LLC.
Description: Application for Authorization of Sale/Leaseback Transactions of Alta Wind I Holding Company, LLC, *et al.*
Filed Date: 11/19/2010.
Accession Number: 20101119–5204.
Comment Date: 5 p.m. Eastern Time on Friday, December 10, 2010.

Take notice that the Commission received the following electric rate filings:

Docket Numbers: ER03–534–011.
Applicants: Ingenco Wholesale Power, L.L.C.
Description: Supplement to Notice of Change in Status of Ingenco Wholesale Power, L.L.C..
Filed Date: 11/19/2010.
Accession Number: 20101119–5144.
Comment Date: 5 p.m. Eastern Time on Friday, December 10, 2010.

Docket Numbers: ER05–1178–015; *ER09–838–001.*
Applicants: Gila River Power LP, Entegra Power Services LLC.
Description: Supplement to Updated Market Power Analysis for Continued Market-Based Rate Authority in Compliance with Order No. 697 of Gila River Power, L.P., *et al.*

Filed Date: 11/19/2010.
Accession Number: 20101119–5206.
Comment Date: 5 p.m. Eastern Time on Friday, December 10, 2010.

Docket Numbers: ER10–2235–001.
Applicants: San Diego Gas & Electric Company.
Description: San Diego Gas and Electric Company submits revised worksheets and a refund report under ER10–2235.
Filed Date: 11/08/2010.
Accession Number: 20101109–0201.
Comment Date: 5 p.m. Eastern Time on Monday, November 29, 2010.

Docket Numbers: ER11–1890–000; ER11–1890–001; ER11–1892–000; ER11–1892–001; ER11–1893–000; ER11–1893–001; ER11–1894–000; ER11–1894–001; ER11–1881–000; ER11–1881–001; ER11–1882–000; ER11–1882–001; ER11–1883–000; ER11–1883–001; ER11–1885–000; ER11–1885–001; ER11–1886–000; ER11–1886–001; ER11–1887–000; ER11–1887–001; ER11–1889–000; ER11–1889–001.
Applicants: Camp Reed Wind Park, LLC, Payne's Ferry Wind Park, LLC, Salmon Falls Wind Park, LLC, Yahoo Creek Wind Park, LLC, Burley Butte Wind Park, LLC, Golden Valley Wind Park, LLC, Milner Dam Wind Park, LLC, Oregon Trail Wind Park, LLC, Pilgrim Stage Station Wind Park, LLC, Thousand Springs Wind Park, LLC, Tuana Gulch Wind Park, LLC.
Description: Second Supplement to the Market-Based Rate Applications of Burley Butte Wind Park, LLC, *et al.*
Filed Date: 11/19/2010.
Accession Number: 20101119–5212.
Comment Date: 5 p.m. Eastern Time on Friday, December 10, 2010.

Docket Numbers: ER11–2159–000.
Applicants: Verso Maine Energy LLC.
Description: Verso Maine Energy LLC submits tariff filing per 35.12: Verso Maine Energy LLC—MBR Application to be effective 1/18/2011.
Filed Date: 11/19/2010.
Accession Number: 20101119–5157.
Comment Date: 5 p.m. Eastern Time on Friday, December 10, 2010.

Docket Numbers: ER11–2160–000.
Applicants: FPL Energy Montezuma Wind, LLC.
Description: FPL Energy Montezuma Wind, LLC submits tariff filing per 35.12: FPL Energy Montezuma Wind, LLC MBR Application to be effective 11/20/2010.
Filed Date: 11/19/2010.
Accession Number: 20101119–5172.
Comment Date: 5 p.m. Eastern Time on Friday, December 10, 2010.

Docket Numbers: ER11–2161–000.
Applicants: Entergy Texas, Inc.
Description: Entergy Texas, Inc submits a revised, lower depreciation rates for their use in all applicable FERC formula rates relating to steam production accounts.
Filed Date: 11/19/2010.
Accession Number: 20101122–0201.
Comment Date: 5 p.m. Eastern Time on Friday, December 10, 2010.

Docket Numbers: ER11–2162–000.
Applicants: AP Holdings Southaven, LLC.
Description: Notice of Cancellation of AP Holdings Southaven, LLC.
Filed Date: 11/22/2010.
Accession Number: 20101122–5056.
Comment Date: 5 p.m. Eastern Time on Monday, December 13, 2010.

Docket Numbers: ER11–2163–000.
Applicants: BTEC New Albany LLC.
Description: Notice of Cancellation of BTEC New Albany LLC.
Filed Date: 11/19/2010.
Accession Number: 20101119–5211.
Comment Date: 5 p.m. Eastern Time on Friday, December 10, 2010.

Docket Numbers: ER11–2164–000.
Applicants: Comverge Inc.
Description: Application of Comverge, Inc. Docket for limited waiver of Section III.13.1.4.8.1 of Market Rule 1 of ISO New England.
Filed Date: 11/19/2010.
Accession Number: 20101119–5173
Comment Date: 5 p.m. Eastern Time on Friday, December 10, 2010.

Any person desiring to intervene or to protest in any of the above proceedings must file in accordance with Rules 211 and 214 of the Commission's Rules of Practice and Procedure (18 CFR 385.211 and 385.214) on or before 5 p.m. Eastern time on the specified comment date. It is not necessary to separately intervene again in a subdocket related to a compliance filing if you have previously intervened in the same docket. Protests will be considered by the Commission in determining the appropriate action to be taken, but will not serve to make protestants parties to the proceeding. Anyone filing a motion to intervene or protest must serve a copy of that document on the Applicant. In reference to filings initiating a new proceeding, interventions or protests submitted on or before the comment deadline need not be served on persons other than the Applicant.

As it relates to any qualifying facility filings, the notices of self-certification [or self-recertification] listed above, do not institute a proceeding regarding qualifying facility status. A notice of self-certification [or self-recertification] simply provides notification that the entity making the filing has determined the facility named in the notice meets the applicable criteria to be a qualifying facility. Intervention and/or protest do not lie in dockets that are qualifying facility self-certifications or self-recertifications. Any person seeking to challenge such qualifying facility status may do so by filing a motion pursuant to 18 CFR 292.207(d)(iii). Intervention and protests may be filed in response to notices of qualifying facility dockets other than self-certifications and self-recertifications.

The Commission encourages electronic submission of protests and interventions in lieu of paper, using the FERC Online links at *http://www.ferc.gov.* To facilitate electronic service, persons with Internet access who will eFile a document and/or be listed as a contact for an intervenor must create and validate an eRegistration account using the eRegistration link. Select the eFiling link to log on and submit the intervention or protests.

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Nathaniel J. Davis, Sr.,

Deputy Secretary.

[FR Doc. 2010–30047 Filed 11–29–10; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. ER11–2154–000]

Twin Eagle Resource Management, LLC; Supplemental Notice That Initial Market-Based Rate Filing Includes Request for Blanket Section 204 Authorization

November 22, 2010.

This is a supplemental notice in the above-referenced proceeding, of Twin Eagle Resource Management, LLC's

application for market-based rate authority, with an accompanying rate tariff, noting that such application includes a request for blanket authorization, under 18 CFR part 34, of future issuances of securities and assumptions of liability.

Any person desiring to intervene or to protest should file with the Federal Energy Regulatory Commission, 888 First Street, NE., Washington, DC 20426, in accordance with Rules 211 and 214 of the Commission's Rules of Practice and Procedure (18 CFR 385.211 and 385.214). Anyone filing a motion to intervene or protest must serve a copy of that document on the Applicant.

Notice is hereby given that the deadline for filing protests with regard to the applicant's request for blanket authorization, under 18 CFR part 34, of future issuances of securities and assumptions of liability is December 13, 2010.

The Commission encourages electronic submission of protests and interventions in lieu of paper, using the FERC Online links at *http://www.ferc.gov.* To facilitate electronic service, persons with Internet access who will eFile a document and/or be listed as a contact for an intervenor must create and validate an eRegistration account using the eRegistration link. Select the eFiling link to log on and submit the intervention or protests.

Persons unable to file electronically should submit an original and 14 copies of the intervention or protest to the Federal Energy Regulatory Commission, 888 First St., NE., Washington, DC 20426.

The filings in the above-referenced proceeding(s) are accessible in the Commission's eLibrary system by clicking on the appropriate link in the above list. They are also available for review in the Commission's Public Reference Room in Washington, DC. There is an eSubscription link on the Web site that enables subscribers to receive e-mail notification when a document is added to a subscribed docket(s). For assistance with any FERC Online service, please e-mail *FERCOnlineSupport@ferc.gov.* or call (866) 208–3676 (toll free). For TTY, call (202) 502–8659.

Kimberly D. Bose,

Secretary.

[FR Doc. 2010–30030 Filed 11–29–10; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. ER11–2159–000]

Verso Maine Energy LLC; Supplemental Notice That Initial Market-Based Rate Filing Includes Request for Blanket Section 204 Authorization

November 22, 2010.

This is a supplemental notice in the above-referenced proceeding, of Verso Maine Energy LLC's application for market-based rate authority, with an accompanying rate tariff, noting that such application includes a request for blanket authorization, under 18 CFR part 34, of future issuances of securities and assumptions of liability.

Any person desiring to intervene or to protest should file with the Federal Energy Regulatory Commission, 888 First Street, NE., Washington, DC 20426, in accordance with Rules 211 and 214 of the Commission's Rules of Practice and Procedure (18 CFR 385.211 and 385.214). Anyone filing a motion to intervene or protest must serve a copy of that document on the Applicant.

Notice is hereby given that the deadline for filing protests with regard to the applicant's request for blanket authorization, under 18 CFR part 34, of future issuances of securities and assumptions of liability is December 13, 2010.

The Commission encourages electronic submission of protests and interventions in lieu of paper, using the FERC Online links at *http://www.ferc.gov.* To facilitate electronic service, persons with Internet access who will eFile a document and/or be listed as a contact for an intervenor must create and validate an eRegistration account using the eRegistration link. Select the eFiling link to log on and submit the intervention or protests.

Persons unable to file electronically should submit an original and 14 copies of the intervention or protest to the Federal Energy Regulatory Commission, 888 First St., NE., Washington, DC 20426.

The filings in the above-referenced proceeding(s) are accessible in the Commission's eLibrary system by clicking on the appropriate link in the above list. They are also available for review in the Commission's Public Reference Room in Washington, DC. There is an eSubscription link on the Web site that enables subscribers to receive e-mail notification when a document is added to a subscribed docket(s). For assistance with any FERC Online service, please e-mail *FERCOnlineSupport@ferc.gov.* or call (866) 208–3676 (toll free). For TTY, call (202) 502–8659.

Kimberly D. Bose,

Secretary.

[FR Doc. 2010–30031 Filed 11–29–10; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. ER11–2160–000]

FPL Energy Montezuma Wind, LLC; Supplemental Notice That Initial Market-Based Rate Filing Includes Request for Blanket Section 204 Authorization

November 22, 2010.

This is a supplemental notice in the above-referenced proceeding, of FPL Energy Montezuma Wind, LLC's application for market-based rate authority, with an accompanying rate tariff, noting that such application includes a request for blanket authorization, under 18 CFR part 34, of future issuances of securities and assumptions of liability.

Any person desiring to intervene or to protest should file with the Federal Energy Regulatory Commission, 888 First Street, NE., Washington, DC 20426, in accordance with Rules 211 and 214 of the Commission's Rules of Practice and Procedure (18 CFR 385.211 and 385.214). Anyone filing a motion to intervene or protest must serve a copy of that document on the Applicant.

Notice is hereby given that the deadline for filing protests with regard to the applicant's request for blanket authorization, under 18 CFR part 34, of future issuances of securities and assumptions of liability is December 13, 2010.

The Commission encourages electronic submission of protests and interventions in lieu of paper, using the FERC Online links at *http://www.ferc.gov.* To facilitate electronic service, persons with Internet access who will eFile a document and/or be listed as a contact for an intervenor must create and validate an eRegistration account using the eRegistration link. Select the eFiling link to log on and submit the intervention or protests.

Persons unable to file electronically should submit an original and 14 copies of the intervention or protest to the Federal Energy Regulatory Commission,

888 First St. NE., Washington, DC 20426.

The filings in the above-referenced proceeding(s) are accessible in the Commission's eLibrary system by clicking on the appropriate link in the above list. They are also available for review in the Commission's Public Reference Room in Washington, DC. There is an eSubscription link on the Web site that enables subscribers to receive e-mail notification when a document is added to a subscribed docket(s). For assistance with any FERC Online service, please e-mail *FERCOnlineSupport@ferc.gov.* or call (866) 208–3676 (toll free). For TTY, call (202) 502–8659.

Kimberly D. Bose,

Secretary.

[FR Doc. 2010–30032 Filed 11–29–10; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Western Area Power Administration

[DOE/EIS–0461]

Intent To Prepare an Environmental Impact Statement and To Conduct Scoping Meetings: Interconnection of the Proposed Hyde County Wind Energy Center Project, South Dakota

AGENCY: Western Area Power Administration, DOE.

ACTION: Notice of Intent to Prepare an Environmental Impact Statement and to Conduct Scoping Meetings; Notice of Floodplain and Wetlands Involvement.

SUMMARY: NextEra Energy Resources (NextEra) applied to interconnect its proposed 150-megawatt (MW) Hyde County Wind Energy Center Project (Project), located in Hyde County, South Dakota, with the Western Area Power Administration's (Western) existing Fort Thompson Substation in Buffalo County, South Dakota. Western will prepare an environmental impact statement (EIS) on the proposal to interconnect the Project in accordance with the National Environmental Policy Act of 1969 (NEPA), U.S. Department of Energy (DOE) NEPA Implementing Procedures, and the Council on Environmental Quality (CEQ) regulations for implementing NEPA.

Western's need for agency action is precipitated by NextEra's application to interconnect with Western's power transmission system. Western needs to consider NextEra's interconnection request under its Open Access Transmission Service Tariff (Tariff). This EIS will address Western's Federal action of interconnecting the proposed Project to Western's transmission system, making changes within Western's existing Fort Thompson Substation to physically connect NextEra's proposed Project, and making any necessary system modifications to accommodate the interconnection. Existing transmission line approaches to Fort Thompson Substation may also need to be realigned. By taking these actions, power generated by NextEra's proposed Project would use Western's transmission system to reach the market.

Portions of NextEra's proposed Project may affect floodplains and wetlands, so this Notice of Intent (NOI) also serves as a notice of proposed floodplain or wetland action in accordance with DOE floodplain and wetland environmental review requirements.

DATES: A public scoping meeting will be held on December 14, 2011, from 5 p.m. to 8 p.m. in Highmore, South Dakota.

The public scoping period starts with the publication of this notice and ends on January 14, 2011. Western will consider all comments on the scope of the EIS received or postmarked by that date. The public is invited to submit comments on the proposed Project at any time during the EIS process.

ADDRESSES: Western will host public scoping meetings at the Hyde County Senior Center, 103 Iowa Avenue South, Highmore, South Dakota, to provide information on the Project and gather comments on the proposal. Oral or written comments may be provided at the public scoping meetings or mailed or e-mailed to Matt Marsh, Upper Great Plains Regional Office, Western Area Power Administration, P.O. Box 35800, Billings, MT 59107–5800, e-mail *MMarsh@wapa.gov,* telephone (800) 358–3415.

FOR FURTHER INFORMATION CONTACT: For additional information on the proposed Project, the EIS process, or to receive a copy of the Draft EIS when it is published, contact Matt Marsh at the addresses above. For general information on the DOE's NEPA review process, contact Carol M. Borgstrom, Director, Office of NEPA Policy and Compliance, GC–54, U.S. Department of Energy, 1000 Independence Avenue SW., Washington, DC 20585–0119, telephone (202) 586–4600 or (800) 472–2756, facsimile (202) 586–7031.

SUPPLEMENTARY INFORMATION: Western is a Federal power marketing agency within the DOE that markets and delivers Federal wholesale electric power (principally hydroelectric power) to municipalities, rural electric cooperatives, public utilities, irrigation districts, Federal and State agencies, and Native American tribes in 15 western and central States. NextEra's proposed Project would be located within Western's Upper Great Plains Region, which operates in North and South Dakota, most of Montana, and portions of Iowa, Minnesota, and Nebraska. NextEra applied to interconnect their proposed 150-MW Project with Western's existing Fort Thompson Substation in Buffalo County, South Dakota. The proposed wind farm Project would be located entirely on private lands; no State- or Federal-managed land would be affected. The transmission line connecting the proposed wind farm to Fort Thompson Substation would, however, cross lands of the Crow Creek Indian Reservation. There are no designated cooperating agencies at this time, but cooperating agencies could be identified at a later date.

Western will prepare an EIS on the interconnection of the proposed Project in accordance with NEPA (42 U.S.C. 4321–4347); DOE NEPA Implementing Procedures (10 CFR part 1021), and the CEQ regulations for implementing NEPA (40 CFR parts 1500–1508).[1]

Purpose and Need for Agency Action

Western's need for agency action is precipitated by NextEra's application to interconnect with Western's power transmission system. Western needs to consider NextEra's interconnection request under Western's Tariff, which provides for open access to its transmission system through an interconnection if there is available capacity in the transmission system. This EIS will address Western's Federal action of interconnecting NextEra's proposed Project with Fort Thompson Substation, making changes within the substation to physically accomplish the interconnection, and making any necessary system modifications to accommodate the interconnection. Preliminary studies indicate that the power system can accommodate the proposed interconnection without negatively affecting system reliability or power deliveries to existing customers. The transmission system may require network and/or transmission system upgrades as determined in the final studies. Any such upgrades would be funded by NextEra as a condition of the interconnection.

[1] On October 4, 1999, DOE's Assistant Secretary for Environmental, Safety and Health delegated to Western's Administrator the authority to approve EISs for integrating transmission facilities with Western's transmission grid.

Proposed Action

In compliance with the provisions of the Tariff, and considering the environmental impacts of NextEra's proposed Project as identified by the EIS process, Western will consider NextEra's interconnection request. If approved the necessary changes within Fort Thompson Substation would be made to accomplish the interconnection, and power generated by the proposed Project would use Western's transmission system to reach the market. Western will consult with the U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act and with the South Dakota State Historic Preservation Office under section 106 of the National Historic Preservation Act.

Alternatives

Western must respond to NextEra's proposed Project as it is described in the interconnection application, and make a decision on interconnection based on that application. However, Western will use the information in NextEra's interconnection request to evaluate possible options for transmission line approaches to Fort Thompson Substation. The location of the interconnection bay within the substation, other transmission lines, and any future development plans will all be considered in siting the approach. Under the no action alternative, Western would not approve the interconnection request, nor construct the interconnection facility.

Applicant's Proposed Project

NextEra's proposed Project would consist of up to 100 wind turbine generators with a combined total generating capacity of 150 MW, located within an approximately 15,000-acre site in Hyde County, South Dakota, north of Fort Thompson Substation and Pierre. The turbines would be located in short east-west oriented strings, with the strings widely scattered over an area of roughly 6 by 7 miles in size. Each turbine would be approximately 389 feet tall from tip of blade to base, and 262 feet tall from the ground to the hub. In addition to the turbines, other proposed Project facilities would include all-weather access roads to each turbine location; underground power collection lines linking turbines to the Project collector substation; the Project collector substation; an approximately 25-mile-long high-voltage transmission line linking the collector substation to Western's Fort Thompson Substation; operation and maintenance facilities and yard; Supervisory Control and Data Acquisition equipment and metering equipment; and two or three permanent meteorological towers.

NextEra plans to upgrade the existing East River Electric Cooperative (East River) 69-kilovolt (kV) transmission line that passes the west boundary of its site and continues south into Fort Thompson Substation to provide the necessary transmission link to the substation. NextEra would need to upgrade approximately 25 miles of the existing transmission line to 230-kV to provide a suitable transmission path for their proposed Project.

While Western's Federal action is to consider the interconnection request and the physical interconnection to Western's existing substation, the EIS will also identify and review the environmental impacts of NextEra's proposed Project. NextEra will be responsible for completing necessary coordination with State and local agencies to permit their proposed Project.

NextEra intends to provide renewable energy to local utilities in response to South Dakota's Renewable Energy Portfolio Standards, passed in 2008, which mandate that 10 percent of all electricity consumed in the State be produced from renewable sources by 2015.

Floodplain or Wetland Involvement

Since the proposed Project may involve action in floodplains or wetlands, this NOI also serves as a notice of proposed floodplain or wetland action. The EIS will include a floodplain/wetland assessment and floodplain/wetland statement of findings following DOE regulations for compliance with floodplain and wetlands environmental review (10 CFR part 1022). NextEra intends to avoid disturbance to all wetland areas within the proposed Project area if possible.

Environmental Issues

The location of the proposed Project is in a relatively sparsely populated portion of eastern South Dakota. The area is characterized by extensive agriculture and pasture with scattered farmsteads on section line roads. NextEra has secured leases with willing landowners for its wind generation turbines and related facilities. Available overview information indicates this area has a relatively low probability of substantial natural resources conflicts. NextEra's siting process for the wind turbine strings and associated facilities considered sensitive resources, and the proposed Project was designed to avoid these areas. The EIS will evaluate the level of impact the interconnection and NextEra's proposed Project would have on environmental resources within the 15,000-acre site, which may lead to minor modifications in the proposed Project to further avoid or minimize resource impacts. While no substantive resource conflicts have been identified thus far, the EIS will analyze the potential impacts on potentially affected environmental resources. Wind farm projects are generally known to have visual and noise effects, and may affect birds and bats.

Public Participation

Interested parties are invited to participate in the scoping process to help define the scope, significant resources, and issues to be analyzed in depth, and to eliminate from detailed study issues that are not pertinent. The scoping process will involve all interested agencies (Federal, State, county, and local), Native American tribes, public interest groups, businesses, affected landowners, and individual members of the public.

Western will consult with the Crow Creek Sioux and other potentially affected or interested tribes to jointly evaluate and address the potential effects on cultural resources, traditional cultural properties, or other resources important to the tribes. These nation-to-nation consultations will be conducted in accordance with Executive Order 13175, Consultation and Coordination with Indian Tribal Governments (65 FR 67249), the President's memorandum of April 29, 1994, Government-to-Government Relations with Native American Tribal Governments (59 FR 22951), DOE-specific guidance on tribal interactions, and applicable natural and cultural resources laws and regulations.

A public scoping meeting will be held as described under **DATES** and **ADDRESSES** above. The meeting will be informal, and attendees will be able to speak directly with Western and NextEra representatives about the proposed Project. The public is encouraged to provide information and comments on issues it believes Western should address in the EIS. Comments may be broad in nature or restricted to specific areas of concern. After gathering comments on the scope of the EIS, Western will address those issues raised in the EIS. Comments on the interconnection and NextEra's proposed Project will be accepted at any time during the EIS process, and may be directed to Western as described under **ADDRESSES** above.

Western's EIS process will include the public scoping meetings; consultation and coordination with appropriate Federal, State, county, and local

agencies and tribal governments; involvement with affected landowners; distribution of and public review and comment on the Draft EIS; a formal public hearing or hearings on the Draft EIS; distribution of a published Final EIS; and publication of Western's Record of Decision in the **Federal Register**.

Dated: November 19, 2010.

Timothy J. Meeks,

Administrator.

[FR Doc. 2010–30068 Filed 11–29–10; 8:45 am]

BILLING CODE 6450–01–P

DEPARTMENT OF ENERGY

Western Area Power Administration

[DOE/EIS–0462]

Intent To Prepare an Environmental Impact Statement and To Conduct Scoping Meetings: Interconnection of the Proposed Crowned Ridge Wind Energy Center Project, South Dakota

AGENCY: Western Area Power Administration, DOE.

ACTION: Notice of Intent To Prepare an Environmental Impact Statement and To Conduct Scoping Meetings; Notice of Floodplain and Wetlands Involvement.

SUMMARY: NextEra Energy Resources (NextEra) applied to interconnect its proposed 150-megawatt (MW) Crowned Ridge Wind Energy Center Project (Project) with the Western Area Power Administration's (Western) existing Watertown Substation in Codington County, South Dakota. The proposed Project would be located in Codington and Grant counties, South Dakota. Western will prepare an environmental impact statement (EIS) on the proposal to interconnect the Project in accordance with the National Environmental Policy Act of 1969 (NEPA), U.S. Department of Energy (DOE) NEPA Implementing Procedures, and the Council on Environmental Quality (CEQ) regulations for implementing NEPA.

Western's need for agency action is precipitated by NextEra's application to interconnect with Western's power transmission system. Western needs to consider NextEra's interconnection request under its Open Access Transmission Service Tariff (Tariff). This EIS will address Western's Federal action of interconnecting the proposed Project to Western's transmission system, making changes within Western's existing Watertown Substation to physically connect NextEra's proposed Project, and making any necessary system modifications to accommodate the interconnection. By taking these actions, power generated by NextEra's proposed Project would use Western's transmission system to reach the market.

Portions of NextEra's proposed Project may affect floodplains and wetlands, so this Notice of Intent (NOI) also serves as a notice of proposed floodplain or wetland action in accordance with DOE floodplain and wetland environmental review requirements.

DATES: A public scoping meeting will be held on December 15, 2011, from 5 p.m. to 8 p.m. in Watertown, South Dakota.

The public scoping period starts with the publication of this notice and ends on January 14, 2011. Western will consider all comments on the scope of the EIS received or postmarked by that date. The public is invited to submit comments on the proposed Project at any time during the EIS process.

ADDRESSES: Western will host public scoping meetings at the Watertown Public Library Community Room, 160 6th Street North, Watertown, South Dakota, to provide information on the Project and gather comments on the proposal. Oral or written comments may be provided at the public scoping meetings or mailed or e-mailed to Matt Marsh, Upper Great Plains Regional Office, Western Area Power Administration, P.O. Box 35800, Billings, MT 59107–5800, e-mail *MMarsh@wapa.gov,* telephone (800) 358–3415.

FOR FURTHER INFORMATION CONTACT: For additional information on the proposed Project, the EIS process, or to receive a copy of the Draft EIS when it is published, contact Matt Marsh at the addresses above. For general information on the DOE's NEPA review process, contact Carol M. Borgstrom, Director, Office of NEPA Policy and Compliance, GC–54, U.S. Department of Energy, 1000 Independence Avenue, SW., Washington, DC 20585–0119, telephone (202) 586–4600 or (800) 472–2756, facsimile (202) 586–7031.

SUPPLEMENTARY INFORMATION: Western is a Federal power marketing agency within the DOE that markets and delivers Federal wholesale electric power (principally hydroelectric power) to municipalities, rural electric cooperatives, public utilities, irrigation districts, Federal and State agencies, and Native American tribes in 15 western and central States. NextEra's proposed Project would be located within Western's Upper Great Plains Region, which operates in North and South Dakota, most of Montana, and portions of Iowa, Minnesota, and Nebraska. NextEra applied to interconnect their proposed 150–MW Project with Western's existing Watertown Substation in Codington County, South Dakota. The proposed wind farm Project would be located entirely on private lands; no State- or Federal-managed land would be affected. There are no designated cooperating agencies at this time, but cooperating agencies could be identified at a later date.

Western will prepare an EIS on the interconnection of the proposed Project in accordance with NEPA (42 U.S.C. 4321–4347); DOE NEPA Implementing Procedures (10 CFR part 1021), and the CEQ regulations for implementing NEPA (40 CFR parts 1500–1508).[1]

Purpose and Need for Agency Action

Western's need for agency action is precipitated by NextEra's application to interconnect with Western's power transmission system. Western needs to consider NextEra's interconnection request under Western's Tariff, which provides for open access to its transmission system through an interconnection if there is available capacity in the transmission system. This EIS will address Western's Federal action of interconnecting NextEra's proposed Project with Watertown Substation, making changes within the substation to physically accomplish the interconnection, and making any necessary system modifications to accommodate the interconnection. Preliminary studies indicate that the power system can accommodate the proposed interconnection without negatively affecting system reliability or power deliveries to existing customers. The transmission system may require network and/or transmission system upgrades as determined in the final studies. Any such upgrades would be funded by NextEra as a condition of the interconnection.

Proposed Action

In compliance with the provisions of the Tariff, and considering the environmental impacts of NextEra's proposed Project as identified by the EIS process, Western will consider NextEra's interconnection request. If approved the necessary changes within Watertown Substation would be made to accomplish the interconnection, and power generated by the proposed Project would use Western's transmission system to reach the

[1] On October 4, 1999, DOE's Assistant Secretary for Environmental, Safety and Health delegated to Western's Administrator the authority to approve EISs for integrating transmission facilities with Western's transmission grid.

market. Western will consult with the U.S. Fish and Wildlife Service under section 7 of the Endangered Species Act and with the South Dakota State Historic Preservation Office under section 106 of the National Historic Preservation Act.

Alternatives

Western must respond to NextEra's proposed Project as it is described in the interconnection application, and make a decision on interconnection based on that application. However, Western will use the information in NextEra's interconnection request to evaluate possible options for transmission line approaches to Watertown Substation. The location of the interconnection bay within the substation, other transmission lines, and any future development plans will all be considered in siting the approach. Under the no action alternative, Western would not approve the interconnection request, nor construct the interconnection facility.

Applicant's Proposed Project

NextEra's proposed Project would consist of up to 100 wind turbine generators with a combined total generating capacity of 150 MW, located within an approximately 20,000-acre site in Codington and Grant counties, northeast of Watertown and east of Interstate 29. The turbines would be located in short east-west or southwest-northeast oriented strings, with the strings widely scattered over an area of roughly 6 by 11 miles in size. Each turbine would be approximately 389 feet tall from tip of blade to base, and 262 feet tall from the ground to the hub. In addition to the turbines, other proposed Project facilities would include all-weather access roads to each turbine location; underground power collection lines linking turbines to the Project collector substation; the Project collector substation; an approximately 15-mile-long high-voltage transmission line linking the collector substation to Western's Watertown Substation; operation and maintenance facilities and yard; Supervisory Control and Data Acquisition equipment and metering equipment; and two or three permanent meteorological towers.

While Western's Federal action is to consider the interconnection request and the physical interconnection to Western's existing substation, the EIS will also identify and review the environmental impacts of NextEra's proposed Project. NextEra will be responsible for completing necessary coordination with State and local agencies to permit their proposed Project.

NextEra intends to provide renewable energy to local utilities in response to South Dakota's Renewable Energy Portfolio Standards, passed in 2008, which mandate that 10 percent of all electricity consumed in the State be produced from renewable sources by 2015.

Floodplain or Wetland Involvement

Floodplains and wetlands are common in this part of South Dakota. Since the proposed Project may involve action in floodplains or wetlands, this NOI also serves as a notice of proposed floodplain or wetland action. The EIS will include a floodplain/wetland assessment and floodplain/wetland statement of findings following DOE regulations for compliance with floodplain and wetlands environmental review (10 CFR part 1022).

Environmental Issues

The location of the proposed Project is in a relatively sparsely populated portion of eastern South Dakota. The area is characterized by extensive agriculture and pasture with scattered farmsteads on section line roads. NextEra has secured leases with willing landowners for its wind generation turbines and related facilities. Available overview information indicates this area has a relatively low probability of substantial natural resources conflicts. NextEra's siting process for the wind turbine strings and associated facilities considered sensitive resources, and the proposed Project was designed to avoid these areas. The EIS will evaluate the level of impact the interconnection and NextEra's proposed Project would have on environmental resources within the 20,000-acre site, which may lead to minor modifications in the proposed Project to further avoid or minimize resource impacts. While no substantive resource conflicts have been identified thus far, the EIS will analyze the potential impacts on potentially affected environmental resources. Wind farm projects are generally known to have visual and noise effects, and may affect birds and bats.

Public Participation

Interested parties are invited to participate in the scoping process to help define the scope, significant resources, and issues to be analyzed in depth, and to eliminate from detailed study issues that are not pertinent. The scoping process will involve all interested agencies (Federal, State, county, and local), Native American tribes, public interest groups, businesses, affected landowners, and individual members of the public.

Western will consult with potentially affected or interested tribes to jointly evaluate and address the potential effects on cultural resources, traditional cultural properties, or other resources important to the tribes. These nation-to-nation consultations will be conducted in accordance with Executive Order 13175, Consultation and Coordination with Indian Tribal Governments (65 FR 67249), the President's memorandum of April 29, 1994, Government-to-Government Relations with Native American Tribal Governments (59 FR 22951), DOE-specific guidance on tribal interactions, and applicable natural and cultural resources laws and regulations.

A public scoping meeting will be held as described under **DATES** and **ADDRESSES** above. The meeting will be informal, and attendees will be able to speak directly with Western and NextEra representatives about the proposed Project. The public is encouraged to provide information and comments on issues it believes Western should address in the EIS. Comments may be broad in nature or restricted to specific areas of concern. After gathering comments on the scope of the EIS, Western will address those issues raised in the EIS. Comments on Western's proposed action and NextEra's proposed Project will be accepted at any time during the EIS process, and may be directed to Western as described under **ADDRESSES** above.

Western's EIS process will include the public scoping meetings; consultation and coordination with appropriate Federal, State, county, and local agencies and tribal governments; involvement with affected landowners; distribution of and public review and comment on the Draft EIS; a formal public hearing or hearings on the Draft EIS; distribution of a published Final EIS; and publication of Western's Record of Decision in the **Federal Register**.

Dated: November 19, 2010.

Timothy J. Meeks,

Administrator.

[FR Doc. 2010–30067 Filed 11–29–10; 8:45 am]

BILLING CODE 6450–01–P

ENVIRONMENTAL PROTECTION AGENCY

[EPA–HQ–OAR–2007–0478; FRL–9233–8; EPA ICR No. 1367.09; OMB Control No. 2060–0178]

Agency Information Collection Activities; Proposed Collection; Comment Request; Gasoline Volatility

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: In compliance with the Paperwork Reduction Act (PRA) (44 U.S.C. 3501 *et seq.*), this document announces that EPA is planning to submit a request to renew an existing approved Information Collection Request (ICR) to the Office of Management and Budget (OMB). This ICR is scheduled to expire on May 31, 2011. Before submitting the ICR to OMB for review and approval, EPA is soliciting comments on specific aspects of the proposed information collection as described below.

DATES: Comments must be submitted on or before January 31, 2011.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–HQ–OAR–2007–0478, by one of the following methods:

- *http://www.regulations.gov:* Follow the on-line instructions for submitting comments.
- *E-mail: a-and-r-docket@epa.gov.*
- *Fax:* (202) 566–1741.
- *Mail:* Air and Radiation Docket, Docket ID No. EPA–HQ–OAR–2007–0478, Environmental Protection Agency, Mailcode: 6102T, 1200 Pennsylvania Avenue, NW., Washington, DC 20460.
- *Hand Delivery:* EPA Docket Center, Public Reading Room, EPA West Building, Room 3334, 1301 Constitution Avenue, NW., Washington, DC 20460. Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments to Docket ID No. EPA–HQ–OAR–2007–0478. EPA's policy is that all comments received will be included in the public docket without change and may be made available online at *http://www.regulations.gov,* including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through *http://www.regulations.gov* or e-mail. The *http://www.regulations.gov* Web site is an "anonymous access" system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA without going through *http://www.regulations.gov* your e-mail address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD–ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional information about EPA's public docket visit the EPA Docket Center homepage at *http://www.epa.gov/epahome/dockets.htm.*

FOR FURTHER INFORMATION CONTACT: James W. Caldwell, Office of Transportation and Air Quality, Mailcode: 6406J, Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460; telephone number: (202) 343–9303; fax number: (202) 343–2802; e-mail address: *caldwell.jim@epa.gov.*

SUPPLEMENTARY INFORMATION:

How can I access the docket and/or submit comments?

EPA has established a public docket for this ICR under Docket ID No. EPA–HQ–OAR–2007–0478, which is available for online viewing at *http://www.regulations.gov*, or in-person viewing at the Air and Radiation Docket in the EPA Docket Center (EPA/DC), EPA West, Room B102, 1301 Constitution Avenue, NW., Washington, DC. The EPA/DC Public Reading Room is open from 8 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Reading Room is 202–566–1744, and the telephone number for the Air and Radiation Docket is 202–566–1742.

Use *http://www.regulations.gov* to obtain a copy of the draft collection of information, submit or view public comments, access the index listing of the contents of the docket, and to access those documents in the public docket that are available electronically. Once in the system, select "search," then key in the docket ID number identified in this document.

What information is EPA particularly interested in?

Pursuant to section 3506(c)(2)(A) of the PRA, EPA specifically solicits comments and information to enable it to:

(i) Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the Agency, including whether the information will have practical utility;

(ii) Evaluate the accuracy of the Agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;

(iii) Enhance the quality, utility, and clarity of the information to be collected; and

(iv) Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses. In particular, EPA is requesting comments from very small businesses (those that employ less than 25) on examples of specific additional efforts that EPA could make to reduce the paperwork burden for very small businesses affected by this collection.

What should I consider when I prepare my comments for EPA?

You may find the following suggestions helpful for preparing your comments:

1. Explain your views as clearly as possible and provide specific examples.

2. Describe any assumptions that you used.

3. Provide copies of any technical information and/or data you used that support your views.

4. If you estimate potential burden or costs, explain how you arrived at the estimate that you provide.

5. Offer alternative ways to improve the collection activity.

6. Make sure to submit your comments by the deadline identified under **DATES.**

7. To ensure proper receipt by EPA, be sure to identify the docket ID number assigned to this action in the subject line on the first page of your response. You may also provide the name, date, and **Federal Register** citation.

What information collection activity or ICR does this apply to?

Affected entities: Entities potentially affected by this action are those who produce or import gasoline containing

ethanol, or who wish to obtain a testing exemption.

Title: Regulation of Fuels and Fuel Additives: Gasoline Volatility, Reporting Requirements for Parties Which Produce of Import Gasoline Containing Ethanol, and Reporting Requirements for Parties Seeking a Testing Exemption (40 CFR 80.27) .

ICR numbers: EPA ICR No. 1367.09, OMB Control No. 2060–0178.

ICR status: This ICR is currently scheduled to expire on May 31, 2011. An Agency may not conduct or sponsor, and a person is not required to respond to, a collection of information, unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations in title 40 of the CFR, after appearing in the **Federal Register** when approved, are listed in 40 CFR part 9, are displayed either by publication in the **Federal Register** or by other appropriate means, such as on the related collection instrument or form, if applicable. The display of OMB control numbers in certain EPA regulations is consolidated in 40 CFR part 9.

Abstract: Gasoline volatility, as measured by Reid Vapor Pressure (RVP) in pounds per square inch (psi), is controlled in the spring and summer in order to minimize evaporative hydrocarbon emissions from motor vehicles. RVP is subject to a Federal standard of 7.8 psi or 9.0 psi, depending on location. The addition of ethanol to gasoline increases the RVP by about 1 psi. Gasoline that contains 9 volume percent to 10 volume percent ethanol is subject to a standard that is 1.0 psi greater. As an aid to industry compliance and EPA enforcement, the product transfer document, which is prepared by the producer or importer and which accompanies a shipment of gasoline containing ethanol, is required by regulation to contain a legible and conspicuous statement that the gasoline contains ethanol and the percentage concentration of ethanol. This is intended to deter the mixing within the distribution system, particularly in retail storage tanks, of gasoline with ethanol in the 9 percent to 10 percent range with gasoline which does not contain ethanol in that range. Such mixing would likely result in a gasoline which is in violation of its RVP standard. Also, a party wishing a testing exemption for research on gasoline that is not in compliance with the applicable volatility standard must submit certain information to EPA. EPA has proposed additional PTD requirements for gasoline containing ethanol at 75 FR 68044 (November 4, 2010). Those requirements will be addressed in a separate ICR.

Burden Statement: The annual public reporting and recordkeeping burden for this collection of information is estimated to average 1 second per response. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements which have subsequently changed; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

The ICR provides a detailed explanation of the Agency's estimate, which is only briefly summarized here:

Estimated total number of potential respondents: 2,000.

Frequency of response: On occasion.

Estimated total average number of responses for each respondent: 22,000.

Estimated total annual burden hours: 12,330.

Estimated total annual costs: $1.4 million. This includes an estimated burden cost of $1.4 million and an estimated cost of $20 for capital investment or maintenance and operational costs.

Are there changes in the estimates from the last approval?

There is a decrease of 1,667 hours in the total estimated annual respondent burden compared with that identified in the ICR currently approved by OMB. This decrease reflects EPA's updating of burden estimates. The decrease is due to an increase in the use of computer-generated product transfer documents.

What is the next step in the process for this ICR?

EPA will consider the comments received and amend the ICR as appropriate. The final ICR package will then be submitted to OMB for review and approval pursuant to 5 CFR 1320.12. At that time, EPA will issue another **Federal Register** notice pursuant to 5 CFR 1320.5(a)(1)(iv) to announce the submission of the ICR to OMB and the opportunity to submit additional comments to OMB. If you have any questions about this ICR or the approval process, please contact the technical person listed under **FOR FURTHER INFORMATION CONTACT**.

Dated: November 23, 2010.

Margo Tsirigotis Oge,

Director, Office of Transportation and Air Quality.

[FR Doc. 2010–30100 Filed 11–29–10; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[EPA–HQ–SFUND–2010–0894; FRL–9233–7]

Guidance on Planning, Implementing, Maintaining, and Enforcing Institutional Controls at Contaminated Sites

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of availability.

SUMMARY: EPA is interested in soliciting individual stakeholder input regarding the issues addressed in the EPA interim final guidance, titled *Institutional Controls: A Guide to Planning, Implementing, Maintaining, and Enforcing Institutional Controls at Contaminated Sites.* The Agency will consider the information gathered from this notice and other sources before finalizing this guidance.

DATES: Comments must be received on or before January 14, 2011, 45 days after publication in the **Federal Register**.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–HQ–SFUND–2010–0894 by one of the following methods:

- *http://www.regulations.gov:* Follow the on-line instructions for submitting comments.
- *E-mail: superfund.docket@epa.gov*
- *Fax:* (202) 566–9744
- *Mail:* U.S. Environmental Protection Agency; EPA Docket Center, Superfund Docket, Mail Code 28221T; 1200 Pennsylvania Avenue, NW., Washington, DC 20460
- *Hand Delivery:* EPA Docket Center—Public Reading Room; EPA West Building, Room 3334; 1301 Constitution Avenue, NW., Washington, DC 20004. Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments to Docket ID No. EPA–HQ–SFUND–2010–0894. EPA's policy is that all comments received will be included in the public docket without change and may be made available online at *http://www.regulations.gov,* including any

personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through *http://www.regulations.gov* or *superfund.docket@epa.gov.* The *http://www.regulations.gov* website is an "anonymous access" system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA without going through *http://www.regulations.gov* your e-mail address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD–ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional information about EPA's public docket visit the EPA Docket Center homepage at *http://www.epa.gov/epahome/dockets.htm.*

Docket: All documents in the docket are listed in the *http://www.regulations.gov* index. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available either electronically in *http://www.regulations.gov* or in hard copy at the EPA Docket Center—Public Reading Room, EPA/DC, EPA West, Room 3334; 1301 Constitution Ave., NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566–1744, and the telephone number for the Superfund docket is (202) 566–0276.

FOR FURTHER INFORMATION CONTACT: Chip Love, phone: (703) 603–0695, e-mail: *love.chip@epa.gov,* Construction and Post Construction Management Branch, Assessment and Remediation Division, Office of Superfund Remediation and Technology Innovation (mail code 5204P), U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW., Washington, DC 20460.

SUPPLEMENTARY INFORMATION: EPA's interim final guidance on *Institutional Controls: A Guide to Planning, Implementing, Maintaining, and Enforcing Institutional Controls at Contaminated Sites* addresses some of the common issues that may be encountered during the cleanup process and provides recommendations on how ICs can complement other response actions (such as engineered response action components) at a site. This interim final guidance also provides an overview of EPA's policy regarding the roles and responsibilities of the parties involved in the various aspects of planning, implementing, maintaining, and enforcing institutional controls. The guidance is available at *http://www.regulations.gov.* This guidance does not represent a regulation, and is not subject to the formal provisions of the Administrative Procedures Act. However, EPA recognizes the potential importance of this guidance to its Federal, state, local, and tribal partners, to the regulated community, and to the public, and therefore through this Federal Register notice seeks public input on the topics addressed in this interim final guidance and its implementation. This public input opportunity will be available until January 14, 2011.

EPA intends to evaluate whether any changes to the interim final guidance are appropriate and expects to issue a final version of this guidance. For purposes of this Federal Register notice, EPA in particular seeks input on the following:

- Are there ways EPA can better evaluate the capacity, willingness, and financial assurance of state, tribal and local governments to assist with ICs and engineering controls when such controls are necessary at a site?
- What potential barriers exist with respect to state, local, and tribal government involvement with ICs and what tools or possible solutions could EPA promote to improve the awareness of and involvement in IC activities?
- How can site managers better engage and involve affected community stakeholders and local land use decision-makers concerning ICs that may be needed and relied upon to complement other response actions (i.e., engineered response action components) at cleanup sites?
- How can information concerning ICs and the underlying land and/or resource use restrictions be made more available to local land use decision-makers?
- How can EPA better identify and account for the full life cycle costs of ICs?

EPA intends to accept input on the interim final guidance until January 14, 2011. EPA also intends to fully consider all public input in evaluating whether changes to the interim final guidance are appropriate, and to issue a final version of this guidance.

Dated: November 23, 2010.

Mathy Stanislaus,

Assistant Administrator, Office of Solid Waste and Emergency Response.

[FR Doc. 2010–30111 Filed 11–29–10; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[FRL–9234–1]

Proposed Consent Decree, Clean Air Act Citizen Suit

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of Proposed Consent Decree; Request for Public Comment.

SUMMARY: In accordance with section 113(g) of the Clean Air Act, as amended ("Act"), 42 U.S.C. 7413(g), notice is hereby given of a proposed consent decree, to address a lawsuit filed by WildEarth Guardians: *WildEarth Guardians* v. *Jackson,* Civil Action No. 1:10–cv–01672–RPM (D. CO). On or about July 14, 2010, WildEarth Guardians filed a complaint alleging that EPA Administrator Jackson failed to fulfill a mandatory duty to respond to an administrative petition to object to issuance of air permit No. 96OPMR129 to the Public Service Company of Colorado doing business as Xcel Energy to operate the Pawnee coal-fired power plant in Morgan County, Colorado (the "Pawnee Petition") within the 60 days specified in section 505(b)(2) of the Clean Air Act and asking the court to enter judgment: (i) Declaring that EPA has violated the Clean Air Act by failing to grant or deny the administrative petition; and, (ii) Ordering EPA to grant or deny the administrative petition in accordance with an expeditious schedule prescribed by the Court. On September 1, 2010, WildEarth Guardians filed a first amended complaint alleging that EPA Administrator Jackson failed to fulfill a mandatory duty to respond to administrative petitions to object to the issuance of air permit No. 96OPAD137 to Xcel Energy to operate the Cherokee

coal-fired power plant in Denver, Colorado (the "Cherokee Petition") and air permit No. 960PBO131 to Xcel Energy to operate the Valmont coal-fired power plant in Boulder County, Colorado (the "Valmont Petition"). Under the terms of the proposed consent decree, EPA agrees to: (i) Sign a response to the Pawnee Petition no later than June 30, 2011; (ii) sign a response to the Valmont Petition no later than September 30, 2011; and, (iii) sign a response to the Cherokee Petition no later than October 31, 2011.

DATES: Written comments on the proposed consent decree must be received by *December 30, 2010.*

ADDRESSES: Submit your comments, identified by Docket ID number EPA–HQ–OGC–2010–0984, online at *http://www.regulations.gov* (EPA's preferred method); by e-mail to *oei.docket@epa.gov;* by mail to EPA Docket Center, Environmental Protection Agency, Mailcode: 2822T, 1200 Pennsylvania Ave., NW., Washington, DC 20460–0001; or by hand delivery or courier to EPA Docket Center, EPA 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. Comments on a disk or CD–ROM should be formatted in Word or ASCII file, avoiding the use of special characters and any form of encryption, and may be mailed to the mailing address above.

FOR FURTHER INFORMATION CONTACT: Richard H. Vetter, Air and Radiation Law Office (2344A), Office of General Counsel, U.S. Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460; *telephone:* (919) 541–2127; fax number (919) 541–4991; *e-mail address: vetter.rick@epa.gov.*

SUPPLEMENTARY INFORMATION:

I. Additional Information About the Proposed Consent Decree

On or about July 14, 2010, WildEarth Guardians, a non-profit conservation organization, filed a complaint in the United States District Court for the District of Colorado (Civil Action No. 1:10-cv-01672–RPM). In the complaint, WildEarth Guardians alleges that EPA has failed to fulfill a mandatory duty to respond to an administrative petition to object to issuance of air permit No. 96OPMR129 to the Colorado Public Service Company, doing business as Xcel Energy for the Pawnee coal-fired power plant in Morgan County, Colorado (the "Pawnee Petition") within the 60 days specified in section 505(b)(2) of the Clean Air Act. On September 1, 2010, WildEarth Guardian filed a first amended complaint alleging that EPA Administrator Jackson failed to fulfill a mandatory duty to respond to administrative petitions to object to the issuance of air permit No. 960PAD137 to Xcel Energy to operate the Cherokee coal-fired power plant in Denver, Colorado (the "Cherokee Petition") and air permit No. 960PBO131 to Xcel Energy to operate the Valmont coal-fired power plant in Boulder County, Colorado (the "Valmont Petition") within the 60 days specified in section 505(b)(2) of the Clean Air Act.

The EPA and WildEarth Guardians chose to enter into a proposed consent decree to avoid protracted and costly litigation and to preserve judicial resources. Under the terms of the proposed consent decree, EPA is to: (i) Sign a response to the Pawnee Petition no later than June 30, 2011; (ii) sign a response to the Valmont Petition no later than September 30, 2011; and, (iii) sign a response to the Cherokee Petition no later than October 31, 2011.

For a period of thirty (30) days following the date of publication of this notice, the Agency will receive written comments relating to the proposed consent decree from persons who were not named as parties or intervenors to the litigation in question. EPA or the Department of Justice may withdraw or withhold consent to the proposed consent decree if the comments disclose facts or considerations that indicate that such consent is inappropriate, improper, inadequate, or inconsistent with the requirements of the Clean Air Act. Unless EPA or the Department of Justice determines that consent to the consent decree should be withdrawn, the terms of the decree will be affirmed.

II. Additional Information About Commenting On the Proposed Consent Decree

A. How can I get a copy of the consent decree?

Direct your comments to the official public docket for this action under Docket ID No. EPA–HQ–OGC–2010–0984 which contains a copy of the consent decree. The official public docket is available for public viewing at the Office of Environmental Information (OEI) Docket in the EPA Docket Center, EPA West, Room 3334, 1301 Constitution Ave., NW., Washington, DC. The EPA Docket Center 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 OEI Docket is (202) 566–1752.

An electronic version of the public docket is available through *http://www.regulations.gov.* You may use the *http://www.regulations.gov* to submit or view public comments, access the index listing of the contents of the official public docket, and to access those documents in the public docket that are available electronically. Once in the system, key in the appropriate docket identification number, then select "search."

It is important to note that EPA's policy is that public comments, whether submitted electronically or on paper, will be made available for public viewing online at *http://www.regulations.gov* without change, unless the comment contains copyrighted material, CBI, or other information whose disclosure is restricted by statute. Information claimed as CBI and other information whose disclosure is restricted by statute is not included in the official public docket or in the electronic public docket. EPA's policy is that copyrighted material, including copyrighted material contained in a public comment, will not be placed in EPA's electronic public docket but will be available only in printed, paper form in the official public docket. Although not all docket materials may be available electronically, you may still access any of the publicly available docket materials through the EPA Docket Center.

B. How and to whom do I submit comments?

You may submit comments as provided in the **ADDRESSES** section. Please ensure that your comments are submitted within the specified comment period. Comments received after the close of the comment period will be marked "late." EPA is not required to consider these late comments.

If you submit an electronic comment, EPA recommends that you include your name, mailing address, and an e-mail address or other contact information in the body of your comment and with any disk or CD–ROM you submit. This ensures that you can be identified as the submitter of the comment and allows EPA to contact you in case EPA cannot read your comment due to technical difficulties or needs further information on the substance of your comment. Any identifying or contact information provided in the body of a comment will be included as part of the comment that is placed in the official public docket, and made available in EPA's electronic public docket. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification,

EPA may not be able to consider your comment.

Use of the *http://www.regulations.gov* Web site to submit comments to EPA electronically is EPA's preferred method for receiving comments. The electronic public docket system is an "anonymous access" system, which means EPA will not know your identity, e-mail address, or other contact information unless you provide it in the body of your comment. In contrast to EPA's electronic public docket, EPA's electronic mail (e-mail) system is not an "anonymous access" system. If you send an e-mail comment directly to the Docket without going through *http://www.regulations.gov,* your e-mail address is automatically captured and included as part of the comment that is placed in the official public docket, and made available in EPA's electronic public docket.

Dated: November 23, 2010.

Richard B. Ossias,

Associate General Counsel.

[FR Doc. 2010–30106 Filed 11–29–10; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[FRL–9234–5]

Proposed Consent Decree, Clean Air Act Citizen Suit

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of proposed consent decree; request for public comment.

SUMMARY: In accordance with section 113(g) of the Clean Air Act, as amended ("CAA" or the "Act"), 42 U.S.C. 7413(g), notice is hereby given of a proposed consent decree to address a lawsuit filed by Sierra Club and Kentucky Environmental Foundation (collectively "Plaintiffs") in the United States District Court for the District of Columbia: *Sierra Club, et al.* v. *Jackson,* No. 10–cv–00889–CKK (D. DC). On May 26, 2010, Plaintiffs filed a complaint alleging that EPA failed to perform nondiscretionary duties, under section 110(k)(2) of the CAA, 42 U.S.C. 7410(k)(2), to take action on certain State Implementation Plan ("SIP") submittals by the State of Kentucky. The proposed consent decree establishes deadlines for EPA to take action.

DATES: Written comments on the proposed consent decree must be received by *December 30, 2010.*

ADDRESSES: Submit your comments, identified by Docket ID number EPA–HQ–OGC–2010–0956, online at *http://www.regulations.gov* (EPA's preferred method); by e-mail to *oei.docket@epa.gov;* by mail to EPA Docket Center, Environmental Protection Agency, *Mailcode:* 2822T, 1200 Pennsylvania Ave., NW., Washington, DC 20460–0001; or by hand delivery or courier to EPA Docket Center, EPA 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. Comments on a disk or CD–ROM should be formatted in Word or ASCII file, avoiding the use of special characters and any form of encryption, and may be mailed to the mailing address above.

FOR FURTHER INFORMATION CONTACT: Winifred Okoye, Air and Radiation Law Office (2344A), Office of General Counsel, U.S. Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460; telephone: (202) 564–5446; fax number (202) 564–5603; e-mail address: *okoye.winifred@epa.gov.*

SUPPLEMENTARY INFORMATION:

I. Additional Information About the Proposed Consent Decree

The proposed consent decree would resolve a lawsuit seeking to compel action by the Administrator to take final action under section 110(k) of the CAA on certain Kentucky SIP submissions. The proposed consent decree requires EPA, on or before April 15, 2011, to sign and thereafter forward within fifteen (15) business days to the Office of Federal Register for review and publication a notice of final action on the Commonwealth of Kentucky's May 27, 2008 SIP submittals titled as follows: (a) Ozone maintenance plan SIP revision for a portion of Greenup County located within the Kentucky portion of the Huntington-Ashland 8-hour ozone 110(a)(1) maintenance area; (b) the Edmonson County 8-hour ozone 110(a)(1) maintenance area; and (c) the Lexington 8-hour ozone 110(a)(1) maintenance area (Fayette and Scott Counties).

The proposed consent decree also requires EPA, on or before March 15, 2012, to sign and thereafter forward within fifteen (15) days to the Office of Federal Register for review and publication a notice of final action on the Commonwealth of Kentucky's June 25, 2008 SIP submittal of a Regional Haze State Implementation Plan.

For a period of thirty (30) days following the date of publication of this notice, the Agency will accept written comments relating to the proposed consent decree from persons who were not named as parties or intervenors to the litigation in question. EPA or the Department of Justice may withdraw or withhold consent to the proposed consent decree if the comments disclose facts or considerations that indicate that such consent is inappropriate, improper, inadequate, or inconsistent with the requirements of the Act. Unless EPA or the Department of Justice determines that consent to this consent decree should be withdrawn, the terms of the decree will be affirmed.

II. Additional Information About Commenting on the Proposed Consent Decree

A. How can I get a copy of the consent decree?

The official public docket for this action (identified by Docket ID No. EPA–HQ–OGC–2010–0956) contains a copy of the proposed consent decree. The official public docket is available for public viewing at the Office of Environmental Information (OEI) Docket in the EPA Docket Center, EPA West, Room 3334, 1301 Constitution Ave., NW., Washington, DC. The EPA Docket Center 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 OEI Docket is (202) 566–1752.

An electronic version of the public docket is available through *http://www.regulations.gov.* You may use *http://www.regulations.gov* to submit or view public comments, access the index listing of the contents of the official public docket, and to access those documents in the public docket that are available electronically. Once in the system, key in the appropriate docket identification number then select "search".

It is important to note that EPA's policy is that public comments, whether submitted electronically or in paper, will be made available for public viewing online at *http://www.regulations.gov* without change, unless the comment contains copyrighted material, CBI, or other information whose disclosure is restricted by statute. Information claimed as CBI and other information whose disclosure is restricted by statute is not included in the official public docket or in the electronic public docket. EPA's policy is that copyrighted material, including copyrighted material contained in a public comment, will not be placed in EPA's electronic public docket but will be available only in printed, paper form in the official public docket. Although not all docket materials may be available

electronically, you may still access any of the publicly available docket materials through the EPA Docket Center.

B. How and to whom do I submit comments?

You may submit comments as provided in the **ADDRESSES** section. Please ensure that your comments are submitted within the specified comment period. Comments received after the close of the comment period will be marked "late." EPA is not required to consider these late comments.

If you submit an electronic comment, EPA recommends that you include your name, mailing address, and an e-mail address or other contact information in the body of your comment and with any disk or CD–ROM you submit. This ensures that you can be identified as the submitter of the comment and allows EPA to contact you in case EPA cannot read your comment due to technical difficulties or needs further information on the substance of your comment. Any identifying or contact information provided in the body of a comment will be included as part of the comment that is placed in the official public docket, and made available in EPA's electronic public docket. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment.

Use of the http://*www.regulations.gov* website to submit comments to EPA electronically is EPA's preferred method for receiving comments. The electronic public docket system is an "anonymous access" system, which means EPA will not know your identity, e-mail address, or other contact information unless you provide it in the body of your comment. In contrast to EPA's electronic public docket, EPA's electronic mail (e-mail) system is not an "anonymous access" system. If you send an e-mail comment directly to the Docket without going through *http://www.regulations.gov,* your e-mail address is automatically captured and included as part of the comment that is placed in the official public docket, and made available in EPA's electronic public docket.

Dated: November 22, 2010.

Richard B. Ossias,

Associate General Counsel.

[FR Doc. 2010–30098 Filed 11–29–10; 8:45 am]

BILLING CODE 6560–50–P

FEDERAL COMMUNICATIONS COMMISSION

Notice of Public Information Collection(s) Being Submitted for Review and Approval to the Office of Management and Budget (OMB), Comments Requested

November 15, 2010.

Summary: As part of its continuing effort to reduce paperwork burden and as required by the Paperwork Reduction Act (PRA) of 1995 (44 U.S.C. 3501–3520), the Federal Communications Commission invites the general public and other Federal agencies to comment on the following information collection. Comments are requested concerning: (a) Whether the proposed collection of information is necessary for the proper performance of the functions of the Commission, including whether the information shall have practical utility; (b) the accuracy of the Commission's burden estimate; (c) ways to enhance the quality, utility, and clarity of the information collected; (d) ways to minimize the burden of the collection of information on the respondents, including the use of automated collection techniques or other forms of information technology; and (e) ways to further reduce the information collection burden for small business concerns with fewer than 25 employees.

The FCC may not conduct or sponsor a collection of information unless it displays a currently valid control number. No person shall be subject to any penalty for failing to comply with a collection of information subject to the Paperwork Reduction Act (PRA) that does not display a valid control number.

Dates: Written Paperwork Reduction Act (PRA) comments should be submitted on or before December 30, 2010. If you anticipate that you will be submitting PRA comments, but find it difficult to do so within the period of time allowed by this notice, you should advise the FCC contact listed below as soon as possible.

Addresses: Direct all PRA comments to Nicholas A. Fraser, Office of Management and Budget, via fax at 202–395–5167 or the Internet at *Nicholas_A._Fraser@omb.eop.gov*; and to the Federal Communications Commission's PRA mailbox (e-mail address: *PRA@fcc.gov*). Include in the e-mail the OMB control number of the collection as shown in the **SUPPLEMENTARY INFORMATION** section below, or if there is no OMB control number, include the Title as shown in the **SUPPLEMENTARY INFORMATION** section. If you are unable to submit your comments by email, contact the person listed below to make alternate arrangements.

For Further Information Contact: For additional information, contact Judith B. Herman at 202–418–0214 or via the Internet at *Judith-b.herman@fcc.gov*.

Supplementary Information:

OMB Control Number: 3060–1092.

Title: Interim Procedures for Filing Applications Seeking Approval for Designated Entity Reportable Eligibility Events and Annual Reports.

Form Nos.: FCC Form 609–T and 611–T.

Type of Review: Extension of a currently approved collection.

Respondents: Business or other for-profit, not-for-profit institutions, and state, local or tribal government.

Number of Respondents: 1,100 respondents; 2,750 responses.

Estimated Time per Response: FCC Form 609–T is estimated at 4 hours per response; FCC Form 611–T is estimated at 6 hours per response.

Frequency of Response: Annual and on occasion reporting requirement and third party disclosure requirement.

Obligation To Respond: Required to obtain or retain benefits. Statutory authority for this information collection is contained in 47 U.S.C. 4(i), 308(b), 309(j)(3) and 309(j)(4).

Total Annual Burden: 7,288 hours.

Total Annual Cost: $1,494,625.

Privacy Act Impact Assessment: N/A.

Nature and Extent of Confidentiality: Some respondents may assert that some data and/or agreements that they are filing in response to these information collection requirements include confidential information or trade secrets. The Commission has long established procedures for accepting confidential and market-sensitive documents and information via the Commission's Universal Licensing System (ULS). These long standing procedures will be followed to ensure that no confidential materials or trade secrets are disclosed.

Most of the information collected will be made available for public inspection. Applicants may seek confidential treatment pursuant to 47 CFR 0.459 of the Commission's rules governing requests to withhold from public inspection information submitted to the Commission. The ULS allows for information to be filed confidentially. Confidentially filed materials will only be accessible to Commission employees who have been issued passwords.

Needs and Uses: The Commission will submit this expiring information collection (IC) to the OMB during this comment period. The Commission is reporting no change in its burden hour or annual cost estimates. The

Commission is seeking OMB approval for an extension (there are no change to the reporting requirements).

FCC Form 609–T is used by Designated Entities (DEs) to request prior Commission approval pursuant to Section 1.2114 of the Commission's rules for any reportable eligibility event. The data collected on the form is used by the FCC to determine whether the public interest would be served by the approval of the reportable eligibility event.

FCC Form 611–T is used by DE licensees to file an annual report, pursuant to section 1.2110(n) of the Commission's rules, related to eligibility for designated entity benefits.

The information collected will be used to ensure that only legitimate small businesses reap the benefits of the Commission's designated entity program. Further, this information will assist the Commission in preventing companies from circumventing the objectives of the designated entity eligibility rules by allowing us to review: (1) The FCC Form 609–T applications seeking approval for "reportable eligibility events" and (2) the FCC Form 611–T annual reports to ensure that licensees receiving designated entity benefits are in compliance with the Commission's policies and rules.

Marlene H. Dortch,

Secretary.

[FR Doc. 2010–30007 Filed 11–29–10; 8:45 am]

BILLING CODE 6712–01–P

FEDERAL COMMUNICATIONS COMMISSION

Notice of Public Information Collection(s) Being Submitted for Review and Approval to the Office of Management and Budget (OMB), Comments Requested

November 9, 2010.

SUMMARY: As part of its continuing effort to reduce paperwork burden and as required by the Paperwork Reduction Act (PRA) of 1995 (44 U.S.C. 3501–3520), the Federal Communications Commission invites the general public and other Federal agencies to comment on the following information collection. Comments are requested concerning: (a) Whether the proposed collection of information is necessary for the proper performance of the functions of the Commission, including whether the information shall have practical utility; (b) the accuracy of the Commission's burden estimate; (c) ways to enhance the quality, utility, and clarity of the information collected; (d) ways to minimize the burden of the collection of information on the respondents, including the use of automated collection techniques or other forms of information technology; and (e) ways to further reduce the information collection burden for small business concerns with fewer than 25 employees.

The FCC may not conduct or sponsor a collection of information unless it displays a currently valid control number. No person shall be subject to any penalty for failing to comply with a collection of information subject to the Paperwork Reduction Act (PRA) that does not display a valid control number.

DATES: Written Paperwork Reduction Act (PRA) comments should be submitted on or before December 30, 2010. If you anticipate that you will be submitting PRA comments, but find it difficult to do so within the period of time allowed by this notice, you should advise the FCC contact listed below as soon as possible.

ADDRESSES: Direct all PRA comments to Nicholas A. Fraser, Office of Management and Budget, via fax at 202–395–5167 or the Internet at *Nicholas_A._Fraser@omb.eop.gov;* and to the Federal Communications Commission's PRA mailbox (e-mail address: *PRA@fcc.gov*). Include in the e-mail the OMB control number of the collection as shown in the **SUPPLEMENTARY INFORMATION** section below, or if there is no OMB control number, include the Title as shown in the **SUPPLEMENTARY INFORMATION** section. If you are unable to submit your comments by e-mail, contact the person listed below to make alternate arrangements.

FOR FURTHER INFORMATION CONTACT: For additional information, contact Judith B. Herman at 202–418–0214 or via the Internet at *Judith-b.herman@fcc.gov.*

SUPPLEMENTARY INFORMATION:

OMB Control Number: 3060–0984.

Title: Section 90.35(b)(2), Industrial/Business Pool and Section 90.175(b)(1), Frequency Coordinator Requirements.

Form No.: N/A.

Type of Review: Extension of a currently approved collection.

Respondents: Business or other for-profit and state, local or tribal government.

Number of Respondents: 7,341 respondents; 7,341 responses.

Estimated Time per Response: 1 hour.

Frequency of Response: One-time reporting requirement and third party disclosure requirement.

Obligation To Respond: Required to obtain or retain benefits. Statutory authority for this information collection is contained in 47 U.S.C. 154(i), 161, 303(g), 303(r), and 332(c)(7).

Total Annual Burden: 7,341 hours.

Total Annual Cost: N/A.

Privacy Act Impact Assessment: N/A.

Nature and Extent of Confidentiality: There is no need for confidentiality.

Needs and Uses: The Commission will submit this expiring information collection (IC) to the OMB during this comment period. The Commission is reporting a 392 hour increase in burden since the last time this was submitted to OMB. The increase in burden is now adjusted due to 392 additional respondents.

Sections 90.35 and 90.175 require third party disclosures by applicants proposing to operate a land mobile radio station. If they have service contours that overlap an existing land mobile station they are required to obtain written concurrence of the frequency coordinator associated with the industry for which the existing station license was issued, or the written concurrence of the licensee of the existing station.

The requirement will be used by Commission personnel in evaluating the applicant's need for such frequencies and to minimize the interference potential to other stations operating on the proposed frequencies.

Federal Communications Commission.

Marlene H. Dortch,

Secretary.

[FR Doc. 2010–30006 Filed 11–29–10; 8:45 am]

BILLING CODE 6712–01–P

FEDERAL COMMUNICATIONS COMMISSION

Public Safety and Homeland Security Bureau; Federal Advisory Committee Act; Communications Security, Reliability, and Interoperability Council

AGENCY: Federal Communications Commission.

ACTION: Notice of public meeting.

SUMMARY: In accordance with the Federal Advisory Committee Act, this notice advises interested persons that the Federal Communications Commission's (FCC) Communications Security, Reliability, and Interoperability Council (CSRIC) will hold its fourth meeting on December 13, 2010, at 9 a.m. in the Commission Meeting Room of the Federal Communications Commission, Room TW–C305, 445 12th Street, SW., Washington, DC 20554.

DATES: December 13, 2010.

ADDRESSES: Federal Communications Commission, Room TW–C305

(Commission Meeting Room), 445 12th Street, SW., Washington, DC 20554.

FOR FURTHER INFORMATION CONTACT: Jeffery Goldthorp, Designated Federal Officer of the FCC's CSRIC, (202) 418–1096 (voice) or *jeffery.goldthorp@fcc.gov* (e-mail); or Lauren Kravetz, Deputy Designated Federal Officer of the FCC's CSRIC, 202–418–7944 (voice) or *Lauren.kravetz@fcc.gov* (e-mail).

SUPPLEMENTARY INFORMATION: The CSRIC is a Federal Advisory Committee that provides recommendations to the FCC regarding best practices and actions the FCC can take to ensure optimal security, reliability, and interoperability of communications systems. On March 19, 2009, the FCC, pursuant to the Federal Advisory Committee Act, renewed the charter for the CSRIC for a period of two years, through March 18, 2011.

Members of the various working groups will report to the Council on conclusions and recommendations reached, or progress made thereto, with respect to the issues that are the focus of the group. Topics likely to be covered at this meeting include: Cybersecurity best practices, ISP network protection practices, transition to NG9–1–1, technical options for E9–1–1 location accuracy, priority service requirements for pandemic planning, and implementation of best practices. CSRIC may take action on recommendations presented.

Members of the general public may attend the meeting. The FCC will attempt to accommodate as many people as possible; however, admittance will be limited to seating availability. The Commission will provide audio and/or video coverage of the meeting over the Internet from the FCC's Web page at *http://www.fcc.gov/live.* The public may submit written comments before the meeting to Jeffery Goldthorp, the FCC's Designated Federal Officer for the CSRIC by e-mail to *Jeffery.goldthorp@fcc.gov* or U.S. Postal Service Mail to Jeffery Goldthorp, Associate Chief for Cybersecurity and Communications Reliability Public Safety and Homeland Security Bureau, Federal Communications Commission, 445 12th Street, SW., Room 7–A325, Washington, DC 20554.

Open captioning will be provided for this event. Other reasonable accommodations for people with disabilities are available upon request. Requests for such accommodations should be submitted via e-mail to *fcc504@fcc.gov* or by calling the Consumer & Governmental Affairs 418–0432 (TTY). Such requests should include a detailed description of the accommodation needed. In addition, please include a way the FCC can contact you if it needs more information. Please allow at least five days advance notice; last minute requests will be accepted, but may be impossible to fill.

Additional information regarding the CSRIC can be found at: *http://www.fcc.gov/pshs/advisory/csric/.*

Federal Communications Commission.

Marlene H. Dortch,

Secretary.

[FR Doc. 2010–30005 Filed 11–29–10; 8:45 am]

BILLING CODE 6712–01–P

FEDERAL COMMUNICATIONS COMMISSION

[CC Docket No. 92–237; DA 10–2238]

Next Meeting of the North American Numbering Council

AGENCY: Federal Communications Commission.

ACTION: Notice.

SUMMARY: The Commission released a public notice announcing the meeting and agenda of the North American Numbering Council (NANC). The intended effect of this action is to make the public aware of the NANC's next meeting and agenda.

DATES: Thursday, December 16, 2010, 9:30 a.m.

ADDRESSES: Requests to make an oral statement or provide written comments to the NANC should be sent to Deborah Blue, Competition Policy Division, Wireline Competition Bureau, Federal Communications Commission, Portals II, 445 Twelfth Street, SW., Room 5–C162, Washington, DC 20554.

FOR FURTHER INFORMATION CONTACT: Deborah Blue, Special Assistant to the Designated Federal Officer (DFO) at (202) 418–1466 or *Deborah.Blue@fcc.gov.* The fax number is: (202) 418–1413. The TTY number is: (202) 418–0484.

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's document in CC Docket No. 92–237, DA 10–2238 released November 24, 2010. The complete text in this document is available for public inspection and copying during normal business hours in the FCC Reference Information Center, Portals II, 445 12th Street, SW., Room CY–A257, Washington, DC 20554. The document my also be purchased from the Commission's duplicating contractor, Best Copy and Printing, Inc., 445 12th Street, SW., Room CY–B402, Washington, DC 20554, telephone (800) 378–3160 or (202) 863–2893, facsimile (202) 863–2898, or via the Internet at *http://www.bcpiweb.com.* It is available on the Commission's Web site at *http://www.fcc.gov.*

The North American Numbering Council (NANC) has scheduled a meeting to be held Thursday, December 16, 2010, from 9:30 a.m. until 5 p.m. The meeting will be held at the Federal Communications Commission, Portals II, 445 Twelfth Street, SW., Room TW–C305, Washington, DC. This meeting is open to members of the general public. The FCC will attempt to accommodate as many participants as possible. The public may submit written statements to the NANC, which must be received two business days before the meeting. In addition, oral statements at the meeting by parties or entities not represented on the NANC will be permitted to the extent time permits. Such statements will be limited to five minutes in length by any one party or entity, and requests to make an oral statement must be received two business days before the meeting. People with Disabilities: To request materials in accessible formats for people with disabilities (braille, large print, electronic files, audio format), send an e-mail to *fcc504@fcc.gov* or call the Consumer and Governmental Affairs Bureau at 202–418–0530 (voice), 202–418–0432 (tty). Reasonable accommodations for people with disabilities are available upon request. Include a description of the accommodation you will need, including as much detail as you can. Also include a way we can contact you if we need more information. Please allow at least five days advance notice; last minute requests will be accepted, but may be impossible to fill.

Proposed Agenda: Thursday, December 16, 2010, 9:30 a.m.*

1. Announcements and Recent News
2. Approval of Transcript
   —Meeting of October 22, 2010
3. Report of the North American Numbering Plan Administrator (NANPA)
4. Report of the National Thousands Block Pooling Administrator (PA)
5. Report of the Numbering Oversight Working Group (NOWG)
6. Report of the North American Numbering Plan Billing and Collection (NANP B&C) Agent
7. Report of the Billing and Collection Working Group (B&C WG)
8. Report of the North American Portability Management LLC (NAPM LLC)
   —Process for Procurement of Local Number Portability Administration Contract

9. Report of the Local Number Portability Administration (LNPA) Working Group
10. Report of the Telcordia Dispute Resolution Team: Telcordia Appeal
11. Status of the Industry Numbering Committee (INC) activities
12. Report of the Future of Numbering Working Group (FoN WG)
13. Summary of Action Items
14. Public Comments and Participation (5 minutes per speaker)
15. Other Business

Adjourn no later than 5 p.m.

* The Agenda may be modified at the discretion of the NANC Chairman with the approval of the DFO.

Federal Communications Commission.

Marilyn Jones,

Attorney, Wireline Competition Bureau.

[FR Doc. 2010–30172 Filed 11–29–10; 8:45 am]

BILLING CODE 6712–01–P

FEDERAL RESERVE SYSTEM

Change in Bank Control Notices; Acquisitions of Shares of a Bank or Bank Holding Company

The notificants listed below have applied under the Change in Bank Control Act (12 U.S.C. 1817(j)) and § 225.41 of the Board's Regulation Y (12 CFR 225.41) to acquire shares of a bank or bank holding company. The factors that are considered in acting on the notices are set forth in paragraph 7 of the Act (12 U.S.C. 1817(j)(7)).

The notices are available for immediate inspection at the Federal Reserve Bank indicated. The notices also will be available for inspection at the offices of the Board of Governors. Interested persons may express their views in writing to the Reserve Bank indicated for that notice or to the offices of the Board of Governors. Comments must be received not later than December 13, 2010.

A. Federal Reserve Bank of San Francisco (Kenneth Binning, Vice President, Applications and Enforcement) 101 Market Street, San Francisco, California 94105–1579:

1. *Marc Jonathan Foulkrod,* Moorpark, California; to acquire additional voting shares of Mission Valley Bancorp, Sun Valley, California, and thereby indirectly acquire shares of Mission Valley Bank, Sun Valley, California.

Board of Governors of the Federal Reserve System, November 23, 2010.

Robert deV. Frierson,

Deputy Secretary of the Board.

[FR Doc. 2010–29998 Filed 11–29–10; 8:45 am]

BILLING CODE 6210–01–P

FEDERAL RESERVE SYSTEM

Formations of, Acquisitions by, and Mergers of Bank Holding Companies

The companies listed in this notice have applied to the Board for approval, pursuant to the Bank Holding Company Act of 1956 (12 U.S.C. 1841 *et seq.*) (BHC Act), Regulation Y (12 CFR part 225), and all other applicable statutes and regulations to become a bank holding company and/or to acquire the assets or the ownership of, control of, or the power to vote shares of a bank or bank holding company and all of the banks and nonbanking companies owned by the bank holding company, including the companies listed below.

The applications listed below, as well as other related filings required by the Board, are available for immediate inspection at the Federal Reserve Bank indicated. The application also will be available for inspection at the offices of the Board of Governors. Interested persons may express their views in writing on the standards enumerated in the BHC Act (12 U.S.C. 1842(c)). If the proposal also involves the acquisition of a nonbanking company, the review also includes whether the acquisition of the nonbanking company complies with the standards in section 4 of the BHC Act (12 U.S.C. 1843). Unless otherwise noted, nonbanking activities will be conducted throughout the United States.

Unless otherwise noted, comments regarding each of these applications must be received at the Reserve Bank indicated or the offices of the Board of Governors not later than December 23, 2010.

A. Federal Reserve Bank of New York (Ivan Hurwitz, Vice President), 33 Liberty Street, New York, New York 10045–0001:

1. Chemung Financial Corporation, Elmira, New York; to acquire and thereby merge with Fort Orange Financial Corp., and thereby indirectly acquire Capital Bank & Trust Company, both in Albany, New York.

Board of Governors of the Federal Reserve System, November 24, 2010.

Robert deV. Frierson,

Deputy Secretary of the Board.

[FR Doc. 2010–30076 Filed 11–29–10; 8:45 am]

BILLING CODE P

FEDERAL RESERVE SYSTEM

Formations of, Acquisitions by, and Mergers of Bank Holding Companies

The companies listed in this notice have applied to the Board for approval, pursuant to the Bank Holding Company Act of 1956 (12 U.S.C. 1841 *et seq.*) (BHC Act), Regulation Y (12 CFR part 225), and all other applicable statutes and regulations to become a bank holding company and/or to acquire the assets or the ownership of, control of, or the power to vote shares of a bank or bank holding company and all of the banks and nonbanking companies owned by the bank holding company, including the companies listed below.

The applications listed below, as well as other related filings required by the Board, are available for immediate inspection at the Federal Reserve Bank indicated. The application also will be available for inspection at the offices of the Board of Governors. Interested persons may express their views in writing on the standards enumerated in the BHC Act (12 U.S.C. 1842(c)). If the proposal also involves the acquisition of a nonbanking company, the review also includes whether the acquisition of the nonbanking company complies with the standards in section 4 of the BHC Act (12 U.S.C. 1843). Unless otherwise noted, nonbanking activities will be conducted throughout the United States.

Unless otherwise noted, comments regarding each of these applications must be received at the Reserve Bank indicated or the offices of the Board of Governors not later than December 23, 2010.

A. Federal Reserve Bank of Dallas (E. Ann Worthy, Vice President) 2200 North Pearl Street, Dallas, Texas 75201–2272:

1. TXRB Holdings, Inc., Dallas, Texas; to become a bank holding company by acquiring 100 percent of the voting shares of Texas Republic Bank, N.A., Frisco, Texas.

Board of Governors of the Federal Reserve System, November 23, 2010.

Robert deV. Frierson,

Deputy Secretary of the Board.

[FR Doc. 2010–29999 Filed 11–29–10; 8:45 am]

BILLING CODE 6210–01–P

FEDERAL RESERVE SYSTEM

Formations of, Acquisitions by, and Mergers of Bank Holding Companies; Correction

This notice corrects a notice (FR Doc. 2010–29489) published on pages 71440 and 71441 of the issue for Tuesday, November 23, 2010.

Under the Federal Reserve Bank of Dallas heading, the entry for Commercial Bancshares, Inc., El Campo, Texas, is revised to read as follows:

A. Federal Reserve Bank of Dallas (E. Ann Worthy, Vice President) 2200

North Pearl Street, Dallas, Texas 75201–2272:

1. Commercial Bancshares, Inc., El Campo, Texas; to become a bank holding company by acquiring 75 percent of the voting shares of El Campo Bancshares, Inc., and thereby indirectly acquire voting shares of Commercial State Bank, both of El Campo, Texas.

Comments on this application must be received by December 17, 2010.

Board of Governors of the Federal Reserve System, November 23, 2010.

Robert deV. Frierson,

Deputy Secretary of the Board.

[FR Doc. 2010–29997 Filed 11–29–10; 8:45 am]

BILLING CODE 6210–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Agency for Toxic Substances and Disease Registry

[ATSDR–268]

Availability of Final Toxicological Profiles

AGENCY: Agency for Toxic Substances and Disease Registry (ATSDR), Department of Health and Human Services (HHS).

ACTION: Notice of availability.

SUMMARY: This notice announces the availability of one new and six updated final toxicological profiles of priority hazardous substances comprising the twenty-first set prepared by ATSDR.

FOR FURTHER INFORMATION CONTACT: Ms. Olga Dawkins, Division of Toxicology and Environmental Medicine, Agency for Toxic Substances and Disease Registry, Mailstop F–62, 1600 Clifton Road, NE., Atlanta, Georgia 30333, telephone (770) 488–3315. Electronic access to these documents is also available at the ATSDR Web site: *http://www.atsdr.cdc.gov/toxprofiles/index.asp*

SUPPLEMENTARY INFORMATION: The Superfund Amendments and Reauthorization Act of 1986 (SARA) (42 U.S.C. 9601 *et seq.*) amended the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA or Superfund) (42 U.S.C. 9601 *et seq.*) by establishing certain requirements for ATSDR and the U.S. Environmental Protection Agency (EPA) with regard to hazardous substances that are most commonly found at facilities on the CERCLA National Priorities List (NPL). Among these statutory requirements is a mandate for the Administrator of ATSDR to prepare toxicological profiles for each substance included on the priority lists of hazardous substances. These lists identified 275 hazardous substances that ATSDR and EPA determined pose the most significant potential threat to human health. The availability of the revised list of the 275 priority substances was announced in the **Federal Register** on December 7, 2005 (70 FR 234). For prior versions of the list of substances, *see* **Federal Register** notices dated April 17, 1987 (52 FR 12866); October 20, 1988 (53 FR 41280); October 26, 1989 (54 FR 43619); October 17, 1990 (55 FR 42067); October 17, 1991 (56 FR 52166); October 28, 1992 (57 FR 48801); February 28, 1994 (59 FR 9486); April 29, 1996 (61 FR 18744; November 17, 1997 (62 FR 61332); October 21, 1999 (64 FR 56792); October 25, 2001 (66 FR 54014) and November 7, 2003 (68 FR 63098).

Notice of the availability of drafts toxicological profiles for public review and comment was published in the **Federal Register** on October 23rd, 2007, (72 FR 60020), with notice of a 90-day public comment period for each profile, starting from the actual release date. Following the close of the comment period, chemical-specific comments were addressed, and, where appropriate, changes were incorporated into each profile. The public comments and other data submitted in response to the **Federal Register** notices bear the docket control number ATSDR–236. This material is available for public inspection at the Division of Toxicology and Environmental Medicine, Agency for Toxic Substances and Disease Registry, 4700 Buford Highway, Building 106, Second Floor, Chamblee, Georgia 30341 between 8 a.m. and 4:30 p.m., Monday through Friday, except legal holidays.

Availability

This notice announces the availability of one new and six updated final toxicological profiles of priority hazardous substances comprising the twenty-first set prepared by ATSDR.

The following toxicological profiles are now available through the U.S. Department of Commerce, National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, Virginia 22161, telephone 1–800–553–6847. There is a charge for these profiles as determined by NTIS.

TWENTY-FIRST SET

Toxicological profile	NTIS order No.	CAS No.
1. Boron (Update)	PB2010–100001	7440–42–8
2. Chlorine	PB2010–100002	7782–50–5
3. Ethylbenzene (Update)	PB2010–100004	100–41–4
4. Ethylene Glycol (Update)	PB2010–100005	107–21–1
5. Plutonium (Update)	PB2010–100006	7440–07–5
6. Styrene (Update)	PB2010–100007	100–42–5

Dated: November 23, 2010.

Ken Rose,

Director, Office of Policy, Planning and Evaluation, National Center for Environmental Health/Agency for Toxic Substances and Disease Registry.

[FR Doc. 2010–30009 Filed 11–29–10; 8:45 am]

BILLING CODE 4163–70–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Centers for Disease Control and Prevention

[30Day–11–09CL]

Proposed Data Collections Submitted for Public Comment and Recommendations

In compliance with the requirement of Section 3506(c)(2)(A) of the Paperwork Reduction Act of 1995 for opportunity for public comment on proposed data collection projects, the Centers for Disease Control and Prevention (CDC) will publish periodic summaries of proposed projects. To request more information on the proposed project or to obtain a copy of data collection plans and instruments, call the CDC Reports Clearance Officer on 404–639–5960 or send comments to CDC Assistant Reports Clearance

Officer, 1600 Clifton Road, MS D–74, Atlanta, GA 30333 or send an e-mail to *omb@cdc.gov.* Written comments should be received within 30 days of this notice.

Proposed Project

Calibration of the Short Strengths and Difficulties Questionnaire (SDQ) in the National Health Interview Survey (NHIS)—New—National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention (CDC).

Background and Brief Description

Section 306 of the Public Health Service (PHS) Act (42 U.S.C. 242k), as amended, authorizes that the Secretary of Health and Human Services (DHHS), acting through NCHS, shall collect statistics on the extent and nature of illness and disability of the population of the United States. Section 520 [42 U.S.C. 290bb–31] of the Public Health Service Act establishes the Center for Mental Health Services (CMHS), Substance Abuse and Mental Health Services Administration (SAMHSA), and authorizes the CMHS to conduct surveys with respect to mental health. To monitor the prevalence of children and youth with mental health problems, CMHS and the National Institute of Mental Health (NIMH), through a reimbursable agreement with the NCHS have funded questions on children's mental health on the National Health Interview Study (NHIS).

One component of the NHIS is the short Strengths and Difficulties Questionnaire (short SDQ), a module that has obtained data on the mental health of children aged 4–17 years since 2001. As part of its mission, CMHS has undertaken the task of improving its methods for providing national estimates related to child mental health, specifically by conducting studies that determine validity and appropriate cut-points for measuring serious emotional disturbance in children. To ensure that the short SDQ is a valid measure of child mental health, the proposed study calibrates the short SDQ on the NHIS to a standard psychiatric measure. Highly trained clinical interviewers will administer, via telephone, the Child and Adolescent Psychiatric Assessment (CAPA) or the Pre-School Age Psychiatric Assessment (PAPA) to the parents of a sample of children aged 4–17 years identified in the NHIS as having mental health problems. Children aged 12–17 years will also be interviewed using the Child and Adolescent Psychiatric Assessment (CAPA). Clinical interviewers will also administer these assessments to a suitable control group of parents and children. Approximately 800 adults and 600 children will take part in the study. A 24-month clearance is being sought to conduct this study.

Data collected in the follow-up interviews will then be used to calibrate the short SDQ as it is used in the NHIS. Data will not be used to produce national estimates. There is no cost to respondents other than their time. The total estimated annualized burden hours are 633.

ESTIMATED ANNUALIZED BURDEN HOURS

Type of respondent	Type of form	Number of respondents	Number of responses per respondent	Average burden per response in hours
Parents of children aged 4–8 years	Pre-school Age Psychiatric Assessment (PAPA).	63	1	1
Parents of children aged 9–17 years	Child and Adolescent Psychiatric Assessment: Parent Version (CAPA).	338	1	1
Children, aged 12–17	Child and Adolescent Psychiatric Assessment: Child Version (CAPA).	300	1	45/60
Parents	Short Strengths and Difficulties Questionnaire (SDQ).	401	1	1/60

Dated: November 23, 2010.

Catina Conner,

Acting Reports Clearance Officer, Centers for Disease Control and Prevention.

[FR Doc. 2010–30124 Filed 11–29–10; 8:45 am]

BILLING CODE 4163–18–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Centers for Disease Control and Prevention

[0920–11–10BG]

Agency Forms Undergoing Paperwork Reduction Act Review

The Centers for Disease Control and Prevention (CDC) publishes a list of information collection requests under review by the Office of Management and Budget (OMB) in compliance with the Paperwork Reduction Act (44 U.S.C. chapter 35). To request a copy of these requests, call the CDC Reports Clearance Officer at (404) 639–5960 or send an e-mail to *omb@cdc.gov.* Send written comments to CDC Desk Officer, Office of Management and Budget, Washington, DC or by fax to (202) 395–5806.

Proposed Project

National Voluntary Environmental Assessment Information System (NVEAIS)—New—National Center for Environmental Health (NCEH), Centers for Disease Control and Prevention (CDC).

Background and Brief Description

The CDC is requesting OMB approval for a National Voluntary Environmental Assessment Information System to collect data from foodborne illness outbreak environmental assessments routinely conducted by local, state, territorial, or tribal food safety programs during outbreak investigations. Environmental assessment data are not currently collected at the national level. The data reported through this information system will provide timely data on the causes of outbreaks, including environmental factors associated with outbreaks, and are essential to environmental public health regulators' efforts to respond more effectively to outbreaks and prevent future, similar outbreaks.

The information system was developed by the Environmental Health Specialists Network (EHS-Net), a collaborative project of federal and state public health agencies. The EHS-Net has developed a standardized instrument for reporting data relevant to foodborne illness outbreak environmental assessments.

State, local, tribal, and territorial food safety programs are the respondents for this data collection. Although it is not possible to determine how many programs will choose to participate, as NVEAIS is voluntary, the maximum

potential number of program respondents is approximately 3,000.

However, these programs will be reporting data on outbreaks, not their programs or personnel. It is not possible to determine exactly how many outbreaks will occur in the future, nor where they will occur. However, we can estimate, based on existing data that a maximum of 1,400 foodborne illness outbreaks will occur annually. Only programs in the jurisdictions in which these outbreaks occur would report to NVEAIS. Consequently, we have based our respondent burden estimate on the number of outbreaks likely to occur each year. Assuming each outbreak occurs in a different jurisdiction, there will be one respondent per outbreak. Each respondent will respond only once per outbreak investigated.

There are two activities for which we need to estimate burden for these programs. The first is entering all requested environmental assessment data into NVEAIS. This will be done once for each outbreak. This will take approximately 120 minutes per outbreak.

The second activity requiring a burden estimate is the manager interview that will be conducted at each establishment associated with an outbreak. Most outbreaks are associated with only one establishment; however, some are associated with multiple establishments. We estimate that a maximum average of 4 manager interviews will be conducted per outbreak. Each interview will take about 20 minutes.

The total estimated annual burden is 4,667 hours (see Table). There is no cost to the respondents other than their time.

ESTIMATED ANNUAL BURDEN HOURS

Respondents	Data collection activity/form name	Number of respondents	Number of responses per respondent	Average burden per response (in hours)
Food safety program personnel	Reporting environmental assessment data into electronic system.	1,400	1	2
Food safety program personnel	Manager interview	1,400	4	20/60

Dated: November 23, 2010.

Catina Conner,

Acting Reports Clearance Officer, Centers for Disease Control and Prevention.

[FR Doc. 2010–30129 Filed 11–29–10; 8:45 am]

BILLING CODE 4163–18–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Administration for Children and Families

Submission for OMB Review; Comment Request

Title: State Personal Responsibility Education Program (PREP).

OMB No.: 0970–0380.

Description: The Patient Protection and Affordable Care Act, 2010, also known as health care reform, amends Title V of the Social Security Act (42 U.S.C. 701 *et seq.*) as amended by sections 2951 and 2952(c), by adding section 513, authorizing the Personal Responsibility Education Program (PREP). The President signed into law the Patient Protection and Affordable Care Act on March 23, 2010, Public Law 111–148, which adds the new PREP formula grant program. The purpose of this program is to educate adolescents on both abstinence and contraception to prevent pregnancy and sexually transmitted infections (STIs); and at least three adulthood preparation subjects. The Personal Responsibility Education grant program funding is available for fiscal years 2010 through 2014.

An emergency request is being made to solicit comments from the public on paperwork reduction as it relates to ACYF's receipt of the following documents from applicants and awardees: Application for Mandatory Formula Grant. State Plan. Performance Progress Report.

Respondents: 50 States and 9 Territories, to include, District of Columbia, Puerto Rico, Virgin Islands, Guam, American Samoa, Northern Mariana Islands, the Federated States of Micronesia, the Marshall Islands and Palau.

ANNUAL BURDEN ESTIMATES

Instrument	Number of respondents	Number of responses per respondent	Average burden hours per response	Total burden hours
Application, to include program narrative	59	1	24	1,416
State Plan	59	1	40	2,360
Performance Progress Reports	59	2	16	1,888

Estimated Total Annual Burden Hours: 5,664.

Additional Information: Copies of the proposed collection may be obtained by writing to the Administration for Children and Families, Office of Administration, Office of Information Services, 370 L'Enfant Promenade, SW., Washington, DC 20447, *Attn:* ACF Reports Clearance Officer. All requests should be identified by the title of the information collection. *E-mail address: infocollection@acf.hhs.gov.*

OMB Comment: OMB is required to make a decision concerning the collection of information between 30 and 60 days after publication of this document in the **Federal Register**. Therefore, a comment is best assured of having its full effect if OMB receives it within 30 days of publication. Written comments and recommendations for the proposed information collection should be sent directly to the following: Office of Management and Budget, Paperwork Reduction Project, *Fax:* 202–395–7285, *e-mail: OIRA_SUBMISSION@OMB.EOP.GOV, Attn:* Desk Officer for the Administration for Children and Families.

Dated: November 24, 2010.

Robert Sargis,

Reports Clearance Officer.

[FR Doc. 2010–30105 Filed 11–29–10; 8:45 am]

BILLING CODE 4184–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Administration for Children and Families

Request for Public Comment on the Proposed Adoption of Administration for Native Americans (ANA) Program Policies and Procedures

AGENCY: Administration for Native Americans, ACF, HHS.

ACTION: Notice.

SUMMARY: Pursuant to Section 814 of the Native American Programs Act of 1974 (NAPA), as amended, the Administration for Native Americans (ANA) is required to provide members of the public an opportunity to comment on proposed changes in interpretive rules, general statements of policy, and rules of agency procedure or practice, and to give notice of the final adoption of such changes at least 30 days before the changes become effective. In accordance with notice requirements of NAPA, ANA herein describes its proposed interpretive rules, general statements of policy, and rules of agency procedure or practice as they relate to the Fiscal Year (FY) 2011 Funding Opportunity Announcements (FOA) for the following programs: Social and Economic Development Strategies (SEDS), Social and Economic Development Strategies—Tribal Governance (SEDS—TG), Social and Economic Development Strategies—Assets for Independence (SEDS—AFI), Native Language Preservation and Maintenance (Language P&M), Native Language Preservation and Maintenance—Esther Martinez Initiative (Language—EMI), and Environmental Regulatory Enhancement (ERE). This notice also provides additional information about ANA's plan for administering the programs.

DATES: The deadline for receipt of comments is 30 days from the date of publication in the **Federal Register**.

ADDRESSES: Comments in response to this notice should be addressed to Lillian Sparks, Commissioner, Administration for Native Americans, 370 L'Enfant Promenade, SW., Mail Stop: Aerospace 2—West, Washington, DC 20447. Delays may occur in mail delivery to Federal offices; therefore, a copy of comments should be faxed to (202) 690–7441. Comments will be available for inspection by members of the public at the Administration for Native Americans, 901 D Street, SW., Washington, DC 20447.

FOR FURTHER INFORMATION CONTACT: Kathy Killian, Program Specialist, (877) 922–9262.

SUPPLEMENTARY INFORMATION: Section 814 of NAPA, as amended, requires ANA to provide notice of its proposed interpretive rules, general statements of policy, and rules of agency organization, procedure, or practice. The proposed clarifications, modifications, and new text will appear in the FY 2011 FOAs: SEDS, SEDS—TG, SEDS—AFI, Language P&M, Language—EMI, and ERE. This notice serves to fulfill this requirement.

A. Funding Opportunity Announcements

1. Social and Economic Development Strategies (SEDS)

In FY 2011, ANA will combine the SEDS and SEDS—Special Initiative (SEDS—SI) FOAs from FY 2010 into one SEDS FOA. The SEDS FOA will include all program areas of interest from the previous FOAs which address Social Development, Economic Development, and Strengthening Families. Governance projects will be addressed in a separate FOA (see SEDS—TG, below). The SEDS FOA will include two funding ranges with the higher funding amount being the disqualification factor for applications (*see* Section C of this Notice for more information on funding ranges). Furthermore, through the SEDS FOA, ANA will fund project proposals from Tribes to prepare applications for Federal recognition. Tribes will only be allowed to receive funding for this priority area once, as per the funding restriction which states, "ANA does not fund projects that are essentially identical or similar in whole or in part to previously funded projects proposed by the same applicant or activities or projects proposed by a consortium that duplicate activities for which any consortium member also receives funding from ANA." This is a return to the ANA priority of the 1990s. (Legal authority: Section 803(a) of NAPA, as amended.)

2. SEDS—Tribal Governance (TG)

In FY 2011 ANA will introduce SEDS—TG to fund tribal governance projects. These types of projects were formerly funded under SEDS. ANA will expand the governance priority to emphasize projects that strengthen the internal capacity and infrastructure of tribal governments to increase services provided to children and families. The FOA will also emphasize increasing the tribal government's ability to exercise local control and decision making over their resources. ANA is particularly interested in projects designed to develop strong linkages between social services, health programs, and schools serving Native children. Program areas of interest will be expanded to include:

(1) *Interoperability:* Promote program coordination among human and social service programs for tribal communities to strengthen the programs they provide to their children, youth, and families.

(2) *Comprehensive Strategies:* Develop comprehensive intergovernmental strategies involving tribal, State and Federal governments to meet the needs of tribal children and youth.

(3) *Self-Governance:* Build the capacity and infrastructure of tribal governments to enter into self-governance compacts.

ANA believes this FOA will encourage Tribes and Native communities to look at new opportunities and methods for providing services to their communities. Applicants eligible for this FOA are the same as those identified for SEDS. (Legal authority: Section 803(a) of NAPA, as amended.)

3. SEDS—Assets for Independence (AFI)

ANA is partnering with the Office of Community Services' (OCS) AFI program to support Tribes and Native organizations in planning and implementing comprehensive asset-building projects. ANA and OCS are providing this support through funding opportunities, training, and technical assistance. The AFI program is an assets-based approach for assisting low-income families out of poverty. The program assists individuals and families to save earned income in special-purpose, matched savings accounts called Individual Development Accounts (IDAs). Every dollar in savings deposited into an IDA by a participant will be combined with non-participant funds (from $1 to $8 combined Federal (AFI) and non-Federal funds). The program promotes savings and enables a participant to acquire a lasting asset. An AFI participant can use the IDA savings to achieve any of three objectives: acquire a first home, capitalize a small business, or enroll in postsecondary education or training.

ANA, through its SEDS program, and OCS, through its AFI program, are offering Tribes and Native organizations a joint funding initiative. The purpose of the joint SEDS–AFI funding is to support Tribes and Native organizations

implement asset building projects with an AFI-funded IDA component. The ANA–SEDS portion of the funding will focus on the operational and staffing costs necessary to implement the project, financial literacy training, capacity building, and other activities. The OCS–AFI portion will be used to provide funding for IDAs and limited administrative costs. This FOA will request one application with two project budgets to complete the project. The two project budgets will separately identify the SEDS portion of the funding and corresponding match and the AFI portion of the funding and corresponding match. These two project budgets will be the basis for two awards needed to complete the project. The project will be monitored by a team representing both ANA and OCS. ANA will provide a funding opportunity for applicants to apply for a 5-year (five 12-month budget periods) grant to accompany award of a standard 5-year AFI grant.

Eligible applicants include non-profit organizations that serve Native American populations, or Tribes, and Alaska Native villages if they are joint applicants with a non-profit organization serving Native American populations. The eligibility reflects the overlap between ANA's target populations and the AFI program's legislative eligibility requirements. Individual participants who open IDAs under this program must meet AFI participant guidelines, which are: Members of a household that is eligible for assistance under Temporary Assistance for Needy Families (TANF), or whose adjusted gross income is either equal to or less than 200 percent of the Federal poverty line, or is eligible for Federal Earned Income Tax Credit and has less than $10,000 in assets (excluding the value of a primary dwelling unit and one motor vehicle).

The partnership includes a training and technical assistance (T/TA) component, through which ANA's T/TA providers will conduct pre-application trainings and provide one-on-one technical assistance to potential SEDS—AFI applicants.

This partnership between OCS and ANA will allow these two programs to provide enhanced funding opportunities to our common target communities and maximize the impact of grant dollars. Interoperability between programs within ACF is an ACF priority. (Legal authority: Section 803(a) of NAPA, as amended.)

4. Native Language Preservation and Maintenance (Language P&M) and Esther Martinez Initiative (Language—EMI)

All Language P&M and Language—EMI projects funded in FY2011 will have a start date of August 1, 2011. The revision to the start date will allow projects to better align with most school schedules throughout ANA's target communities. To accommodate this revision, the Language FOAs will be published and application due dates will be earlier in the year than all other FOAs. (Legal authority: Section 803(a) and 803C of NAPA, as amended, 42 U.S.C. 2991b and § 2991b-3 and Pub. L. 109–394.)

B. *Administrative Policies:* In FY 2011, ANA will add five administrative policies.

1. Grantees can have only one active grant per Catalog of Federal Domestic Assistance (CFDA) number.

2. ANA will increase the reach of its limited funding. Therefore, applicants that have received funding from ANA for at least two projects consecutively and within one CFDA number may not be funded for a third consecutive project within the same CFDA number if other applicants who have not received ANA funding in the past 3 years are within the scoring range to be funded.

3. Applicants are requested to identify a target amount of leveraged resources (target of zero is acceptable) and a target number of partnerships. The value of the targets will not be evaluated and scored; however, the indicators' contribution within the overall strategy of project implementation and its sustainability is included in the evaluation criteria. Grantees will be required to track these indicators quarterly throughout the project period. Leveraged resources are in addition to the statutory matching requirement of 20 percent and are not a requirement of this grant.

4. Business plans should be submitted for all SEDS applications requesting an equity investment on behalf of the Federal government.

The first two administrative policies will allow ANA to maximize its limited funding to benefit the most communities. The intent of the first policy, to restrict funding to one grant per entity per CFDA number, will also be stated in the eligibility and funding restriction sections of all FOAs. Due to the change in the project period start date for language projects, ANA will waive this restriction if a language project is ending within 2 months of a new project start date (*i.e.,* organizations or Tribes with projects ending 9/29/2011 can receive new awards with a 8/1/2011 start date). In addition to maximizing the benefit of ANA's limited funds, the first administrative policy will encourage current grantees to successfully complete project objectives within the originally defined project periods and avoid requests for No Cost Extensions (NCEs). Past experience has shown that project success is increased when a grantee can complete one project prior to starting a second project. Overlapping projects, specifically a new award and an extension, can result in delays or significant challenges to one or both projects because of limited financial and personnel resources.

The second administrative policy allows the ANA commissioner to limit the frequency of the same organizations receiving funding, thus allowing it to address more communities. (Legal authority: Section 803(a), 803(d), and 803C of NAPA, as amended, 42 U.S.C. 2991b and 2991b–3 and Pub. L. 109–394.)

The third administrative policy allows ANA to continue to measure leveraged resources and partnerships for all funded projects, but removes the target numbers for these indicators from being evaluated and scored by panel reviewers. ANA is required to measure these important indicators, as per the Government Performance Reporting Act (GPRA) for all negotiated awards. (Legal authority: Section 803(a), 803(d), and 803C of NAPA, as amended, 42 U.S.C. 2991b and 2991b–3 and Pub. L. 109–394.)

The last administrative policy is specific to SEDS FOA. The business plan will not be evaluated for the merit of the plan itself; however, the business plan will be reviewed to ensure that the project strategy is in line with the business plan. (Legal authority: Section 803(a) of NAPA, as amended.)

C. *Award Information:* In all FOAs, ANA identifies funding floors and funding ceilings, as well as project periods. In FY 2011, the thresholds and project periods for SEDS, SEDS—TG, and SEDS—AFI are new or have changed.

The funding ranges and project periods for the combined and new FOAs (see Section A of this Notice) will be as follows:

SEDS

$50,000 to $149,999 per budget period, and
$150,000 to $400,000 per budget period.
12-month project and budget period, or
24-month project period with two 12-month budget periods, or

36-month project period with three 12-month budget periods.

The SEDS FOA will identify how many applications will be funded in each of the two funding ranges. Only the upper limit of the two ranges ($400,000) will be used as a disqualification factor.

SEDS—TG

$50,000 to $375,000 per budget period.
12-month project and budget period, or
24-month project period with two 12-month budget periods, or
36-month project period with three 12-month budget periods.

SEDS—AFI

$50,000 to $250,000 per budget period.
60-month project period with five 12-month budget periods.

The SEDS—AFI range reflects the ANA portion of the funding only. OCS will provide up to $1 million for a 5-year budget and project period. (Legal authority: Section 803(a) of NAPA, as amended.)

Disqualification Factors: ANA will revise for clarification two factors that are specific to applications submitted for ANA funding. Applications that are submitted without this documentation will be considered non-responsive to the FOA and will not be considered for competition.

The first ANA-specific disqualification factor applies to all applicants. The documentation required from the Tribe, Alaska Native village or organization stating approval of the proposed project must come in the form of a Board Resolution.

The second ANA-specific disqualification factor applies only to applicants that are *not* Tribes or Native Alaska villages. Organizations applying for funding must show that a majority of board members approving the project proposal are representative of the community to be served. ANA will revise the categories of representatives of the community to be served to include: (1) Members of Federally or State recognized Tribes; (2) persons eligible to be a participant or beneficiary to the project to be funded; (3) persons who are recognized by the eligible community to be served as having a cultural relationship with the community to be served; or (4) persons considered to be Native American as defined in title 45, part 1336, section 10 of the Code of Federal Regulations (CFR), and Native American Pacific Islander as defined in the Native American Programs Act.

These disqualification factors will be revised to better establish board support for a project and to demonstrate a stronger link between an organization's board and the community to be served. (Legal authority: Section 803(a) and 814 of NAPA, as amended.)

D. *Definitions:* ANA will revise and add definitions for terms used in the FOA.

Leveraged Resources—Any resource, not including the Federal share, non-Federal contribution, and program income, acquired or utilized during the project period that supports the project. Leveraged resources are expressed as a dollar amount and may include natural, financial, personnel, and physical resources provided to assist in the successful completion of the project.

Interoperability—Collaborative administration or information sharing that integrates the efforts of individual programs, projects, departments, etc. in order to strengthen programs and provide comprehensive service.

Program Income—Gross income earned by a recipient and/or subrecipient that was directly generated by the grant-supported activity or earned as a result of the award. Program income includes (but is not limited to) fees for services performed, the use or rental of real or personal property acquired under the grant, the sale of commodities or items fabricated under an award, license fees and royalties on patents and copyrights, and payments of interest on loans made with grant funds. Except as otherwise provided in statute, regulation, or the terms and conditions of the award, program income does not include rebates, credits, discounts, or interest earned in relation to program income; the receipt of principal on loans or interest the recipient earns on those amounts after receiving them from the borrower; taxes, special assessments, levies, fines, or similar revenues raised by a governmental recipient or subrecipient. The term also does not include interest earned on advances of Federal funds and proceeds from the sale of equipment or real property acquired under an award, which have distinct accountability requirements.

The leveraged resources definition will be revised to state that program income cannot be included. Interoperability is defined because the evaluation criteria will include a reference to the integration of the proposed project into other programs, if appropriate for the proposed project. Interoperability is an ACF priority, both within ACF and in the entities it funds. Program income is defined to clarify the definition of leveraged resources. (Legal authority: Section 803(b) and 814 of NAPA, as amended and 42 U.S.C. 2991b-3(b)(7)(C).)

E. *Cost Sharing or Matching:* The matching requirement waiver for Insular Areas will no longer be available for nongovernmental entities.

1. All matching is waived for consolidated grants to governments of the Insular Areas;

2. The first $200,000 of matching is waived for non-consolidated grants to governments of American Samoa, Guam, the Virgin Islands, or the Northern Mariana Islands; however, matching over the first $200,000 is not waived;

3. Matching is not waived for grants to nongovernmental entities of the Insular Areas.

Although there is not an automatic waiver for all applicants from the Insular Areas, any applicant may request an individual match requirement waiver, in accordance with NAPA. (Legal authority: 48 U.S.C. 1469(a)(d) and 45 CFR 1336.50(b)(3).)

F. *Funding Restrictions:* The restriction that prevents ANA from funding "counseling or therapeutic activities that are medically-based" will not be included in the following FOAs: Language—P&M, Language—EMI, SEDS—AFI, SEDS—TG, and ERE. In the SEDS FOA, the restriction will be revised to state:

ANA does not fund couples or family counseling activities that are medically based.

ANA will revise this restriction in SEDS in order to fund medically based activities in projects that address such health issues as diabetes prevention and care projects, elder health care, or other similar types of health issues. This funding restriction will not appear in other FOAs. (Legal authority: Sections 803(a) and 814 of NAPA, as amended.)

G. *ANA Application Evaluation Criteria:* ANA will revise the evaluation criteria throughout the Language—P&M, Language—EMI, SEDS, SEDS—TG, and ERE FOAs to clarify how reviewers will evaluate and score applications. The content of evaluation criteria will mirror the content of the project description section of the FOAs, which instructs applicants on what to include in an application.

i. *Titles and Assigned Weight:* In FY 2011, ANA will rename the criteria and adjust the weighted scores.

For FY 2011, the criteria will be titled and weighted as follows:

—Objectives and Need for Assistance 20 points;
—Outcomes Expected 15 points;
—Approach 50 points;
—Sub-criterion—Project Strategy 30 points;
—Sub-criterion—Objective Work Plan (OWP) 20 points and

—Budget and Budget Justification 15 points.

For FY 2011, the two criteria for the SEDS–AFI FOA will be titled and weighted as follows:

—Approach 90 points and
—Budget and Budget Justification 10 points.

The criteria titles will match the titles found in the project description section of the FOAs. Matching titles will help applicants to better understand the connection between the two sections of the FOAs. The assigned weights better reflect what ANA considers to be the most important elements of the project application. (Legal authority: Section 803(c) of NAPA, as amended.)

ii. *ANA Evaluation Criteria:* Included here is a summary of each criterion. The FOAs will include a more detailed description of the evaluation criteria and the associated project description.

(a) *Objectives and Need for Assistance:* Under this criterion, applications will be evaluated on the applicant's community and applicant identification, connection to the community, community participation in the project development, the problem statement, and the briefly stated objectives.

(b) *Outcomes Expected:* Under this criterion, applications will be evaluated on the strength of the project outcomes expected, which include the project goal, the results and benefits expected, and one project-specific impact indicator. For language applications that are designed to teach a Native language, applicants must include an impact indicator that shows advancement of language fluency. All other language projects should provide an impact indicator that measures an increase in community interest to preserve the language.

(c) *Approach:* Under this criterion, the application will be evaluated on the strength of the project approach. This criterion includes two sub-criteria: The project strategy and the OWP. The project strategy sub-criterion includes a detailed description of the implementation plan, community involvement and outreach during implementation, and contingency planning to support project implementation. In addition, partnerships and leveraged resources will be evaluated as to their contribution within the overall strategy of project implementation and its sustainability; however, the target numbers will not be evaluated or scored. In this section reviewers will also consider organizational capacity and project sustainability. The OWP sub-criterion includes a review of the OWP form and its strength as an effective implementation tool.

(d) *Budget:* Under this criterion, the application will be evaluated on the strength of the budget and how well it supports successful completion of the project objectives. This criterion includes a line-item budget and budget justification for each line item for each budget period.

The changes to the content of evaluation criteria, and the complementary changes to the project description section of the FOA, will more effectively guide panel reviewers and applicants on what ANA believes are critical components of a project application. (Legal authority: Section 803(c) of NAPA, as amended.)

Dated: November 22, 2010.

Lillian Sparks,

Commissioner, Administration for Native Americans.

[FR Doc. 2010–29976 Filed 11–29–10; 8:45 am]

BILLING CODE 4184–34–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

[Docket No. FDA–2010–N–0583]

Agency Information Collection Activities: Proposed Collection; Comment Request; Radioactive Drug Research Committees

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 the information collection contained in regulations governing the use of radioactive drugs for basic informational research (21 CFR 361.1).

DATES: Submit either electronic or written comments on the collection of information by January 31, 2011.

ADDRESSES: Submit electronic comments on the collection of information to *http://www.regulations.gov.* Submit written comments on the collection of information to the Division of Dockets Management (HFA–305), Food and Drug Administration, 5630 Fishers Lane., rm. 1061, Rockville, MD 20852. All comments should be identified with the docket number found in brackets in the heading of this document.

FOR FURTHER INFORMATION CONTACT: Elizabeth Berbakos, Office of Information Management, Food and Drug Administration, 1350 Piccard Dr., PI50–400B, Rockville, MD 20850, 301–796–3792, *Elizabeth.Berbakos@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.

Radioactive Drug Research Committees—(OMB Control Number 0910–0053)

Under sections 201, 505, and 701 of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 321, 355, and 371), FDA has the authority to issue regulations governing the use of radioactive drugs

for basic scientific research. Section 361.1 (21 CFR 361.1) sets forth specific regulations regarding the establishment and composition of Radioactive Drug Research Committees and their role in approving and monitoring basic research studies utilizing radiopharmaceuticals. No basic research study involving any administration of a radioactive drug to research subjects is permitted without the authorization of an FDA approved Radioactive Drug Research Committee (§ 361.1(d)(7)). The type of research that may be undertaken with a radiopharmaceutical drug must be intended to obtain basic information and not to carry out a clinical trial for safety or efficacy. The types of basic research permitted are specified in the regulation, and include studies of metabolism, human physiology, pathophysiology, or biochemistry.

Section 361.1(c)(2) requires that each Radioactive Drug Research Committee shall select a chairman, who shall sign all applications, minutes, and reports of the committee. Each committee shall meet at least once each quarter in which research activity has been authorized or conducted. Minutes shall be kept and shall include the numerical results of votes on protocols involving use in human subjects. Under § 361.1(c)(3), each Radioactive Drug Research Committee shall submit an annual report to FDA. The annual report shall include the names and qualifications of the members of, and of any consultants used by, the Radioactive Drug Research Committee, using FDA Form 2914, and a summary of each study conducted during the proceeding year, using FDA Form 2915.

Under § 361.1(d)(5), each investigator shall obtain the proper consent required under the regulations. Each female research subject of childbearing potential must state in writing that she is not pregnant, or on the basis of a pregnancy test be confirmed as not pregnant.

Under § 361.1(d)(8), the investigator shall immediately report to the Radioactive Drug Research Committee all adverse effects associated with use of the drug, and the committee shall then report to FDA all adverse reactions probably attributed to the use of the radioactive drug.

Section 361.1(f) sets forth labeling requirements for radioactive drugs. These requirements are not in the reporting burden estimate because they are information supplied by the Federal Government to the recipient for the purposes of disclosure to the public (5 CFR 1320.3(c)(2)).

Types of research studies not permitted under this regulation are also specified, and include those intended for immediate therapeutic, diagnostic, or similar purposes or to determine the safety or effectiveness of the drug in humans for such purposes (*i.e.,* to carry out a clinical trial for safety or efficacy). These studies require filing of an investigational new drug application (IND) under 21 CFR part 312, and the associated information collections are covered in OMB Control Number 0910–0014.

The primary purpose of this collection of information is to determine whether the research studies are being conducted in accordance with required regulations and that human subject safety is assured. If these studies were not reviewed, human subjects could be subjected to inappropriate radiation or pharmacologic risks.

Respondents to this information collection are the chairperson(s) of each individual Radioactive Drug Research Committee, investigators, and participants in the studies.

The burden estimates are based on FDA's experience with these reporting and recordkeeping requirements over the past few years and the number of submissions received by FDA under the regulations.

FDA estimates the burden of this collection of information as follows:

TABLE 1.—ESTIMATED ANNUAL REPORTING BURDEN[1]

21 CFR Section	Forms	Number of respondents	Annual frequency per response	Total annual responses	Hours per response	Total hours
361.1(c)(3) & (4)	FDA 2914	80	1	80	1	80
361.1(c)(3)	FDA 2915	50	6.8	340	3.5	1,190
361.1(d)(8)		50	6.8	340	0.1	34
Total						1,304

[1] There are no capital costs or operating and maintenance costs associated with this collection of information.

TABLE 2—ESTIMATED ANNUAL RECORDKEEPING BURDEN[1]

21 CFR section	Number of recordkeepers	Annual frequency per recordkeeping	Total annual records	Hours per record	Total hours
361.1(c)(2)	80	4	320	10	3,200
361.1(d)(5)	50	6.8	340	.75	255
Total					3,455

[1] There are no capital costs or operating and maintenance costs associated with this collection of information.

Dated: November 23, 2010.

Leslie Kux,

Acting Assistant Commissioner for Policy.

[FR Doc. 2010–30038 Filed 11–29–10; 8:45 am]

BILLING CODE 4160–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

[Docket No. FDA–2010–N–0594]

Agency Information Collection Activities; Proposed Collection; Comment Request; Focus Groups as Used by the Food and Drug Administration (All Food and Drug Administration Regulated 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 focus groups as used by FDA to gauge public opinion on all FDA-regulated products.

DATES: Submit either electronic or written comments on the collection of information by January 31, 2011.

ADDRESSES: Submit electronic comments on the collection of information to *http://www.regulations.gov.* Submit written comments on the collection of information to the Division of Dockets Management (HFA–305), Food and Drug Administration, 5630 Fishers Lane, rm. 1061, Rockville, MD 20852. All comments should be identified with the docket number found in brackets in the heading of this document.

FOR FURTHER INFORMATION CONTACT: Jonna Capezzuto, Office of Information Management, Food and Drug Administration, 1350 Piccard Dr., PI50–400B, Rockville, MD 20850, 301–796–3794, e-mail: *Jonnalynn.capezzuto@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.

Focus Groups as Used by the Food and Drug Administration (All FDA-Regulated Products)—(OMB Control Number 0910–0497)—Extension

FDA conducts focus group interviews on a variety of topics involving FDA-regulated products, including drugs, biologics, devices, food, tobacco, and veterinary medicine.

Focus groups provide an important role in gathering information because they allow for a more indepth understanding of consumers' attitudes, beliefs, motivations, and feelings than do quantitative studies. Focus groups serve the narrowly defined need for direct and informal opinion on a specific topic and as a qualitative research tool have three major purposes:

- To obtain consumer information that is useful for developing variables and measures for quantitative studies,
- To better understand consumers' attitudes and emotions in response to topics and concepts, and
- To further explore findings obtained from quantitative studies.

FDA will use focus group findings to test and refine their ideas but will generally conduct further research before making important decisions, such as adopting new policies and allocating or redirecting significant resources to support these policies.

FDA estimates the burden of this collection of information as follows:

TABLE 1—ESTIMATED ANNUAL REPORTING BURDEN[1]

Activity	Number of respondents	Annual frequency per response	Total annual responses	Hours per response	Total hours
Focus Group Interviews	1,440	1	1,440	1.75	2,520

[1] There are no capital or operating and maintenance costs associated with this collection of information.

Annually, FDA projects about 20 focus group studies using 160 focus groups with an average of 9 persons per group, and lasting an average of 1.75 hours each. FDA is requesting this burden for unplanned focus groups so as not to restrict the Agency's ability to gather information on public sentiment of its proposals in its regulatory and communications programs.

Dated: November 23, 2010.

Leslie Kux,

Acting Assistant Commissioner for Policy.

[FR Doc. 2010–30037 Filed 11–29–10; 8:45 am]

BILLING CODE 4160–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

[Docket No. FDA–2010–N–0588]

Agency Information Collection Activities; Proposed Collection; Comment Request; Exceptions or Alternatives to Labeling Requirements for Products Held by the Strategic National Stockpile

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 the information collection requirements for FDA regulations related to the exceptions or alternatives to labeling requirements for products held by the Strategic National Stockpile (SNS).

DATES: Submit either electronic or written comments on the collection of information by January 31, 2011.

ADDRESSES: Submit electronic comments on the collection of information to *http://www.regulations.gov.* Submit written comments on the collection of information to the Division of Dockets Management (HFA–305), Food and Drug Administration, 5630 Fishers Lane, rm. 1061, Rockville, MD 20852. All comments should be identified with the docket number found in brackets in the heading of this document.

FOR FURTHER INFORMATION CONTACT: Elizabeth Berbakos, Office of Information Management, Food and Drug Administration, 1350 Piccard Dr., PI50–400B, Rockville, MD 20850, 301–796–3792, *Elizabeth.Berbakos@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.

Exceptions or Alternatives to Labeling Requirements for Products Held by the Strategic National Stockpile—(OMB Control Number 0910–0614)—Extension

Under the Public Health Service Act (the PHS Act), the Department of Health and Human Services stockpiles medical products that are essential to the health security of the Nation (see section 319F–2 of the PHS Act (42 U.S.C. 247d-6b)). This collection of medical products for use during national health emergencies, known as the SNS, is to "provide for the emergency health security of the United States, including the emergency health security of children and other vulnerable populations, in the event of a bioterrorist attack or other public health emergency."

It may be appropriate for certain medical products that are or will be held in the SNS to be labeled in a manner that would not comply with certain FDA labeling regulations given their anticipated circumstances of use in an emergency. However, noncompliance with these labeling requirements could render such products misbranded under section 502 of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 352).

In the **Federal Register** of December 28, 2007 (72 FR 73589), FDA published an interim final rule entitled "Exceptions or Alternatives to Labeling Requirements for Products Held by the Strategic National Stockpile." In the interim final rule, FDA issued regulations under §§ 201.26, 610.68, 801.128, and 809.11 (21 CFR 201.26, 610.68, 801.128, and 809.11), which allow the appropriate FDA Center Director to grant a request for an exception or alternative to certain regulatory provisions pertaining to the labeling of human drugs, biological products, medical devices, and in vitro diagnostics that currently are or will be included in the SNS if certain criteria are met. The appropriate FDA Center Director may grant an exception or alternative to certain FDA labeling requirements if compliance with these labeling requirements could adversely affect the safety, effectiveness, or availability of products that are or will be included in the SNS. An exception or alternative granted under the regulations may include conditions or safeguards so that the labeling for such products includes appropriate information necessary for the safe and effective use of the product given the product's anticipated circumstances of use. Any grant of an exception or alternative will only apply to the specified lots, batches, or other units of medical products in the request. The appropriate FDA Center Director may also grant an exception or alternative to the labeling provisions specified in the regulations on his or her own initiative.

Under § 201.26(b)(1)(i) (human drug products), § 610.68(b)(1)(i) (biological products), § 801.128(b)(1)(i) (medical devices), and § 809.11(b)(1)(i) (in vitro diagnostic products for human use) an SNS official or any entity that manufactures (including labeling, packing, relabeling, or repackaging), distributes, or stores such products that are or will be included in the SNS may submit, with written concurrence from a SNS official, a written request for an exception or alternative to certain labeling requirements to the appropriate

FDA Center Director. Except when initiated by an FDA Center Director, a request for an exception or alternative must be in writing and must:

- Identify the specified lots, batches, or other units of the affected product;
- Identify the specific labeling provisions under this rule that are the subject of the request;
- Explain why compliance with the specified labeling provisions could adversely affect the safety, effectiveness, or availability of the product subject to the request;
- Describe any proposed safeguards or conditions that will be implemented so that the labeling of the product includes appropriate information necessary for the safe and effective use of the product given the anticipated circumstances of use of the product;
- Provide copies of the proposed labeling of the specified lots, batches, or other units of the affected product that will be subject to the exception or alternative; and
- Provide any other information requested by the FDA Center Director in support of the request.

If the request is granted, the manufacturer may need to report to FDA any resulting changes to the New Drug Application, Biologics License Application, Premarket Approval Application or Premarket Notification (510(k)) in effect, if any. The submission and grant of an exception or an alternative to the labeling requirements specified in the interim final rule (72 FR 73589) may be used to satisfy certain reporting obligations relating to changes to product applications under § 314.70 (21 CFR 314.70) (human drugs), § 601.12 (21 CFR 601.12) (biological products), § 814.39 (21 CFR 814.39) (medical devices subject to premarket approval), or § 807.81 (21 CFR 807.81) (medical devices subject to 510(k) clearance requirements). The information collection provisions in §§ 314.70, 601.12, 807.81, and 814.39 have been approved under OMB control numbers 0910–0001, 0910–0338, 0910–0120, and 0910–0231, respectively. On a case-by-case basis, the appropriate FDA Center Director may also determine when an exception or alternative is granted that certain safeguards and conditions are appropriate, such as additional labeling on the SNS products, so that the labeling of such products would include information needed for safe and effective use under the anticipated circumstances of use.

Respondents to this collection of information are entities that manufacture (including labeling, packing, relabeling, or repackaging), distribute or store affected SNS products. Based on the number of requests for an exception or alternative received by FDA since issuance of the interim final rule, FDA estimates an average of two requests annually. FDA is estimating that each respondent will spend an average of 24 hours preparing each request. The hours per response for each submission are based on the estimated time that it takes to prepare a supplement to an application, which may be considered similar to a request for an exception or alternative. To the extent that labeling changes not already required by FDA regulations are made in connection with an exception or alternative granted under the interim final rule, FDA is estimating one occurrence annually in the event FDA would require any additional labeling changes not already covered by FDA regulations, and that it would take 8 hours to develop and revise the labeling to make such changes.

FDA estimates the burden of this collection of information as follows:

TABLE 1—ESTIMATED ANNUAL REPORTING BURDEN [1]

21 CFR section	Number of respondents	Annual frequency per response	Total annual responses	Hours per response	Total hours
201.26(b)(1)(i), 610.68(b)(1)(i), 801.128(b)(1)(i), and 809.11(b)(1)(i)	2	1	2	24	48
201.26(b)(1)(i), 610.68(b)(1)(i), 801.128(b)(1)(i), and 809.11(b)(1)(i)	1	1	1	8	8
Total					56

[1] There are no capital costs or operating and maintenance costs associated with this collection of information.

Dated: November 23, 2010.

Leslie Kux,

Acting Assistant Commissioner for Policy.

[FR Doc. 2010–30036 Filed 11–29–10; 8:45 am]

BILLING CODE 4160–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

[Docket No. FDA–2010–N–0576]

Supplemental Funding Under the Food and Drug Administration's Convener of Active Medical Product Surveillance Discussions (U13) RFA–FD–09–012; Request for Supplemental Application

AGENCY: Food and Drug Administration, HHS.

ACTION: Notice of intent.

SUMMARY: The Food and Drug Administration (FDA) is announcing a program expansion of its Conference Cooperative Agreement Program (U13), awarded to the Engelberg Center for Health Care Reform at the Brookings Institution (Brookings). The goal of this expansion is to plan and hold meetings and conferences that will ensure broad stakeholder input on FDA programs and initiatives related to disseminating information from active medical product surveillance activities and other sources of product information.

DATES: Important dates are as follows:

1. The supplemental application due date is December 13, 2010.

2. The award anticipated start date is January 1, 2011.

3. The opening date is November 30, 2010.

4. The expiration date is December 14, 2010.

FOR FURTHER INFORMATION AND ADDITIONAL REQUIREMENTS CONTACT:

Melissa Robb, Office of Medical Policy, Food and Drug Administration, 10903 New Hampshire Ave, Bldg. 51, rm. 6360, Silver Spring, MD 20993–0002, 301–796–2500, e-mail: *Melissa.Robb@fda.hhs.gov;* or

Camille R. Peake, Division of Acquisition Support and Grants, Food and Drug Administration, 5630 Fishers Lane (HFA–500), Rockville, MD 20857, 301–827–7175, FAX: 301–827–7101, e-mail: *Camille.Peake@fda.hhs.gov.*

SUPPLEMENTARY INFORMATION:

I. Funding Opportunity Description

For more information on the original full funding opportunity announcement (FOA) RFA–FD–09–012, go to *http://www.fda.gov/Safety/FDAsSentinelInitiative/ucm168759.htm.*

A. Background

This FOA, issued by FDA, announces a proposed program expansion of FDA's Conference Cooperative Agreement Grant U13 FD003802 awarded to Brookings. The goal of this program is to plan and hold meetings and conferences that will ensure broad stakeholder input on FDA programs and initiatives related to disseminating information from active medical product surveillance activities and other sources of product information. The information obtained through these meetings and workshops is being used to develop, implement, and evaluate medical product surveillance methods and systems, which support the gathering, analysis, and communication of medical product safety information.

Supplementing the parent grant to incorporate expansion of the scope of work would support activities including convening discussions, leveraging the information learned from medical product surveillance, and engaging stakeholders, namely the health care community, consumers and industry, on topics related to patient counseling and dissemination of product information on the risks, benefits, and safe use of prescription drugs. Discussions would cover issues related to developing a quality systems approach to make sure that user-friendly, easily accessible, up-to-date information is available to the public and health care practitioners who are interacting with patients to prescribe and dispense medications. It is important that practitioners and pharmacists are able to adequately inform patients about the proper use of medications being prescribed or dispensed. This supplement would include convening meetings and synthesizing, summarizing, and communicating the findings on topics such as those listed in the Research Objectives. (*See* section B of this document.)

During Year 1, a supplement was awarded that allowed for the convening of discussions on topics related to the development and appropriate dissemination of Patient Medication Information (PMI). With this FOA, FDA proposes to further expand the scope of work of the 2009 supplement and increase the amount of supplemental funding for each budget year to $501,534 total cost (direct costs only), beginning in 2010, and future years 2011, 2012, and 2013. (Funding for this supplement will be subject to availability of funds and satisfactory progress of the project).

B. Research Objectives

This supplement will expand the existing program to convene meetings and synthesize, summarize, and communicate relevant findings on topics such as those discussed in the following paragraphs.

• Patient Medication Information (PMI)

To be able to use prescription medications safely, consumers need to receive clear, actionable medication information that is accurate, balanced, and delivered in a consistent and easily understood format. In February 2009, FDA's Risk Communication Advisory Committee recommended FDA adopt a single, standard document for communicating essential information about prescription drugs, which would replace Consumer Medical Information, Patient Package Insert (PPI), and Medication Guides. Such changes to the delivery of PMI may require changes to the Federal Food, Drug, and Cosmetics Act law and/or regulations to implement. Following a series of public workshops convened by FDA, the Agency developed three draft patient information prototypes as well as a strategy for evaluating the prototypes. Upon approval from the Office of Management and Budget, FDA plans to evaluate the three prototypes using an experimental consumer testing study. As part of its evaluation process, FDA intends to hold a series of workshops to ensure continued, broad public input on the prototypes. In addition, Brookings also convened three workshops in cooperation with FDA (Year 1) to discuss optimizing, implementing, and evaluating adoption of a single, standard medication information document. As a followup to the outcomes and recommendations received from the meetings described previously, FDA is interested in obtaining additional feedback, guidance, and expert opinion from a broad range of stakeholders during the supplemented years needed to move the PMI initiative forward, including, for example, through pilot projects for PMI distribution using modern media and exploration of additional issues related to PMI monitoring, compliance, and enforcement, as well as by developing processes for follow-up assessments.

• Professional Labeling

In the **Federal Register** of January 24, 2006 (71 FR 3922), FDA published a final rule that amended the requirements for the content and format of the package insert for human prescription drug and biologic products. The purpose of the new requirements was to improve the management of the risks of medical product use and reduce medical errors by health care professionals, as well as enable health care practitioners to better communicate risk information to their patients. The new regulation (21 CFR 201.57) was designed to make information in the prescription package insert easier for health care practitioners to access, read, and use, thereby facilitating use of the package insert to make prescribing decisions. The final rule has a phased-in implementation schedule that initially targets new and recently approved drugs. These new requirements have been in effect for 4 years, and many drugs on the market have package inserts in the new format.

Because complying with these new requirements is essential for meeting the objective of better risk communication, FDA is interested in obtaining feedback from health care practitioners on whether the new package insert format is being implemented in a manner that meets the needs of the practicing physician and other health care practitioners or whether there are areas in which FDA could improve implementation.

• Risk Evaluation and Mitigation Strategies (REMS)

With the additional regulatory authority granted to FDA in the FDA Amendments Act of 2007, FDA has begun requiring REMS, with the components of each individual strategy varying by the risks involved and patient populations eligible.

Based on existing FDA guidance, REMS components have included medication guides ("MedGuides"); patient package inserts; communication plan(s) for health care practitioners (*e.g.* "Dear Provider" letters); and elements to assure safe use (ETASU), including requirements for those who prescribe, dispense, or use the drug. In some cases, MedGuides have been the only component required; in other cases, FDA has required ETASU of varying designs, such as those requiring that a drug be dispensed to patients with evidence (*e.g.,* restricted distribution) or other documentation of safe-use conditions (*e.g.,* certain laboratory test result outcomes required before a drug may be dispensed).

The current REMS requirement process has led to the implementation of more than 100 new strategies, with varying elements based on the severity

of risk projected and different approaches taken by manufacturers seeking to meet those requirements. FDA would like to convene sessions of experts and hold focused meetings over the next 3 years to discuss REMS implementation to date, and explore practical policy approaches relevant to restricted distribution processes and quality care counseling.

C. Eligibility Information

This supplement is available only to the existing grant recipient, Brookings.

D. Requirements of the Supplemental Application

1. The application clearly demonstrates an understanding of the purpose and objectives of the program expansion as described in section B of this document.

2. The application clearly describes the steps involved in a proposed schedule for planning, implementing, and accomplishing the activities to be carried out under the program expansion.

3. The application establishes Brookings ability to perform the responsibilities under the program expansion including the availability of appropriate staff and sufficient funding.

4. The application describes Brookings ability to act as a neutral, independent third party to convene a wide group of diverse stakeholders with relevant expertise related to selected topics.

5. The application specifies the manner in which interaction with FDA will be maintained throughout the lifetime of the project.

6. The application specifies how Brookings will monitor progress of the work under the program expansion and how progress will be reported to FDA.

7. The application shall include a detailed budget that shows: (1) Anticipated costs for personnel, travel, communications and postage, and supplies and (2) the sources of funds to meet those needs, if other than FDA.

II. Award Information/Funds Available

A. Award Amount

FDA anticipates supplementing this program expansion by providing approximate total cost of $501,534 (direct costs only) in each budget period beginning in 2010, and the remaining budget periods (years: 2011, 2012, and 2013).

B. Length of Support

The initial supplemental award will be awarded to correspond with the 2010 budget period, and the remaining budget periods (2011, 2012, and 2013) will be dependant on the grantee's successful performance, and financial management.

III. Paper Application and Submission Information

To submit a paper application in response to this supplemental notice, applicants should download the PHS–398 form at *http://grants.nih.gov/grants/funding/phs398/phs398.html.* (FDA has verified the Web site address, but FDA is not responsible for any subsequent changes to the Web site after this document publishes in the **Federal Register**.)

For all paper application submissions, the following steps are required:

Submit paper via Express mail to (*see* the *For Further Information and Additional Requirements Contact* section of this document).

Dated: November 23, 2010.

Leslie Kux,

Acting Assistant Commissioner for Policy.

[FR Doc. 2010–30054 Filed 11–29–10; 8:45 am]

BILLING CODE 4160–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Health Resources and Services Administration

Agency Information Collection Activities: Proposed Collection: Comment Request

In compliance with the requirement for opportunity for public comment on proposed data collection projects (section 3506(c)(2)(A) of Title 44, United States Code, as amended by the Paperwork Reduction Act of 1995, Pub. L. 104–13), the Health Resources and Services Administration (HRSA) publishes periodic summaries of proposed projects being developed for submission to the Office of Management and Budget (OMB), under the Paperwork Reduction Act of 1995. To request more information on the proposed project or to obtain a copy of the data collection plans and draft instruments, e-mail *paperwork@hrsa.gov* or call the HRSA Reports Clearance Officer at (301) 443–1129.

Comments are invited on: (a) The proposed collection of information for the proper performance of the functions of the agency; (b) the accuracy of the agency's estimate of the burden of the proposed collection of information; (c) ways to enhance the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information technology.

Proposed Project: Ryan White HIV/AIDS Program Core Medical Services Waiver Application Requirements (OMB No. 0915–0307)—Extension

HRSA utilizes standards for granting waivers of the core medical services requirement for the Ryan White HIV/AIDS Program. These standards meet the intent of the Ryan White HIV/AIDS Program to increase access to core medical services, including antiretroviral drugs, for persons with HIV/AIDS and to ensure that grantees receiving waivers demonstrate the availability of such services for individuals with HIV/AIDS who are identified and eligible under Title XXVI of the Public Health Service (PHS) Act. The core medical services waiver uniform standard and waiver request process will apply to Ryan White HIV/AIDS Program Grant awards under Parts A, B, and C of Title XXVI of the PHS Act. Core medical services waivers will be effective for a 1-year period that is consistent with the grant award period.

Title XXVI, Section 2671 of the PHS Act, as amended by the Ryan White HIV/AIDS Treatment Extension Act of 2009, Public Law 111–87, (Ryan White HIV/AIDS Program), requires that grantees expend 75 percent of Parts A, B, and C funds on core medical services, including antiretroviral drugs, for individuals with HIV/AIDS who are identified and eligible under the legislation. In order for grantees under Parts A, B, and C to be exempt from the 75 percent core medical services requirement, they must request and receive a waiver from HRSA.

Grantees must submit the waiver request with the annual grant application that includes the certifications and documentation which will be utilized by HRSA in making determinations regarding waiver requests. Grantees must provide evidence that all of the core medical services listed in the statute, regardless of whether such services are funded by the Ryan White HIV/AIDS Program, are available to all individuals with HIV/AIDS who are identified and eligible under Title XXVI of the PHS Act in the service area within 30 days.

The annual estimate of burden is as follows:

Application	Number of respondents	Responses per respondent	Total responses	Hours per response	Total burden hours
Waiver Request	10	1	10	6.5	65
Total	10	1	10	6.5	65

E-mail comments to *paperwork@hrsa.gov* or mail the HRSA Reports Clearance Officer, Room 10–33, Parklawn Building, 5600 Fishers Lane, Rockville, MD 20857. Written comments should be received within 30 days of this notice.

Dated: November 23, 2010.

Robert Hendricks,

Director, Division of Policy and Information Coordination.

[FR Doc. 2010–30170 Filed 11–29–10; 8:45 am]

BILLING CODE 4165–15–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Health Resources and Services Administration

Agency Information Collection Activities: Proposed Collection: Comment Request

In compliance with the requirement for opportunity for public comment on proposed data collection projects (section 3506(c)(2)(A) of Title 44, United States Code, as amended by the Paperwork Reduction Act of 1995, Pub. L. 104–13), the Health Resources and Services Administration (HRSA) publishes periodic summaries of proposed projects being developed for submission to the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995. To request more information on the proposed project or to obtain a copy of the data collection plans and draft instruments, e-mail *paperwork@hrsa.gov* or call the HRSA Reports Clearance Officer at (301) 443–1129.

Comments are invited on: (a) The proposed collection of information for the proper performance of the functions of the agency; (b) the accuracy of the agency's estimate of the burden of the proposed collection of information; (c) ways to enhance the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information technology.

Proposed Project: Healthy Weight Collaborative (OMB No. 0915–NEW)—[NEW].

Background: The mission of the Healthy Weight Collaborative (HWC) is to discover, identify, develop, and disseminate both evidence-based and promising clinical and community-based interventions to prevent and treat obesity. The HWC was funded by the Health Resources and Services Administration under Title V, Section 501(a)(2) of the Social Security Act (42 U.S.C. 701(a)(2)) and Section 4002 of the Patient Protection and Affordable Care Act (Pub. L. 111–148).

The goal of the HWC is to value and leverage each community team's strengths, networks, grantees, and expertise towards the common goal of promoting healthy weight for all populations, especially those at high risk for overweight and obesity.

The HWC is modeled after the Institute for Healthcare Improvement Collaborative Model for achieving breakthrough improvement. Also known as the Breakthrough Series, this model was developed in 1996 to help healthcare organizations make breakthrough improvements in quality while reducing costs. This model is designed to close the gap between science and practice by creating a structure in which organizations can easily learn from each other and from recognized experts in topic areas in which they want to make quality improvements.

Approximately 50 community teams will be recruited to participate in the HWC. The intended beneficiaries of this program are children and their families, and teams in the HWC can include health departments, community-based organizations, HRSA and the Department of Health and Human Services (HHS) grantees; especially safety net providers and other stakeholders in the HRSA and HHS program network. Teams will be asked to report on non-personally identifiable aggregate information from clinical and public health or community interventions related to four domains, including clinical and public health:

- Body Mass Index (BMI), collected from an electronic health record.
- Nutrition, which includes measures related to change in knowledge, attitudes, behavior, and consumption.
- Physical Activity, which includes measures related to change in knowledge, attitudes, behavior, and levels of activity.
- Partnerships and Process Improvement, which includes measures related to linkages made between clinical and community-based or public health programs, increased efficiencies related to these linkages, and the number of people served by these linkages.

The annual estimate of burden is as follows:

Instrument	Number of respondents	Responses per respondent	Total responses	Hours per response	Total burden hours
BMI	50	30	1,500	.10	150
Nutrition	50	30	1,500	.20	300
Physical Activity	50	30	1,500	.20	300
Partnerships and Process Improvement	50	50	2,500	.20	500
Total	50	.....	7,000	.....	1,250

E-mail comments to *paperwork@hrsa.gov* or mail the HRSA Reports Clearance Officer, Room 10–33, Parklawn Building, 5600 Fishers Lane, Rockville, MD 20857. Written comments should be received within 60 days of this notice.

Dated: November 24, 2010.

Robert Hendricks,

Director, Division of Policy and Information Coordination.

[FR Doc. 2010–30177 Filed 11–29–10; 8:45 am]

BILLING CODE 4165–15–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Health Resources and Services Administration

Agency Information Collection Activities: Proposed Collection: Comment Request

In compliance with the requirement for opportunity for public comment on proposed data collection projects (section 3506(c)(2)(A) of Title 44, United States Code, as amended by the Paperwork Reduction Act of 1995, Pub. L. 104–13), the Health Resources and Services Administration (HRSA) publishes periodic summaries of proposed projects being developed for submission to the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995. To request more information on the proposed project or to obtain a copy of the data collection plans and draft instruments, e-mail *paperwork@hrsa.gov* or call the HRSA Reports Clearance Officer on (301) 443–1129.

Comments are invited on: (a) The proposed collection of information for the proper performance of the functions of the agency; (b) the accuracy of the agency's estimate of the burden of the proposed collection of information; (c) ways to enhance the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information technology.

Proposed Project Title: Evaluation of the text4baby Program—(OMB No. 0915–NEW)—NEW

Background: Text4baby is a free mobile health education service that provides pregnant women and mothers with an infant under one year of age with free, evidence-based, brief health messages. An educational program led by the National Healthy Mothers, Healthy Babies coalition (HMHB), text4baby is intended to help women in having safe and healthy pregnancies by empowering them with information they need to give their babies the best possible start in life. The text4baby service was launched nationally in February 2010. Text4baby is made possible through a broad, public-private partnership that includes government and tribal agencies, corporations, academic institutions, professional associations, and non-profit organizations.

The goal of this program evaluation is to examine the characteristics of women who utilize the text4baby mobile phone-based program, assess their experience with the program, and determine whether text4baby is associated with timely access to prenatal care and healthy behaviors during pregnancy and through the first year of the infant's life. This information will help the Department of Health and Human Services to understand the usefulness of using mobile technology and the potential for expanding and/or adapting mobile phone messaging to additional health topics or conditions. The study may also offer insight into planning and implementing similar projects.

Purpose: The purpose of the evaluation is to assess behavior change and the usefulness of the text4baby messages on current subscribers to the program. There are four components to the evaluation:

- Mobile survey of current subscribers to the text4baby program.
- Consumer Safety Net Survey of subscribers and non-subscribers to the text4baby program in safety net settings.
- Focus Groups of current subscribers to ensure more in-depth qualitative data are collected regarding the usefulness of the messages and the program.
- Key Informant Interviews of a diverse mix of providers in safety net settings to examine any utility from the provider perspective. Providers could include case managers, outreach workers, and health educators.
- Key Stakeholder Interviews of community stakeholders that have built partnerships and coalitions around text4baby at a local, State, regional or national level to examine factors related to coalition building, sustainability and partnership.

The estimated response burden is as follows:

Instrument	Number of respondents	Responses per respondent	Total responses	Hours per response	Total burden hours
Mobile Survey	10,000	4	40,000	.16	6,667
Consumer Safety Net Survey	2,000	2	4,000	1	4,000
Focus Groups	80	1	80	1.5	120
Key Informant Interviews	20	1	20	.75	15
Stakeholder Interviews	30	1	30	.75	22.5
Total	12,130		44,130		10,824.50

E-mail comments to *paperwork@hrsa.gov* or mail the HRSA Reports Clearance Officer, Room 10–33, Parklawn Building, 5600 Fishers Lane, Rockville, MD 20857. Written comments should be received within 60 days of this notice.

Dated: November 23, 2010.

Robert Hendricks,

Director, Division of Policy and Information Coordination.

[FR Doc. 2010–30174 Filed 11–29–10; 8:45 am]

BILLING CODE 4165–15–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Health Resources and Services Administration

Agency Information Collection Activities: Submission for OMB Review; Comment Request

Periodically, the Health Resources and Services Administration (HRSA) publishes abstracts of information collection requests under review by the Office of Management and Budget (OMB), in compliance with the Paperwork Reduction Act of 1995 (44 U.S.C. chapter 35). To request a copy of the clearance requests submitted to OMB for review, e-mail *paperwork@hrsa.gov* or call the HRSA Reports Clearance Office on (301) 443–1129.

The following request has been submitted to the Office of Management and Budget for review under the Paperwork Reduction Act of 1995:

Proposed Project: Performance Report for Grants and Cooperative Agreements (OMB No. 0915–0061)—Revision

The HRSA Bureau of Health Professions (BHPr) Performance Report for Grants and Cooperative Agreements is used to report grantee activities for Title VII and VIII health professions and nursing education and training programs. The reporting system measures the grantee's success in meeting (1) the objectives of the grant project, and (2) the cross-cutting outcomes developed for the Bureau of Health Professions' Title VII and VIII health professions and nursing education and training programs. The reporting system has two parts: Part I of the performance report is designed to collect information on activities specific to a given program and Part II, the core performance measures, collects data on overall project performance related to BHPr's strategic goals, objectives, outcomes, and legislative requirements. Progress will be measured based on the objectives of the grant project, and outcome measures and indicators developed by the Bureau to meet requirements of the Government Performance and Results Act (GPRA) and other statutory authorities.

BHPr is revising the grantee burden reported on the previous information collection request. As a result of eliminating multiple race combinations for two or more races, the hours per response has decreased. In addition, measures will be added to collect outcome data on a new program as a result of the Affordable Care Act (*i.e.,* State Workforce Development Grants). New measures will also be added to collect outcome data on the State Primary Care Offices (PCOs) program and the Oral Health Program. Based on a more accurate estimation of BHPr grantees reporting, the hours per response is approximately 8.5 hours.

The estimated annual burden is as follows:

Report	Number of respondents	Responses per respondent	Total responses	Hours per response	Total burden hours
BHPr Performance Report	1,100	1	1,100	8.5	9,350
Total	1,100		1,100		9,350

Written comments and recommendations concerning the proposed information collection should be sent within 30 days of this notice to the desk officer for HRSA, either by e-mail to *OIRA_submission@omb.eop.gov* or by fax to 202–395–6974. Please direct all correspondence to the "attention of the desk officer for HRSA."

Dated: November 23, 2010.

Robert Hendricks,

Director, Division of Policy and Information Coordination.

[FR Doc. 2010–30166 Filed 11–29–10; 8:45 am]

BILLING CODE 4165–15–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Institute Of Biomedical Imaging And Bioengineering; Notice of Closed Meeting

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended (5 U.S.C. App.), notice is hereby given of the following meeting.

The meeting will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: National Institute of Biomedical Imaging and Bioengineering Special Emphasis Panel; Biomed-ISS 2011/01.

Date: January 28, 2011.

Time: 8 a.m. to 3 p.m.

Agenda: To review and evaluate grant applications.

Place: Hyatt Regency Bethesda, One Bethesda Metro Center, 7400 Wisconsin Avenue, Bethesda, MD 20814.

Contact Person: Ruth Grossman, DDS, Scientific Review Officer, National Institute of Biomedical Imaging and Bioengineering, National Institutes of Health, 6707 Democracy Boulevard, Room 960, Bethesda, MD 20892. 301–496–8775. *grossmanrs@mail.nih.gov.*

Dated: November 23, 2010.

Jennifer Spaeth,

Director, Office of Federal Advisory Committee Policy.

[FR Doc. 2010–30086 Filed 11–29–10; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Eye Institute; 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 Eye Institute Special Emphasis Panel; U10 Teleconference Review.

Date: December 7, 2010.

Time: 11 a.m. to 12 p.m.

Agenda: To review and evaluate grant applications.

Place: National Eye Institute, 5635 Fishers Lane, Rockville, MD 20852. (Telephone Confence Call).

Contact Person: Samuel Rawlings, PhD, Chief, Scientific Review Branch, Division of Extramural Research, National Eye Institute, National Institutes of Health, 5635 Fishers Lane, Suite 1300, MSC 9300. 301–451–2020. *rawlings@nei.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: National Eye Institute Special Emphasis Panel; NEI Data Analysis and Epidemiology Grant Applications.

Date: December 14–15, 2010.

Time: 8 a.m. to 9 p.m.

Agenda: To review and evaluate grant applications.

Place: National Eye Institute, National Institutes of Health, 5635 Fishers Lane, Rockville, MD 20852. (Virtual Meetingl).

Contact Person: Anne E. Schaffner, PhD, Scientific Review Branch, Division of Extramural Research, National Eye Institute, National Institutes of Health, 5635 Fishers Lane, Suite 1300, MSC 9300. 301–451–2020. *aes@nei.nih.gov.*

(Catalogue of Federal Domestic Assistance Program Nos. 93.867, Vision Research, National Institutes of Health, HHS)

Dated: November 23, 2010.

Jennifer S. Spaeth,

Director, Office of Federal Advisory Committee Policy.

[FR Doc. 2010–30084 Filed 11–29–10; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Institute of Mental Health; Notice of Closed Meeting

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended (5 U.S.C. App.), notice is hereby given of the following meeting.

The meeting will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: National Institute of Mental Health Special Emphasis Panel; Reducing HIV Risk.

Date: December 6, 2010.

Time: 10:30 a.m. to 12:00 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: Enid Light, PhD, Scientific Review Officer, Division of Extramural Activities, National Institute of Mental Health, NIH, Neuroscience Center, 6001 Executive Boulevard, Room 6132, MSC 9608, Bethesda, MD 20852–9608. 301–443–3599. *elight@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. 93.242, Mental Health Research Grants; 93.281, Scientist Development Award, Scientist Development Award for Clinicians, and Research Scientist Award; 93.282, Mental Health National Research Service Awards for Research Training, National Institutes of Health, HHS)

Dated: *November 23, 2010.*

Jennifer S. Spaeth,

Director, Office of Federal Advisory Committee Policy.

[FR Doc. 2010–30083 Filed 11–29–10; 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 Member Conflict—Infectious Diseases and Microbiology.

Date: December 10, 2010.

Time: 1 p.m. to 5 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: Soheyla Saadi, PhD, Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 3211, MSC 7808, Bethesda, MD 20892. 301–435–0903. *saadisoh@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: Bioengineering Sciences & Technologies Integrated Review Group Modeling and Analysis of Biological Systems Study Section.

Date: January 27–28, 2011.

Time: 8 a.m. to 4 p.m.

Agenda: To review and evaluate grant applications.

Place: Hotel Kabuki, 1625 Post Street, San Francisco, CA 94115.

Contact Person: Malgorzata Klosek, PhD, Scientific Review Officer, Center for Scientific Review, National Institutes of Health, 6701 Rockledge Drive, Room 4188, MSC 7849, Bethesda, MD 20892. (301) 435–2211. *klosekm@mail.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 23, 2010.

Jennifer S. Spaeth,

Director, Office of Federal Advisory Committee Policy.

[FR Doc. 2010–30082 Filed 11–29–10; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HOMELAND SECURITY

U.S. Citizenship and Immigration Services

Agency Information Collection Activities: Form I–589; Extension of an Existing Information Collection; Comment Request

ACTION: 60-Day Notice of Information Collection Under Review; Form I–589, Application for Asylum and Withholding for Removal; OMB Control No. 1615–0067.

The Department of Homeland Security, U.S. Citizenship and Immigration Services (USCIS) will be submitting the following information collection request for review and clearance in accordance with the Paperwork Reduction Act of 1995. The information collection is published to obtain comments from the public and affected agencies. Comments are encouraged and will be accepted for sixty days until January 31, 2011.

During this 60 day period, USCIS will be evaluating whether to revise the Form I–589. Should USCIS decide to revise Form I–589 we will advise the public when we publish the 30-day notice in the **Federal Register** in accordance with the Paperwork Reduction Act. The public will then have 30 days to comment on any revisions to the Form I–589.

Written comments and/or suggestions regarding the item(s) contained in this notice, especially regarding the estimated public burden and associated response time, should be directed to the Department of Homeland Security (DHS), USCIS, Chief, Regulatory Products Division, Clearance Officer, 20 Massachusetts Avenue, NW., Washington, DC 20529–2020. Comments may also be submitted to DHS via facsimile to 202–272–0997or via e-mail at *rfs.regs@dhs.gov.* When submitting comments by e-mail, please make sure to add OMB Control No. 1615–0067 in the subject box. Written comments and suggestions from the public and affected agencies concerning the collection of information should

address one or more of the following four points:

(1) Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

(2) Evaluate the accuracy of the agencies, estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;

(3) Enhance the quality, utility, and clarity of the information to be collected; and

(4) Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, *e.g.,* permitting electronic submission of responses.

Overview of this Information Collection

(1) *Type of Information Collection:* Extension of an existing information collection.

(2) *Title of the Form/Collection:* Application for Asylum and Withholding of Removal.

(3) *Agency form number, if any, and the applicable component of the Department of Homeland Security sponsoring the collection:* Form I–589; U.S. Citizenship and Immigration Services (USCIS).

(4) *Affected public who will be asked or required to respond, as well as a brief abstract: Primary:* Individuals or households. Form I–589 is necessary to determine whether an alien applying for asylum and/or withholding of deportation in the United States is classified as refugee, and is eligible to remain in the United States.

(5) *An estimate of the total number of respondents and the amount of time estimated for an average respondent to respond:* 63,138 responses at 12 hours per response.

(6) *An estimate of the total public burden (in hours) associated with the collection:* 757,656 annual burden hours.

If you need a copy of the information collection instrument, please visit the Web site at: *http://www.regulations.gov/.*

We may also be contacted at: USCIS, Regulatory Products Division, 20 Massachusetts Avenue, NW., Washington, DC 20529–2020, Telephone number 202–272–8377.

Dated: November 22, 2010.

Sunday A. Aigbe,

Chief, Regulatory Products Division, U.S. Citizenship and Immigration Services, Department of Homeland Security.

[FR Doc. 2010–30139 Filed 11–29–10; 8:45 am]

BILLING CODE 9111–97–P

DEPARTMENT OF HOMELAND SECURITY

U.S. Citizenship and Immigration Services

Agency Information Collection Activities: Form I–829, Extension of a Currently Approved Information Collection; Comment Request

ACTION: 60-Day notice of information collection under review: Form I–829, Petition by Entrepreneur to Remove Conditions; OMB Control No. 1615–0045.

The Department of Homeland Security, U.S. Citizenship and Immigration Services (USCIS) will be submitting the following information collection request for review and clearance in accordance with the Paperwork Reduction Act of 1995. The information collection is published to obtain comments from the public and affected agencies. Comments are encouraged and will be accepted for sixty days until January 31, 2011.

Written comments and suggestions regarding items contained in this notice, and especially with regard to the estimated public burden and associated response time should be directed to the Department of Homeland Security (DHS), USCIS, Chief, Regulatory Products Division, Clearance Office, 201 Massachusetts Avenue, NW., 5th Floor, Suite 5012, Washington, DC 20529–2020. Comments may also be submitted to DHS via facsimile to 202–272–0997, or via e-mail at *rfs.regs@dhs.gov.* When submitting comments by e-mail add the OMB Control Number 1615–0045 in the subject box.

During this 60-day period USCIS will be evaluating whether to revise the Form I–829. Should USCIS decide to revise the Form I–829 it will advise the public when it publishes the 30 day notice in the **Federal Register** in accordance with the Paperwork Reduction Act. The public will then have 30 days to comment on any revisions to the Form I–829.

Written comments and suggestions from the public and affected agencies concerning the proposed collection of information should address one or more of the following four points:

(1) Evaluate whether the collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

(2) Evaluate the accuracy of the agency's estimate of the burden of the collection of information, including the validity of the methodology and assumptions used;

(3) Enhance the quality, utility, and clarity of the information to be collected; and

(4) Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques, or other forms of information technology, *e.g.,* permitting electronic submission of responses.

Overview of this information collection:

(1) *Type of Information Collection:* Extension of an existing information collection.

(2) *Title of the Form/Collection:* Petition by Entrepreneur to Remove Conditions.

(3) *Agency form number, if any, and the applicable component of the Department of Homeland Security sponsoring the collection:* Form I–829. U.S. Citizenship and Immigration Services.

(4) *Affected public who will be asked or required to respond, as well as a brief abstract: Primary:* Individuals and households. This form is used by a conditional resident alien entrepreneur who obtained such status through a qualifying investment, to apply to remove conditions on his or her conditional residence, and on the conditional residence for his or her spouse and children(s).

(5) *An estimate of the total number of respondents and the amount of time estimated for an average respondent to respond:* 200 responses at 2 hours and 5 minutes (2.083) per response.

(6) *An estimate of the total public burden (in hours) associated with the collection:* 416 annual burden hours.

If you have additional comments, suggestions, or need a copy of the information collection instrument, please visit: *http://www.regulations.gov/search/index.jsp.*

We may also be contacted at: USCIS, Regulatory Products Division, 20 Massachusetts Avenue, NW., 5th Floor Suite 5012, Washington, DC 20529–2020, telephone number 202–272–8377.

Dated: November 23, 2010.

Sunday A. Aigbe,

Chief, Regulatory Products Division, U.S. Citizenship and Immigration Services.

[FR Doc. 2010–30143 Filed 11–29–10; 8:45 am]

BILLING CODE 9111–97–P

DEPARTMENT OF HOMELAND SECURITY

U.S. Citizenship and Immigration Services

Agency Information Collection Activities: Form I–601, Revision of a Currently Approved Information Collection; Comment Request

ACTION: 60-Day Notice of Information Collection Under Review: Form I–601, Application for Waiver of Grounds of Inadmissibility; OMB Control Number 1615–0029.

The Department of Homeland Security, U.S. Citizenship and Immigration Services will be submitting the following information collection request for review and clearance in accordance with the Paperwork Reduction Act of 1995. The information collection is published to obtain comments from the public and affected agencies. Comments are encouraged and will be accepted for sixty days until January 31, 2011.

Written comments and suggestions regarding items contained in this notice and especially with regard to the estimated public burden and associated response time should be directed to the Department of Homeland Security (DHS), USCIS, Chief, Regulatory Products Division, Clearance Office, 20 Massachusetts Avenue, NW., 5th Floor Suite 5012, Washington, DC 20529. Comments may also be submitted to DHS via facsimile to 202–272–0997, or via e-mail at *rfs.regs@dhs.gov.* When submitting comments by e-mail, please add the OMB Control Number 1615–0029 in the subject box.

Written comments and suggestions from the public and affected agencies concerning the collection of information should address one or more of the following four points:

(1) Evaluate whether the collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

(2) Evaluate the accuracy of the agencies estimate of the burden of the collection of information, including the validity of the methodology and assumptions used;

(3) Enhance the quality, utility, and clarity of the information to be collected; and

(4) Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, *e.g.,* permitting electronic submission of responses.

Overview of This Information Collection

(1) *Type of Information Collection:* Revision of a currently approved information collection.

(2) *Title of the Form/Collection:* Application for Waiver of Grounds of Inadmissibility.

(3) *Agency form number, if any, and the applicable component of the Department of Homeland Security sponsoring the collection:* Form I–601. U.S. Citizenship and Immigration Services.

(4) *Affected public who will be asked or required to respond, as well as a brief abstract*: *Primary:* Individuals or Households. The information collected on this form is used by U.S Citizenship and Immigration Services (USCIS) to determine whether the applicant is eligible for a waiver of excludability under section 212 of the Immigration and Nationality Act.

(5) *An estimate of the total number of respondents and the amount of time estimated for an average respondent to respond:* 15,500 responses at 1½; hours per response.

(6) *An estimate of the total public burden (in hours) associated with the collection:* 23,250 annual burden hours.

If you have additional comments, suggestions, or need a copy of the information collection instrument, please visit: *http://www.regulations.gov/search/index.jsp.*

We may also be contacted at: USCIS, Regulatory Products Division, 20 Massachusetts Avenue, NW., 5th Floor, Suite 5012, Washington, DC 20529, telephone number 202–272–8377.

Dated: November 23, 2010.

Sunday A. Aigbe,

Chief, Regulatory Products Division, U.S. Citizenship and Immigration Services, Department of Homeland Security.

[FR Doc. 2010–30145 Filed 11–29–10; 8:45 am]

BILLING CODE 9111–97–P

INTER-AMERICAN FOUNDATION BOARD MEETING

Sunshine Act Meetings

TIME AND DATE: December 13, 2010, 9 a.m.–2 p.m.

PLACE: 901 N. Stuart Street, Tenth Floor, Arlington, Virginia 22203.

STATUS: Open session except for the portion specified as closed session as provided in 22 CFR 1004.4(f).

Matters To Be Considered

- Approval of the Minutes of the March 29, 2010, Meeting of the Board of Directors.
- Advisory Council Report and Recommendations.
- Role of Advisory Council.
- President's Report.
- IAF Program Activities.
- Operations.
- Congressional Affairs.
- RedEAmerica.
- IAF Going Forward.
- Executive Session—Personnel Issues.

Portions To Be Open To The Public

- Approval of the Minutes of the March 29, 2010, Meeting of the Board of Directors.
- Advisory Council Report and Recommendations.
- Role of Advisory Council.
- President's Report.
- IAF Program Activities.
- Operations.
- Congressional Affairs.
- RedEAmerica.
- IAF Going Forward.

Portions To Be Closed To The Public

- Executive Session—Personnel issues. Closed session as provided in 22 CFR Part 1004.4(f).

CONTACT PERSON FOR MORE INFORMATION: Jennifer Hodges Reynolds.

Dated: November 23, 2010.

Jennifer Hodges Reynolds,

General Counsel, (703) 306–4301.

[FR Doc. 2010–30270 Filed 11–26–10; 4:15 pm]

BILLING CODE 7025–01–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

[FWS–R9–MB–2010-N264; 1200–1232–0000-P2]

Information Collection Sent to the Office of Management and Budget (OMB) for Approval; OMB Control Number 1018–0022; Federal Fish and Wildlife Permit Applications and Reports—Migratory Birds and Eagles

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice; request for comments.

SUMMARY: We (U.S. Fish and Wildlife Service) 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 November 30, 2010. 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 29, 2010.

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_DOCKET@OMB.eop.gov* (e-mail). Please provide a copy of your comments to the Service Information Collection Clearance Officer, U.S. Fish and Wildlife Service, MS 222–ARLSQ, 4401 North Fairfax Drive, Arlington, VA 22203 (mail), or *infocol@fws.gov (e-mail).*

FOR FURTHER INFORMATION CONTACT: To request additional information about this ICR, contact Susan Lawrence, Division of Migratory Bird Management, U.S. Fish and Wildlife Service, MS MBSP–4107, 4501 North Fairfax Drive, Arlington, VA 22203 (mail); *Susan_M_Lawrence@fws.gov* (e-mail); or 703–358–2016 (telephone).

SUPPLEMENTARY INFORMATION:

OMB Control Number: 1018–0022.

Title: Federal Fish and Wildlife License/Permit Applications and Reports, Migratory Birds and Eagles, 50 CFR 10, 13, 21, and 22.

Service Form Numbers: 3–200–6 through 3–200–18, 3–200–67, 3–200–68, 3–200–71, 3–200–72, 3–200–77, 3–200–78, 3–200–79, 3–200–81, 3–200–82, 3–202–1 through 3–202–17, 3–186, and 3–186A.

Type of Request: Revision of a currently approved collection.

Description of Respondents: Individuals; zoological parks; museums; universities; scientists; taxidermists; businesses; and Federal, State, tribal, and local governments.

Respondent's Obligation: Required to obtain or retain a benefit.

Frequency of Collection: On occasion for applications; annually or on occasion for reports.

Number of Respondents: 57,260.

Estimated Number of Annual Responses: 57,260.

Completion Time per Response: Varies from 15 minutes to 40 hours depending on activity.

Estimated Total Annual Burden Hours: 93,402.

Estimated Annual Nonhour Burden Cost: $1,049,925 for fees associated with permit applications.

Abstract: Our Regional Migratory Bird Permit Offices use information that we collect on permit applications to determine the eligibility of applicants for permits requested in accordance with the criteria in various Federal wildlife conservation laws and international treaties, including:

(1) Migratory Bird Treaty Act (16 U.S.C. 703 *et seq.*).

(2) Lacey Act (16 U.S.C. 3371 *et seq.*).

(3) Bald and Golden Eagle Protection Act (16 U.S.C. 668).

Service regulations implementing these statutes and treaties are in Chapter I, Subchapter B of Title 50 Code of Federal Regulations (CFR). These regulations stipulate general and specific requirements that, when met, allow us to issue permits to authorize activities that are otherwise prohibited.

All Service permit applications are in the 3–200 series of forms, each tailored to a specific activity based on the requirements for specific types of permits. We collect standard identifier information for all permits. The information that we collect on applications and reports is the minimum necessary for us to determine if the applicant meets/continues to meet issuance requirements for the particular activity. This revised ICR includes modifications to the format and content of the currently approved applications so that they (a) are easier to understand and complete and (b) will accommodate future electronic permitting.

This ICR includes four permit application and report forms that are currently approved under OMB Control Number 1018–0136. Once OMB takes action on this IC, we will discontinue OMB Control No. 1018–0136.

- FWS Form 3–200–71 (Eagle Take (Disturb)).
- FWS Form 3–200–72 (Eagle Nest Take).
- FWS Form 3–202–15 (Eagle Take Monitoring and Annual Report).
- FWS Form 3–202–16 (Eagle Nest Take Monitoring and Reporting).

In addition, we are proposing three new forms:

- FWS Form 3–200–81 (Special Purpose—Utility) will provide an application specifically tailored for utilities (*e.g.,* power, communications) to request permits to salvage migratory birds on their property and rights-of-way.
- FWS Form 3–200–82 (Eagle Transport Into and Out of the United States) will provide an application for permits under the Bald and Golden Eagle Protection Act to transport dead eagle specimens into and out of the country temporarily for scientific or exhibition purposes, such as for museum exhibits.
- FWS Form 3–202–17 (Special Purpose—Utility Annual Report) will provide a standardized annual report form for Special Purpose—Utility permits.

Comments: On April 7, 2010, we published in the **Federal Register** (75 FR 17757) 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 June 7, 2010. We did not receive any comments.

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, e-mail 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 23, 2010.

Hope Grey,

Information Collection Clearance Officer, Fish and Wildlife Service.

[FR Doc. 2010–29979 Filed 11–29–10; 8:45 am]

BILLING CODE 4310–55–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

[FWS–R1–ES–2010–N250; 10120–1113–0000–C2]

Endangered and Threatened Wildlife and Plants; Draft Revised Recovery Plan for the Northern Spotted Owl (Strix occidentalis caurina); Reopening of Public Comment Period

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of document availability; reopening of comment period.

SUMMARY: We, the U.S. Fish and Wildlife Service, recently announced the availability of the Draft Revised Recovery Plan for the Northern Spotted Owl (*Strix occidentalis caurina*) for public review and comment. See **SUPPLEMENTARY INFORMATION** for details. We now reopen the comment period. If you have previously submitted comments, please do not resubmit them, because we have already incorporated them in the public record and will fully consider them in developing our final recovery plan.

DATES: To ensure consideration, please send your written comments by December 15, 2010.

ADDRESSES: Electronic copies of the draft revised recovery plan are available online at: *http://ecos.fws.gov/docs/recovery_plan/100915.pdf* and *http://www.fws.gov/oregonfwo/Species/Data/NorthernSpottedOwl/Recovery/*. Printed copies of the draft revised recovery plan are available by request from the Field Supervisor, U.S. Fish and Wildlife Service, Oregon Fish and Wildlife Office, 2600 SE. 98th Avenue, Ste. 100, Portland, OR 97266 (phone: 503/231–6179). Written comments regarding this recovery plan, or requests for copies of the plan, should be addressed to the above Portland address or sent by e-mail to: *NSORPComments@fws.gov*.

FOR FURTHER INFORMATION CONTACT: Brendan White or (for draft copies of population response model output) Diana Acosta, Fish and Wildlife Biologists, at the above address and phone number.

SUPPLEMENTARY INFORMATION: On September 15, 2010, we published a **Federal Register** notice (75 FR 56131) announcing the availability of the Draft Revised Recovery Plan for the Northern Spotted Owl (*Strix occidentalis caurina*) for public review and comment under the Endangered Species Act (16 U.S.C 1531 *et seq.*). We originally opened this comment period for 60 days, from September 15, 2010, to November 15, 2010. We are re-opening the public comment period until December 15, 2010, in response to several requests for additional time to review and comment on the draft revised recovery plan.

For background information on the draft revised recovery plan, see our September 15, 2010, notice. As stated in that notice, we particularly seek comments concerning portions of the draft revised recovery plan that have been updated from the 2008 recovery plan. Appendix C of the draft revised recovery plan described stages 1 and 2 of our ongoing three-stage spotted owl modeling effort. Since its release we have continued this effort, initiating population response modeling using the individual-based population program HexSim. Though still at preliminary draft stage, population response simulations from this portion of the modeling process are available for public review by request from our office. These simulations do not estimate what will occur in the future, but provide comparative information on potential population responses to different conservation scenarios as described in the draft revised recovery plan.

Public Availability of Comments

Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment—including personal identifying information—may be made publicly available at any time. While you may ask us in your comment to withhold personal identifying information from public review, we cannot guarantee that we will be able to do so.

Authority

The authority for this action is section 4(f) of the Endangered Species Act, 16 U.S.C. 1533(f).

Dated: November 15, 2010.

Richard R. Hannan,

Acting Regional Director, Region 1, U.S. Fish and Wildlife Service.

[FR Doc. 2010–30069 Filed 11–29–10; 8:45 am]

BILLING CODE 4310–55–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

[FWS–R2–R–2010–N203; 20131–1265–2CCP–S3]

Laguna Atascosa National Wildlife Refuge, Cameron and Willacy Counties, TX; Final Comprehensive Conservation Plan and Finding of No Significant Impact for Environmental Assessment

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of availability.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), announce the availability of our final comprehensive conservation plan (CCP) and finding of no significant impact (FONSI) for the environmental assessment (EA) for the Laguna Atascosa National Wildlife Refuge (NWR). In this final CCP, we describe how we will manage this refuge for the next 15 years.

ADDRESSES: You may view or obtain copies of the final CCP and FONSI/EA by any of the following methods. You may request a hard copy or CD–ROM.

Agency Web Site: Download a copy of the document(s) at *http://www.fws.gov/southwest/refuges/Plan/index.html.*

E-mail: mark_sprick@fws.gov. Include "Laguna Atascosa final CCP" in the subject line of the message.

Mail: Mark Sprick, AICP, Natural Resource Planner, U.S. Fish and Wildlife Service, Division of Planning, P.O. Box 1306, Albuquerque, NM 87103–1306.

In-Person Viewing or Pickup: Call 505–248–7411 to make an appointment during regular business hours at 500 Gold Avenue, SW., Albuquerque, NM 87102.

FOR FURTHER INFORMATION CONTACT: Sonny Perez, Refuge Manager, Laguna Atascosa NWR, 22817 Ocelot Road, Los Fresnos, TX 78566; by phone, 956–748–3607; or by e-mail, *sonny_perez@fws.gov.*

SUPPLEMENTARY INFORMATION:

Introduction

With this notice, we finalize the CCP process for the Laguna Atascosa NWR. We started this process through a notice in the **Federal Register** July 19, 2004 (69 FR 43010).

Laguna Atascosa NWR is located in Cameron and Willacy Counties, Texas, and encompasses 97,007 acres of brush lands, coastal prairies, freshwater and brackish pothole wetlands, estuarine wetlands, lomas (clay ridges), wind tidal flats, and barrier island beaches and

dunes. Management efforts focus on protecting, enhancing, and restoring Refuge habitats and water management for the benefit of important fish and wildlife resources. The Refuge is a premiere bird watching destination with 415 recorded bird species, more than any other national wildlife refuge. A total of eight federally listed endangered or threatened species occur within the Refuge, including four species of sea turtles. The largest U.S. population of endangered ocelot cats is located on the Refuge, making it the center for ocelot conservation and recovery.

Laguna Atascosa NWR was formally established by the Migratory Bird Commission on October 31, 1945, and the first tract forming the Refuge was acquired on March 29, 1946. The purposes of the Refuge are: "[F]or use as an inviolate sanctuary, or for any other management purpose, for migratory birds" (Migratory Bird Conservation Act of 1929 (16 U.S.C. 715d), as amended); "for wildlife conservation purposes if the real property has particular value in carrying out the national migratory bird management program" (Transfer of Certain Real Property for Wildlife Conservation Purposes Act of 1948 (16 U.S.C. 667b–667d), Public Law 80–537, as amended); "for the development, advancement, management, conservation and protection of fish and wildlife resources" (Fish and Wildlife Act of 1956 (16 U.S.C. 742(a)(4), as amended); and "for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude" (Fish and Wildlife Act of 1956 (16 U.S.C. 742(b)(1), as amended).

We announce our decision and the availability of the FONSI for the final CCP for the Laguna Atascosa NWR in accordance with National Environmental Policy Act (NEPA) (40 CFR 1506.6(b)) requirements. We completed a thorough analysis of impacts on the human environment, which we included in the EA that accompanied the draft CCP.

The CCP will guide us in managing and administering the Laguna Atascosa National Wildlife Refuge for the next 15 years. Alternative B, with modifications as described in Appendix H (Response to Public Comments), is selected as the management direction for the Final Plan.

Background

The National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd–668ee) (Refuge Administration Act), as amended by the National Wildlife Refuge System Improvement Act of 1997, requires us to develop a CCP for each national wildlife refuge. The purpose for developing a CCP is to provide refuge managers with a 15-year plan for achieving refuge purposes and contributing toward the mission of the National Wildlife Refuge System, consistent with sound principles of fish and wildlife management, conservation, legal mandates, and our policies. In addition to outlining broad management direction on conserving wildlife and their habitats, CCPs identify wildlife-dependent recreational opportunities available to the public, including opportunities for hunting, fishing, wildlife observation and photography, and environmental education and interpretation. We will review and update the CCP at least every 15 years in accordance with the Refuge Administration Act.

CCP Alternatives, Including Selected Alternative

Our draft CCP and our EA (74 FR 66148) addressed several issues. To address these, we developed and evaluated the following alternatives.

	A: No-action alternative	B: Proposed action alternative	C: Optimize public-use alternative
Issue 1: Habitat Management Activities.	Biological program and habitat management would continue under existing plans; any expansions would occur opportunistically..	Integrated biological and habitat management efforts with landscape-level and ecosystem-level plans; emphasis on protection and monitoring of Federal trust species and priority species and their habitats..	Same as No-Action Alternative (Alternative A).
Issue 2: Improvements to public use opportunities.	Limited to current public use under existing plans; any expansions would occur opportunistically..	Improvement of priority public uses, particularly hunting, fishing, and wildlife observation, to meet demand when compatible with wildlife needs and Refuge purposes; expansion of research efforts and dynamic partnerships..	Expand and emphasize all priority public uses, particularly hunting and fishing and access to all Refuge areas to the maximum extent when compatible, based on public comments.
Issue 3: Staffing, Facilities, and Infrastructure.	Existing staffing (17 permanent positions) and facilities; any additional staff and facility expansions would occur opportunistically..	Addition of 11 staff to existing base; addition of over 6 miles of hike/bike trails; one auto tour route; two separate parking areas; new visitor center at Laguna Atascosa Unit. Visitor contact and research station at Bahia Grande..	Base funding and staffing would increase by four positions (Outdoor Recreation Planner and three Park Rangers); several additional miles of auto tour routes, seven hike/bike trails and associated parking areas; visitor contact station; all primarily at Bahia Grande.

Comments

We accepted comments on the draft CCP and the EA for the Laguna Atascosa NWR from December 14, 2009, to February 12, 2010 (74 FR 66148). Subsequently, the Draft Plan/EA were made available for public review starting on December 14, 2009, at the Refuge, at eight local municipal and county libraries in the south Texas area near the Refuge, and at the Regional Office in Albuquerque, New Mexico. Four open house meetings were held in communities near the Refuge in January 2010. In all, 98 individuals signed the attendance rosters at the open house meetings and a total of 52 comments were submitted in writing or phoned in to the Refuge/Regional Office. Additionally, one State agency, one university, and six nongovernmental

organizations responded prior to the end of the 60-day public comment period. Based on the comments received, we changed the Draft Plan/EA to include: Improved inventory and assessment of water resources to meet protection goals, recommended strategies for bird surveys, modification of a wildlife objective to clarify protections for falcons, and strategies to address future establishment of artificial water sources.

Selected Alternative

After considering the comments we received, we have selected Alternative B for implementation. This alternative describes how habitat objectives will be accomplished through a combination of management activities to encourage ecological integrity, promote restoration of coastal prairie habitats, control invasive plant species, and provide/enhance brush land, wetland and grassland habitat for ocelots, migratory waterfowl, and other resident wildlife. This alternative was selected because it best meets refuge purposes and goals of the Laguna Atascosa National Wildlife Refuge. This action will not adversely impact endangered or threatened species or their habitat. Opportunities for wildlife-dependent recreation activities, such as hunting, fishing, observation, photography, environmental education, and interpretation, will be enhanced. Future management actions will have a neutral or positive impact on the local economy, and the recommendations in the Plan will ensure that Refuge management is consistent with the mission of the National Wildlife Refuge System.

Public Availability of Documents

In addition to the methods in **ADDRESSES**, you can view or obtain documents at the following locations:

- Our Web site: *http://www.fws.gov/southwest/refuges/texas/STRC/laguna/Index_Laguna.html.*
- At the following libraries:

Library	Address	Phone number
City of Brownsville Public Library	2600 Central Blvd., Brownsville, TX 78520–8824	956–548–1055
Harlingen Public Library	410 '76 Drive, Harlingen, TX 78550	956–427–8841
Laguna Vista Public Library	1300 Palm Blvd., Laguna Vista, TX 78578	956–943–7155
Los Fresnos Public Library	402 W. Ocean, Los Fresnos, TX 78566	956–233–5330
Port Isabel Public Library	213 Yturria St., Port Isabel, TX 78578	956–943–2265
Willacy County/Reber Memorial Library	190 N. 4th. St., Raymondville, TX 78580	956–689–2930
Rio Hondo Public Library	121 N. Arroyo Blvd., Rio Hondo, TX 78583	956–748–3322
San Benito Public Library	101 W. Rose St., San Benito, TX 78586	956–361–3860

Dated: October 19, 2010.

Joy Nicholopoulos,

Regional Director, Region 2, U.S. Fish and Wildlife Service.

[FR Doc. 2010–30003 Filed 11–29–10; 8:45 am]

BILLING CODE 4310–55–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

[FWS–R2–R–2010–N203; 20131–1265–2CCP–S3]

Tishomingo National Wildlife Refuge, Johnston County, OK; Final Comprehensive Conservation Plan and Finding of No Significant Impact for Environmental Assessment

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of availability.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), announce the availability of our final comprehensive conservation plan (CCP) and finding of no significant impact (FONSI) for the environmental assessment (EA) for the Tishomingo National Wildlife Refuge (NWR). In this final CCP, we describe how we will manage this Refuge for the next 15 years.

ADDRESSES: You may view or obtain copies of the final CCP and FONSI/EA by any of the following methods. You may request a hard copy or CD–ROM.

Agency Web Site: Download a copy of the document(s) at *http://www.fws.gov/southwest/refuges/Plan/index.html.*

E-mail: Joseph_Lujan@fws.gov. Include "Tishomingo Final CCP" in the subject line of the message.

Mail: Joseph R. Lujan, Natural Resource Planner, U.S. Fish and Wildlife Service, Division of Planning, P.O. Box 1306, Albuquerque, NM 87103–1306.

In-Person Viewing or Pickup: Call 505–248–7458 to make an appointment during regular business hours at 500 Gold Avenue SW., Albuquerque, NM 87102.

FOR FURTHER INFORMATION CONTACT: Kris Patton, Refuge Manager, Tishomingo NWR, 12000 South Refuge Road, Tishomingo, OK 73625; by phone, 580–371–2402; or by e-mail, *kris_patton@fws.gov.*

SUPPLEMENTARY INFORMATION:

Introduction

With this notice, we finalize the CCP process for the Tishomingo NWR. We started this process through a notice in the **Federal Register** November 17, 1999 (64 FR 62683).

Tishomingo NWR is located in Johnston County, Oklahoma, and encompasses 16,464 acres located in south-central Oklahoma. Management efforts focus on protecting, enhancing, and restoring Refuge habitats and water management for the benefit of fish and wildlife resources. Cumberland Pool, a part of Lake Texoma, takes up a quarter of the Refuge and serves as the focal point for many visitors because of its birds and fish. The Refuge also has a strong historical context. The Refuge was once the homeland of the Chickasaw Nation, and later became the Washita and Chapman Farms, integrating an entire community.

On January 24, 1946, the Refuge was authorized and established to preserve nesting grounds for migrating waterfowl, by order of President Harry S. Truman under Public Land Order 312. U.S. Army Corps of Engineers' and the Service's cooperative agreement, along with a cooperative agreement between the Service, Oklahoma Department of Wildlife Conservation, and the Corps, are the foundation of refuge management authority for the Service.

We announce our decision and the availability of the FONSI for the final CCP for the Tishomingo NWR in accordance with National Environmental Policy Act (NEPA) (40 CFR 1506.6(b)) requirements. We completed a thorough analysis of impacts on the human environment, which we included in the EA that accompanied the draft CCP.

The CCP will guide us in managing and administering the Tishomingo National Wildlife Refuge for the next 15 years. Alternative B, with modifications

as described in Appendix I (Response to Public Comments), is selected as the management direction for the Final Plan.

Background

The National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd–668ee) (Refuge Administration Act), as amended by the National Wildlife Refuge System Improvement Act of 1997, requires us to develop a CCP for each national wildlife refuge. The purpose for developing a CCP is to provide Refuge managers with a 15-year plan for achieving refuge purposes and contributing toward the mission of the National Wildlife Refuge System, consistent with sound principles of fish and wildlife management, conservation, legal mandates, and our policies. In addition to outlining broad management direction on conserving wildlife and their habitats, CCPs identify wildlife-dependent recreational opportunities available to the public, including opportunities for hunting, fishing, wildlife observation and photography, and environmental education and interpretation. We will review and update the CCP at least every 15 years in accordance with the Refuge Administration Act.

CCP Alternatives, Including Selected Alternative

Our draft CCP and our EA (75 FR 3753) addressed several issues. To address these, we developed and evaluated the following alternatives.

	A: No-action alternative	B: Proposed action alternative	C: Expanded public-use alternative
Issue 1: Habitat Management Activities.	Biological program and habitat management would continue under existing plans; any expansions would occur opportunistically.	Integrated biological and habitat management efforts with landscape level and ecosystem level plans; implement adaptive management practices that would contribute to ongoing monitoring and modification of Refuge resources.	Same as Proposed Action (Alternative B).
Issue 2: Improvements to public use opportunities.	Limited to current public use under existing plans; Any expansions would occur opportunistically.	Improvement of priority public uses, particularly hunting, fishing and wildlife observation, to meet demand when compatible with wildlife needs and Refuge purposes; expansion of research efforts and dynamic partnerships.	Expand and emphasize all priority public uses, particularly hunting within the Wildlife Management Unit portion of the Refuge.
Issue 3: Staffing, Facilities, and Infrastructure.	Existing staffing (seven permanent positions) and facilities; any additional staff and facility expansions would occur opportunistically.	Addition of a Visitors Service Manager to existing base; addition of over 5 miles of hiking trails with pull outs and parking areas; development of primitive camping areas.	Same as Proposed Action (Alternative B) plus additional 10 miles of hiking trails, an 8-mile canoe interpretive trail and a 12-mile auto tour route.

Comments

We solicited comments on the draft CCP and the EA for the Tishomingo NWR from January 22, 2010, to March 23, 2010 (75 FR 3753). The Draft Plan/EA was made available for public review on January 22, 2010, at the Refuge; at the local library in Tishomingo, OK; and at the Regional Office in Albuquerque, New Mexico. A total of 12 meetings were held with other local, State, and Federal governments as well as the local Chickasaw nation and nongovernment agencies, including one university. An open house public meeting was also held on February 24, 2010, in the Redbud Environmental Education Center on the Tishomingo NWR, where a total of 15 individuals signed the attendance rosters. A total of 82 comments were submitted in writing to the Refuge/Regional Office. Additionally, one State agency, one university, and two nongovernmental organizations responded prior to the end of the 60-day public comment period.

Based on the comments received, the Draft Plan/EA was changed to include rationale on how management direction for Lake Texoma is consistent with the purpose of establishment of the Refuge and remains focused on waterfowl, migratory birds, and other wildlife. Additional rationale was also incorporated to maintain the current amount of farming but increase moist soil units in an attempt to improve waterfowl habitat.

Selected Alternative

After considering the comments we received, we have selected Alternative B for implementation. This alternative describes how habitat objectives will be accomplished through a combination of adaptive management activities to encourage ecological integrity, promote restoration of grasslands, and control invasive plant species to promote habitat for migratory birds, waterfowl and other resident wildlife. This alternative was selected because it best meets Refuge purposes and goals. This action will not adversely impact endangered or threatened species or their habitat. Opportunities for wildlife-dependent recreation activities, such as hunting, fishing, wildlife observation, wildlife photography, environmental education, and interpretation, will be enhanced. Future management actions will have a neutral or positive impact on the local economy, and the recommendations in the Plan will ensure that Refuge management is consistent with the mission of the National Wildlife Refuge System.

Public Availability of Documents

In addition to the methods in **ADDRESSES**, you can view or obtain documents at the following locations:

- Our Web site: *http://www.fws.gov/southwest/refuges/oklahoma/tishomingo/Index_html.*
- At the following locations:

Library	Address	Phone No.
Johnston County Library—Chickasaw Library System	116 West Main Street, Tishomingo, OK 73460	(580) 371–3006

Dated: October 29, 2010.

Joy E. Nicholopoulos,

Regional Director, Region 2, U.S. Fish and Wildlife Service.

[FR Doc. 2010–30001 Filed 11–29–10; 8:45 am]

BILLING CODE 4310–55–P

DEPARTMENT OF THE INTERIOR

Bureau of Indian Affairs

Information Collection for Native American Business Development Institute Funding for Economic Development Feasibility Studies and Long-Term Strategic, Reservation-Wide Economic Development Plans; Comment Request

AGENCIES: Bureau of Indian Affairs, Interior.

ACTION: Notice of proposed information collection.

SUMMARY: The Division of Economic Development (DED), Office of Indian Energy and Economic Development (IEED) seeks to spur job growth and sustainable economies on American Indian reservations. DED created the Native American Business Development Institute (NABDI) to provide Tribes and tribal businesses with expert advice regarding economic development matters. In compliance with the Paperwork Reduction Act of 1995, DED is seeking comments on a proposed information collection related to the NABDI's funding of economic development feasibility studies (studies) and long-term strategic, reservation-wide economic development plans (plans). Federally recognized Indian tribes, on their own behalf or on behalf of tribally owned business, may apply for the funding by providing certain information. Applicants receiving funding must provide a final report summarizing the progress of and results of studies and plans. This notice requests comments on the information collection associated with the application and final report.

DATES: Interested persons are invited to submit comments on or before January 31, 2011.

ADDRESSES: You may submit comments on the information collection to Mr. Victor Christiansen, Division of Economic Development, Office of Indian Energy and Economic Development, U.S. Department of the Interior, Room 14—South Interior Building, 1951 Constitution Avenue, NW., Washington, DC 20245, fax (202) 208–4564; e-mail: *Victor.Christiansen@bia.gov.*

FOR FURTHER INFORMATION CONTACT: You may request further information from Mr. Victor Christiansen, Division of Economic Development, Office of Indian Energy and Economic Development, U.S. Department of the Interior. Telephone: (202) 219–0739.

SUPPLEMENTARY INFORMATION:

I. Abstract

DED established the NABDI to provide technical assistance funding to federally recognized American Indian tribes seeking to retain universities and colleges, private consulting firms, non-academic/non-profit entities, or others to prepare studies of economic development opportunities or plans. These studies and plans will empower American Indian tribes and tribal businesses to make informed decisions regarding their economic futures. Studies may concern the viability of an economic development project or business or the practicality of a technology a tribe may choose to pursue. DED will specifically exclude from consideration proposals for research and development projects, requests for funding of salaries for tribal government personnel, funding to pay legal fees, and requests for funding for the purchase or lease of structures, machinery, hardware or other capital items. Plans may encompass future periods of five years or more and include one or more economic development factors including but not limited to land and retail use, industrial development, tourism, energy, resource development and transportation.

This is an annual program whose primary objective is to create jobs and foster economic activity within tribal communities. DED will administer the program within IEED; and studies and plans as described herein will be the sole discretionary projects DED will consider or fund absent a competitive bidding process. When funding is available, DED will solicit proposals for studies and plans. To receive these funds, tribes may use the contracting mechanism established by Public Law 93–638, the Indian Self-Determination Act or may obtain adjustments to their funding from the Office of Self-Governance. *See* 25 U.S.C. 450 *et seq.*

Interested applicants must submit a tribal resolution requesting funding, a statement of work describing the project for which the study is requested or the scope of the plan envisioned, the identity of the academic institution or other entity the applicant wishes to retain (if known) and a budget indicating the funding amount requested and how it will be spent. DED expressly retains the authority to reduce or otherwise modify proposed budgets and funding amounts.

Applications for funding will be juried and evaluated on the basis of a proposed project's potential to generate jobs and economic activity on the reservation.

II. Request for Comments

DED requests that you send your comments on this collection to the location listed in the **ADDRESSES** section. Your comments should address: (a) The necessity of the information collection for the proper performance of the agencies, including whether the information will have practical utility; (b) the accuracy of our estimate of the burden (hours and cost) of the collection of information, including the validity of the methodology and assumptions used; (c) ways we could enhance the quality, utility and clarity of the information to be collected; and (d) ways we could minimize the burden of the collection of the information on the respondents, such as through the use of automated collection techniques or other forms of information technology.

Please note that an agency may not sponsor or conduct, and an individual need not respond to, a collection of information unless it has a valid OMB Control Number.

It is our policy to make all comments available to the public for review at the location listed in the **ADDRESSES** section during the hours of 9 a.m.–5 p.m., Eastern Time, Monday through Friday except for legal holidays. Before including your address, phone number, e-mail address or other personally identifiable information, be advised that your entire comment—including your personally identifiable information—may be made public at any time. While you may request that we withhold your personally identifiable information, we cannot guarantee that we will be able to do so.

III. Data

OMB Control Number: 1076–0XXX.

Type of Review: New.

Title: NABDI Funding Solicitation for Economic Development Feasibility Studies and Long-Term Strategic, Reservation-Wide Economic Development Plans.

Brief Description of Collection: Indian tribes that would like to apply for NABDI funding must submit an application that includes certain information. A complete application must contain:

- A duly-enacted, signed resolution of the governing body of the tribe;
- A proposal describing the planned activities and deliverable products; and
- The identity (if known) of the academic institution, private consultant, non-profit/non-academic entity, or other entity the tribe has chosen to perform the study or prepare the plan; and
- A detailed budget estimate, including contracted personnel costs, travel estimates, data collection and analysis costs, and other expenses, though DED reserves authority to reduce or otherwise modify this budget.

DED requires this information to ensure that it provides funding only to those projects that meet the economic development and job creation goals for which NABDI was established. Applications will be evaluated on the basis of the proposed project's potential to generate jobs and economic activity on the reservation. Upon completion of the funded project, a tribe must then submit a final report summarizing events, accomplishments, problems and/or results in executing the project. DED estimates that approximately 20 tribes will apply each year, and that DED will accept approximately all 20 into the program annually.

Respondents: Indian tribes with trust or restricted land.

Number of Respondents: 20 applicants per year; 20 project participants each year.

Estimated Time per Response: 40 hours per application; 1.5 hours per report.

Frequency of Response: Once per year for applications and final report.

Total Annual Burden to Respondents: 830 hours (800 for applications and 30 for final reports).

Dated: November 22, 2010.

Alvin Foster,

Acting Chief Information Officer—Indian Affairs.

[FR Doc. 2010–30092 Filed 11–29–10; 8:45 am]

BILLING CODE 4310–4J–P

DEPARTMENT OF THE INTERIOR

Bureau of Indian Affairs

Information Collection for Tribal Energy Development Capacity Program; Comment Request

AGENCY: Bureau of Indian Affairs, Interior.

ACTION: Notice of Proposed Information Collection.

SUMMARY: In compliance with the Paperwork Reduction Act of 1995, the Office of Indian Energy and Economic Development (IEED) is seeking comments on a proposed information collection related to funds provided under the Tribal Energy Development Capacity (TEDC) program. Indian tribes, including Alaska Native regional and village corporations, may be considered for funding under the TEDC if they provide certain information as part of an application. Once an application is accepted, the Indian tribe must then submit reports regarding the progress of their project. This notice requests comments on the information collection associated with the application and progress reports.

DATES: Interested persons are invited to submit comments on or before January 31, 2011.

ADDRESSES: You may submit comments on the information collection to Ashley Stockdale, Department of the Interior, Office of Indian Energy and Economic Development, Room 20—South Interior Building, 1951 Constitution Avenue, NW., Washington, DC 20245, fax (202) 208–4564; *e-mail: Ashley.Stockdale@bia.gov*.

FOR FURTHER INFORMATION CONTACT: You may request further information from Ashley Stockdale, Department of the Interior, Office of Indian Energy and Economic Development. Telephone (202) 219–0740.

SUPPLEMENTARY INFORMATION:

I. Abstract

The Energy Policy Act of 2005 authorizes the Secretary of the Interior to provide assistance to Indian tribes for energy development and appropriates funds for such projects on a year-to-year basis. *See* 25 U.S.C. 3502. When funding is available, the Office of IEED may solicit proposals for projects for building capacity for tribal energy resource development on Indian land from Indian tribes, including Alaska Native regional and village corporations under the TEDC program. For the purposes of this program, "Indian land" includes: All land within the boundaries of an Indian reservation, pueblo, or rancheria; any land outside those boundaries that is held by the United States in trust for a tribe or individual Indian or by a tribe or individual Indian with restrictions on alienation; and land owned by an Alaska Native regional or village corporation.

Tribes may use the contracting mechanism established by the Indian Self-Determination Act or may receive the money through adjustments to their funding from the Office of Self-Governance. *See* 25 U.S.C. 450 *et seq.* Indian tribes that would like to submit a TEDC project proposal must submit an application that includes certain information and, once funding is received, must submit reports on how they are using the funding. A complete application must contain the following elements:

- A formal signed resolution of the governing body of the tribe;
- A proposal describing the planned activities and deliverable products; and
- A detailed budget estimate, including contracted personnel costs, travel estimates, data collection and analysis costs, and other expenses.

The project proposal must include information about the tribe sufficient to allow IEED to evaluate the proposal based on the following criteria:

(a) Energy resource potential;

(b) Tribe's energy resource development history and current status;

(c) Tribe's existing energy resource development capabilities;

(d) Demonstrated willingness of the tribe to develop an independent energy resource development business entity;

(e) Intent to develop and retain energy development capacity within tribal government or business entities; and

(f) Tribal commitment of staff, training, or monetary resources.

IEED requires this information to ensure that it provides funding only to those projects that meet the goals of the TEDC and the purposes for which Congress provides the appropriations.

II. Request for Comments

IEED requests that you send your comments on this collection to the location listed in the **ADDRESSES** section. Your comments should address: (a) The necessity of the information collection for the proper performance of the agencies, including whether the information will have practical utility; (b) the accuracy of our estimate of the burden (hours and cost) of the collection of information, including the validity of the methodology and assumptions used; (c) ways we could enhance the quality, utility and clarity of the information to be collected; and (d) ways we could

minimize the burden of the collection of the information on the respondents, such as through the use of automated collection techniques or other forms of information technology.

Please note that an agency may not sponsor or conduct, and an individual need not respond to, a collection of information unless it has a valid OMB Control Number.

It is our policy to make all comments available to the public for review at the location listed in the **ADDRESSES** section during the hours of 9 a.m.–5 p.m., Eastern Time, Monday through Friday except for legal holidays. Before including your address, phone number, e-mail address or other personally identifiable information, be advised that your entire comment—including your personally identifiable information—may be made public at any time. While you may request that we withhold your personally identifiable information, we cannot guarantee that we will be able to do so.

III. Data

OMB Control Number: 1076–0XXX.

Type of Review: New.

Title: Tribal Energy Development Capacity Program Proposal Solicitation

Brief Description of Collection: Indian tribes that would like to apply for TEDC funding must submit an application that includes certain information. A complete application must contain a formal signed resolution of the governing body of the tribe, a proposal describing the planned activities and deliverable products; and a detailed budget estimate, including contracted personnel costs, travel estimates, data collection and analysis costs, and other expenses. IEED requires this information to ensure that it provides funding only to those projects that meet the goals of the TEDC program and purposes for which Congress provides the appropriation. Upon acceptance of an application, a tribe must then submit one- to two-page quarterly progress reports summarizing events, accomplishments, problems and/or results in executing the project. IEED estimates that approximately 20 tribes will apply each year, and that IEED will accept approximately 10 of those applicants into the program.

Respondents: Indian tribes under 25 U.S.C. 3502.

Number of Respondents: 20 applicants per year; 10 project participants each year.

Estimated Time per Response: 40 hours per application; 1.5 hours per progress report.

Frequency of Response: Once per year for applications; 4 times per year for progress reports.

Total Annual Burden to Respondents: 860 hours (800 for applications and 60 for progress reports).

Dated: November 22, 2010.

Alvin Foster,

Acting Chief Information Officer—Indian Affairs.

[FR Doc. 2010–30095 Filed 11–29–10; 8:45 am]

BILLING CODE 4310–4J–P

DEPARTMENT OF THE INTERIOR

National Park Service

[2280–665]

National Register of Historic Places; Notification of Pending Nominations and Related Actions

Nominations for the following properties being considered for listing, removal, or related actions in the National Register were received by the National Park Service before October 30, 2010. Pursuant to sections 60.13 and 60.15 of 36 CFR part 60, written comments are being accepted concerning the significance of the nominated properties under the National Register criteria for evaluation. Comments may be forwarded by United States Postal Service, to the National Register of Historic Places, National Park Service, 1849 C St., NW., MS 2280, Washington, DC 20240; by all other carriers, National Register of Historic Places, National Park Service,1201 Eye St., NW., 8th floor, Washington, DC 20005; or by fax, 202–371–6447. Written or faxed comments should be submitted by November 30, 2010.

Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

J. Paul Loether,

Chief, National Register of Historic Places/National, Historic Landmarks Program.

FLORIDA

Jefferson County

Letchworth Mounds Archeological Site, Address Restricted, Tallahassee, 10001034

Volusia County

Ormond Fire House, 160 E Granada Blvd, Ormond Beach, 10001033

MAINE

Androscoggin County

Bates Mill Historic District, Roughly bounded by Canal St, Chestnut St, Lincoln St, and Main St, Lewiston, 10001036

Washington County

Jonesboro Grange #357, Harrington Road, Jonesboro, 10001035

MASSACHUSETTS

Essex County

Hayes, Charles H., Building, 14–44 Granite St, Haverhill, 10001006

Norfolk County

Weymouth Meeting House Historic District, Church, East, Green, North, and Norton Sts, Weymouth, 10001007

MICHIGAN

Ingham County

Lansing Artillery Michigan National Guard Armory, 330 Marshall St, Lansing, 10001025

Muskegon County

Lewis, John C. and Augusta Covell, House, 324 S Mears Ave, Whitehall, 10001027

Oakland County

Griggs Brothers Rochester Elevator Company Grain Elevator, 303 East University Drive, Rochester, 10001028

Pleasant Ridge Historic District (Boundary Increase), W of Ridge Rd to city limits of Royal Oak, Huntington Woods, Oak Park, and Ferndale, Pleasant Ridge, 10001024

Washtenaw County

McGregor Memorial Conference Center, 495 Ferry Mall, Detroit, 10001023

Saint Mary's School, 400 Congdon St, Chelsea, 10001026

Wayne County

Hull's Trace North Huron River Corduroy Segment, 36000 W Jefferson Ave, Brownstown Township, 10001022

N. MARIANA ISLANDS

Saipan Municipality

Japanese Jail Historic and Archeological District, Chichirica Ave and Ghiyobw St, Garapan, 10001017

NEBRASKA

Buffalo County

Harmon Park, Roughly bounded by 33rd St and 5th Ave, Kearney, 10001002

Gage County

Dole, Marion and Ruth Ann, House, 1908 S 4th St, Beatrice, 10001003

Lancaster County

Agricultural Hall, Lincoln's State Fairgrounds, Lincoln, 10001001

Pawnee County

Pawnee City Carnegie Library, (Carnegie Libraries in Nebraska MPS) 730 G St, Pawnee City, 10001004

OKLAHOMA

Jefferson County

Archeological Site 34Jf109, Address Restricted, Belleville, 10001014

Kay County

Downtown Ponca City Historic District, Roughly bounded by Pine, Chestnut, 7th St, and Central Ave, Ponca City, 10001010

Latimer County

Eastern Oklahoma Tuberculosis Sanatorium, 10014 SE 1138th Ave, Talihina, 10001008

Love County

Archeological Site 34LV181, Address Restricted, Rubottom, 10001015
Archeological Site 34LV184, Address Restricted, Leon, 10001016

Oklahoma County

Main Public Library, 131 Dean McGee Ave, Oklahoma City, 10001009

Tulsa County

KATY Railroad Historic District, Roughly along W Easton and the old KATY Railroad Right-of-Way between N Cheyenne and N Boston Aves, Tulsa, 10001012
North Cheyenne Avenue Historic District, Roughly along E/W Frisco Tracks and Alley between W Archer and W Brady Sts, N Denver and Alley between N Boulder, Tulsa, 10001011
Oil Capital Historic District, Roughly between 3rd and 7th Sts and Cincinnati and Cheyenne Aves, Tulsa, 10001013

PENNSYLVANIA

Delaware County

Eden Cemetery, 1434 Springdale Rd, Collingdale, 10001031

Philadelphia County

Girard Avenue West Historic District, W Girard Ave between N Taney and N 30th Sts, Philadelphia, 10001032
Greenbelt Knoll Historic District, I–19 Longford St, roughly bounded by Holme Ave and Pennypack Park Greenway, Philadelphia, 10001030

WASHINGTON

King County

Washington Hall, 153 14th Ave, Seattle, 10001018

Skagit County

President Hotel, 310 Myrtle St, Mount Vernon, 10001021

Snohomish County

Hewitt Avenue Historic District, 1620–1915 Hewitt Ave and portions of Wetmore, Rockefeller, Oakes, and Lombard Ave, Everett, 10001020

Spokane County

Piollet, Victor & Jean, House, 606 W 16th Ave, Spokane, 10001019

WEST VIRGINIA

Doddridge County

West Union Residential Historic District, Roughly bounded by Court St, Stuart St, Wood St, an Garrison Ave, West Union, 10001029

WISCONSIN

Ozaukee County

NORTHERNER Shipwreck (Schooner), (Great Lakes Shipwreck Sites of Wisconsin MPS) 5 mi SE of Port Washington Harbor in Lake Michigan, Town of Grafton, 10001005

Request for REMOVAL has been made for the following resource:

OREGON

Multnomah County

Brown, Capt. John A., House, 525 NW 19th Ave, Portland, 71001086

[FR Doc. 2010–30112 Filed 11–29–10; 8:45 am]

BILLING CODE 4312–51–P

INTERNATIONAL TRADE COMMISSION

Inv. No. 337–TA–749

In the Matter of Certain Liquid Crystal Display Devices, Including Monitors, Televisions, and Modules, and Components Thereof; Notice of Investigation; Notice of Investigation

AGENCY: U.S. International Trade Commission.

ACTION: Institution of investigation pursuant to 19 U.S.C. 1337.

SUMMARY: Notice is hereby given that a complaint was filed with the U.S. International Trade Commission on October 25, 2010, under section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. 1337, on behalf of Thomson Licensing SAS of France and Thomson Licensing LLC of Princeton, New Jersey. The complaint alleges violations of section 337 based upon the importation into the United States, the sale for importation, and the sale within the United States after importation of certain liquid crystal display devices, including monitors, televisions, and modules, and components thereof by reason of infringement of certain claims of U.S. Patent No. 5,978,063 ("the '063 patent"); U.S. Patent No. 5,621,556 ("the '556 patent"); and U.S. Patent No. 5,375,006 ("the '006 patent"). The complaint further alleges that an industry in the United States exists as required by subsection (a)(2) of section 337.

The complainants request that the Commission institute an investigation and, after the investigation, issue an exclusion order and cease and desist orders.

ADDRESSES: The complaint, except for any confidential information contained therein, is available for inspection during official business hours (8:45 a.m. to 5:15 p.m.) in the Office of the Secretary, U.S. International Trade Commission, 500 E Street, SW., Room 112, Washington, DC 20436, telephone 202–205–2000. Hearing impaired individuals are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on 202–205–1810. Persons with mobility impairments who will need special assistance in gaining access to the Commission should contact the Office of the Secretary at 202–205–2000. General information concerning the Commission may also be obtained by accessing its internet server at *http://www.usitc.gov.* The public record for this investigation may be viewed on the Commission's electronic docket (EDIS) at *http://edis.usitc.gov.*

FOR FURTHER INFORMATION CONTACT: Daniel L. Girdwood, Esq., Office of Unfair Import Investigations, U.S. International Trade Commission, telephone (202) 205–3409.

Authority: The authority for institution of this investigation is contained in section 337 of the Tariff Act of 1930, as amended, and in section 210.10 of the Commission's Rules of Practice and Procedure, 19 CFR 210.10 (2010).

Scope of Investigation

Having considered the complaint, the U.S. International Trade Commission, on November 23, 2010, *ordered that*—

(1) Pursuant to subsection (b) of section 337 of the Tariff Act of 1930, as amended, an investigation be instituted to determine whether there is a violation of subsection (a)(1)(B) of section 337 in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain liquid crystal display devices, including monitors, televisions, and modules, and components thereof that infringe one or more of claim 3 of the '556 patent; claims 1–4, 8, 11, 12, 14, 17, and 18 of the '063 patent; and claims 4, 7–10, and 14 of the '006 patent, and whether an industry in the United States exists as required by subsection (a)(2) of section 337;

(2) For the purpose of the investigation so instituted, the following are hereby named as parties upon which this notice of investigation shall be served:

(a) The complainants are:

Thomson Licensing SAS, 1–5 rue Jeanne d'Arc, 92130 Issy-les-Moulineaux, France.
Thomson Licensing LLC, 2 Independence Way, Princeton, NJ 08543.

(b) The respondents are the following entities alleged to be in violation of section 337, and are the parties upon which the complaint is to be served:

Qisda Corporation, 157 Shan-Ying Road Gueishan, Taoyuan 333, Taiwan.

Qisda America Corporation, 8941 Research Drive, Suite 200, Irvine, CA 92618.

Qisda (Suzhou) Co., Ltd., 169 Zhujiang Road, Suzhou, China 215015.

BenQ Corporation, 16 Jihu Road, Neihu, Taipei 114, Taiwan.

BenQ America Corporation, 15375 Barranca Parkway, Suite A–205, Irvine, CA 92618.

BenQ Latin America Corporation, 8200 NW 33rd Street, Suite 301, Miami, FL 33122.

AU Optronics Corporation, No. 1, Li-Hsin Road 2, Hsinchu Science Park, Hsinchu, Taiwan.

AU Optronics Corporation America, 9720 Cypresswood Drive, Suite 241, Houston, TX 77070–3355.

(c) The Commission investigative attorney, party to this investigation, is Daniel L. Girdwood, Esq., Office of Unfair Import Investigations, U.S. International Trade Commission, 500 E Street, SW., Suite 401, Washington, DC 20436; and

(3) For the investigation so instituted, the Honorable Paul J. Luckern, Chief Administrative Law Judge, U.S. International Trade Commission, shall designate the presiding Administrative Law Judge.

Responses to the complaint and the notice of investigation must be submitted by the named respondents in accordance with section 210.13 of the Commission's Rules of Practice and Procedure, 19 CFR 210.13. Pursuant to 19 CFR 201.16(d)–(e) and 210.13(a), such responses will be considered by the Commission if received not later than 20 days after the date of service by the Commission of the complaint and the notice of investigation. Extensions of time for submitting responses to the complaint and the notice of investigation will not be granted unless good cause therefor is shown.

Failure of a respondent to file a timely response to each allegation in the complaint and in this notice may be deemed to constitute a waiver of the right to appear and contest the allegations of the complaint and this notice, and to authorize the administrative law judge and the Commission, without further notice to the respondent, to find the facts to be as alleged in the complaint and this notice and to enter an initial determination and a final determination containing such findings, and may result in the issuance of an exclusion order or a cease and desist order or both directed against the respondent.

By order of the Commission.

Marilyn R. Abbott,

Secretary to the Commission.

[FR Doc. 2010–30010 Filed 11–29–10; 8:45 am]

BILLING CODE 7020–02–P

INTERNATIONAL TRADE COMMISSION

[Inv. No. 337–TA–750]

In the Matter of Certain Mobile Devices and Related Software; Notice of Investigation

AGENCY: U.S. International Trade Commission.

ACTION: Institution of investigation pursuant to 19 U.S.C. 1337.

SUMMARY: Notice is hereby given that a complaint was filed with the U.S. International Trade Commission on October 29, 2010, under section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. 1337, on behalf of Apple Inc., f/k/a Apple Computer, Inc. of Cupertino, California. The complaint alleges violations of section 337 based upon the importation into the United States, the sale for importation, and the sale within the United States after importation of certain mobile devices and related software by reason of infringement of certain claims of U.S. Patent No. 7,812,828 ("the '828 patent"); U.S. Patent No. 7,663,607 ("the '607 patent"); and U.S. Patent No. 5,379,430 ("the '430 patent"). The complaint further alleges that an industry in the United States exists as required by subsection (a)(2) of section 337.

The complainant requests that the Commission institute an investigation and, after the investigation, issue an exclusion order and a cease and desist order.

ADDRESSES: The complaint, except for any confidential information contained therein, is available for inspection during official business hours (8:45 a.m. to 5:15 p.m.) in the Office of the Secretary, U.S. International Trade Commission, 500 E Street, SW., Room 112, Washington, DC 20436, telephone 202–205–2000. Hearing impaired individuals are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on 202–205–1810. Persons with mobility impairments who will need special assistance in gaining access to the Commission should contact the Office of the Secretary at 202–205–2000. General information concerning the Commission may also be obtained by accessing its Internet server at *http://www.usitc.gov.* The public record for this investigation may be viewed on the Commission's electronic docket (EDIS) at *http://edis.usitc.gov.*

FOR FURTHER INFORMATION CONTACT: Benjamin Levi, Esq., Office of Unfair Import Investigations, U.S. International Trade Commission, telephone (202) 205–2781.

Authority: The authority for institution of this investigation is contained in section 337 of the Tariff Act of 1930, as amended, and in section 210.10 of the Commission's Rules of Practice and Procedure, 19 CFR 210.10 (2010).

Scope of Investigation: Having considered the complaint, the U.S. International Trade Commission, on November 23, 2010, *ordered that—*

(1) Pursuant to subsection (b) of section 337 of the Tariff Act of 1930, as amended, an investigation be instituted to determine whether there is a violation of subsection (a)(1)(B) of section 337 in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain mobile devices and related software that infringe one or more of claims 1, 2, 10, 11, 24–26 and 29 of the '828 patent; claims 1–7 and 10 of the '607 patent; and claims 1, 3, and 5 of the '430 patent, and whether an industry in the United States exists as required by subsection (a)(2) of section 337;

(2) For the purpose of the investigation so instituted, the following are hereby named as parties upon which this notice of investigation shall be served:

(a) The complainant is: Apple Inc., f/k/a Apple Computer, Inc., 1 Infinite Loop, Cupertino, CA 95014.

(b) The respondents are the following entities alleged to be in violation of section 337, and are the parties upon which the complaint is to be served: Motorola, Inc., 1303 East Algonquin Road, Schaumburg, IL 60196;

Motorola Mobility, Inc., 600 North U.S. Highway 45, Libertyville, IL 60048.

(c) The Commission investigative attorney, party to this investigation, is Benjamin Levi, Esq., Office of Unfair Import Investigations, U.S. International Trade Commission, 500 E Street, SW., Suite 401, Washington, DC 20436; and

(3) For the investigation so instituted, the Honorable Paul J. Luckern, Chief Administrative Law Judge, U.S. International Trade Commission, shall designate the presiding Administrative Law Judge.

Responses to the complaint and the notice of investigation must be

submitted by the named respondents in accordance with section 210.13 of the Commission's Rules of Practice and Procedure, 19 CFR 210.13. Pursuant to 19 CFR 201.16(d)–(e) and 210.13(a), such responses will be considered by the Commission if received not later than 20 days after the date of service by the Commission of the complaint and the notice of investigation. Extensions of time for submitting responses to the complaint and the notice of investigation will not be granted unless good cause therefor is shown.

Failure of a respondent to file a timely response to each allegation in the complaint and in this notice may be deemed to constitute a waiver of the right to appear and contest the allegations of the complaint and this notice, and to authorize the administrative law judge and the Commission, without further notice to the respondent, to find the facts to be as alleged in the complaint and this notice and to enter an initial determination and a final determination containing such findings, and may result in the issuance of an exclusion order or a cease and desist order or both directed against the respondent.

By order of the Commission.
Issued: November 23, 2010.

Marilyn R. Abbott,

Secretary to the Commission.

[FR Doc. 2010–30013 Filed 11–29–10; 8:45 am]

BILLING CODE 7020–02–P

DEPARTMENT OF JUSTICE

Bureau of Alcohol, Tobacco, Firearms and Explosives

[OMB Number 1140–0091]

Agency Information Collection Activities: Proposed Collection; Comments Requested

ACTION: 60-Day notice of information collection under review: customer satisfaction surveys.

The Department of Justice (DOJ), Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF), will be submitting the following information collection request to the Office of Management and Budget (OMB) for review and approval in accordance with the Paperwork Reduction Act of 1995. This notice requests comments from the public and affected agencies concerning the proposed information collection. Comments are encouraged and will be accepted for "sixty days" until January 31, 2011. This process is conducted in accordance with 5 CFR 1320.10.

If you have comments especially on the estimated public burden or associated response time, suggestions, or need a copy of the proposed information collection instrument with instructions or additional information, please contact Mary Lynn Wolfe, *Mary.Wolfe@atf.gov,* Arson and Explosives Programs Division, Fax# (202) 648–9660, 99 New York Avenue, NE., Washington, DC 20226.

Written comments and suggestions from the public and affected agencies concerning the proposed information collection are encouraged. Your comments should address one or more of the following four points:

—Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;
—Evaluate the accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;
—Enhance the quality, utility, and clarity of the information to be collected; and
—Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, *e.g.,* permitting electronic submission of responses.

Summary of This Information Collection

(1) *Type of Information Collection:* Extension of a currently approved collection.

(2) *Title of the Form/Collection:* Customer Satisfaction Surveys.

(3) *Agency form number, if any, and the applicable component of the Department of Justice sponsoring the collection:* Form Number: None. Bureau of Alcohol, Tobacco, Firearms and Explosives.

(4) *Affected public who will be asked or required to respond, Primary:* State, Local or Tribal Government. Other: None.

Need for Collection

The Arson and Explosives Programs Division (AEPD) of the Bureau of Alcohol, Tobacco, Firearms and Explosives distribute program-specific customer satisfaction surveys to more effectively capture customer perception/satisfaction of services. AEPD's strategy is based on a commitment to provide the kind of customer service that will better accomplish ATF's mission.

An estimate of the total number of respondents and the amount of time estimated for an average respondent to respond: It is estimated that 500 respondents will complete a 15 minute survey.

An estimate of the total public burden (in hours) associated with the collection: There are an estimated 125 annual total burden hours associated with this collection.

If additional information is required contact Lynn Murray, Department Clearance Officer, United States Department of Justice, Justice Management Division, Policy and Planning Staff, 2 Constitution Square, Room 2E–502, 145 N Street, NE., Washington, DC 20530.

Dated: November 23, 2010.

Lynn Murray,

Department Clearance Officer, PRA, Department of Justice.

[FR Doc. 2010–30002 Filed 11–29–10; 8:45 am]

BILLING CODE 4410–FY–P

DEPARTMENT OF LABOR

Office of the Secretary

Agency Information Collection Activities; Submission for OMB Review; Comment Request; Job Corps Placement and Assistance Record

ACTION: Notice.

SUMMARY: The Department of Labor (DOL) hereby announces the submission of the Employment and Training Administration (ETA) sponsored information collection request (ICR) titled, "Job Corps Placement and Assistance Record," to the Office of Management and Budget (OMB) for review and approval for continued use in accordance with the Paperwork Reduction Act of 1995 (Pub. L. 104–13, 44 U.S.C. chapter 35).

DATES: Submit comments on or before December 30, 2010.

ADDRESSES: A copy of this ICR, with applicable supporting documentation; including a description of the likely respondents, proposed frequency of response, and estimated total burden may be obtained from the RegInfo.gov Web site, *http://www.reginfo.gov/public/do/PRAMain* or by contacting Michel Smyth by telephone at 202–693–4129 (this is not a toll-free number) or sending an e-mail to *DOL_PRA_PUBLIC@dol.gov.*

Submit comments about this request to the Office of Information and Regulatory Affairs, Attn: OMB Desk Officer for the Department of Labor, Employment and Training Administration (ETA), Office of Management and Budget, Room 10235,

Washington, DC 20503, Telephone: 202–395–6929/Fax: 202–395–6881 (these are not toll-free numbers), e-mail: *OIRA_submission@omb.eop.gov.*

FOR FURTHER INFORMATION: Contact Michel Smyth by telephone at 202–693–4129 (this is not a toll-free number) or by e-mail at *DOL_PRA_PUBLIC@dol.gov.*

SUPPLEMENTARY INFORMATION: Form ETA 678 is used to obtain information about student training for placement of students in jobs, further education or military service. The form used to evaluate overall program effectiveness and is the only form that documents a student's post-center status. The form is prepared by Job Corps centers and placement specialists for each student separating from Job Corps centers.

This information collection is subject to the PRA. A Federal agency generally cannot conduct or sponsor a collection of information, and the public is generally not required to respond to an information collection, unless it is currently approved by the OMB under the PRA and displays a currently valid OMB Control Number. In addition, notwithstanding any other provisions of law, no person shall generally be subject to penalty for failing to comply with a collection of information if the collection of information does not display a currently valid OMB control number. *See* 5 CFR 1320.5(a) and 1320.6. The DOL obtains OMB approval for this information collection under OMB Control Number 1205–0035. The current OMB approval is scheduled to expire on November 30, 2010; however, it should be noted that information collections submitted to the OMB receive a month-to-month extension while they undergo review. For additional information, see the related notice published in the **Federal Register** on August 20, 2010 (75 FR 51484).

Interested parties are encouraged to send comments to the OMB, Office of Information and Regulatory Affairs at the address shown in the **ADDRESSES** section within 30 days of publication of this notice in the **Federal Register**. In order to ensure the appropriate consideration, comments should reference OMB Control Number 1205–0035. The OMB is particularly interested in comments that:

- Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;
- Evaluate the accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;
- Enhance the quality, utility, and clarity of the information to be collected; and
- Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses.

Agency: Employment and Training Administration (ETA).

Type of Review: Extension without change of a currently approved collection.

Title of Collection: Job Corps Health Questionnaire.

Form Number: ETA 678.

OMB Control Number: 1205–0035.

Affected Public: Individuals or Households.

Total Estimated Number of Respondents: 40,000.

Total Estimated Number of Responses: 40,000.

Total Estimated Annual Burden Hours: 4,953.

Total Estimated Annual Costs Burden: $39,737.

Dated: November 22, 2010.

Michel Smyth,

Departmental Clearance Officer.

[FR Doc. 2010–29983 Filed 11–29–10; 8:45 am]

BILLING CODE 4510–30–P

DEPARTMENT OF LABOR

Office of the Secretary

Agency Information Collection Activities; Submission for OMB Review; Comment Request; Welding, Cutting and Brazing

ACTION: Notice.

SUMMARY: The Department of Labor (DOL) hereby announces the submission of the Occupational Safety and Health Administration (OSHA) sponsored information collection request (ICR) titled, "Welding, Cutting and Brazing," to the Office of Management and Budget (OMB) for review and approval for continued use in accordance with the Paperwork Reduction Act of 1995 (Pub. L. 104–13, 44 U.S.C. chapter 35).

DATES: Submit comments on or before December 30, 2010.

ADDRESSES: A copy of this ICR, with applicable supporting documentation; including a description of the likely respondents, proposed frequency of response, and estimated total burden may be obtained from the *RegInfo.gov* Web site, *http://www.reginfo.gov/public/do/PRAMain* or by contacting Michel Smyth by telephone at 202–693–4129 (this is not a toll-free number) or sending an email to *DOL_PRA_PUBLIC@dol.gov.*

Submit comments about this request to the Office of Information and Regulatory Affairs, Attn: OMB Desk Officer for the Department of Labor, Occupational Safety and Health Administration (OSHA), Office of Management and Budget, Room 10235, Washington, DC 20503, Telephone: 202–395–6929/Fax: 202–395–6881 (these are not toll-free numbers), e-mail: *OIRA_submission@omb.eop.gov.*

FOR FURTHER INFORMATION CONTACT: Contact Michel Smyth by telephone at 202–693–4129 (this is not a toll-free number) or by email at *DOL_PRA_PUBLIC@dol.gov.*

SUPPLEMENTARY INFORMATION: This ICR relates to the regulatory requirement that a periodic inspection of resistance welding equipment be made by qualified maintenance personnel and that a certification record be generated and maintained. The certification shall include the date of the inspection, the signature of the person who performed the inspection, and the serial number or other identifier for the equipment inspected. The record shall be made available to an OSHA inspector upon request. The maintenance inspection ensures that welding equipment is in safe operating condition while the maintenance record provides evidence to workers and Agency compliance officers that employers performed the required inspections.

This information collection is subject to the PRA. A Federal agency generally cannot conduct or sponsor a collection of information, and the public is generally not required to respond to an information collection, unless it is currently approved by the OMB under the PRA and displays a currently valid OMB Control Number. In addition, notwithstanding any other provisions of law, no person shall generally be subject to penalty for failing to comply with a collection of information if the collection of information does not display a currently valid OMB control number. *See* 5 CFR 1320.5(a) and 1320.6. The DOL obtains OMB approval for this information collection under OMB Control Number 1218–0207. The current OMB approval is scheduled to expire on November 30, 2010; however, it should be noted that information collections submitted to the OMB receive a month-to-month extension while they undergo review. For

additional information, see the related notice published in the **Federal Register** on August 24, 2010 (75 FR 52037).

Interested parties are encouraged to send comments to the OMB, Office of Information and Regulatory Affairs at the address shown in the **ADDRESSES** section within 30 days of publication of this notice in the **Federal Register**. In order to ensure the appropriate consideration, comments should reference OMB Control Number 1218–0207. The OMB is particularly interested in comments that:

• Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

• Evaluate the accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;

• Enhance the quality, utility, and clarity of the information to be collected; and

• Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, *e.g.,* permitting electronic submission of responses.

Agency: Occupational Safety and Health Administration (OSHA).

Type of Review: Extension without change of a currently approved collection.

Title of Collection: Welding, Cutting and Brazing.

OMB Control Number: 1218–0207.

Affected Public: Private sector—Businesses or other for profits.

Total Estimated Number of Respondents: 21,164.

Total Estimated Number of Responses: 84,952.

Total Estimated Annual Burden Hours: 5,935.

Total Estimated Annual Costs Burden: $0.

Dated: November 23, 2010.

Michel Smyth,

Departmental Clearance Officer.

[FR Doc. 2010–30045 Filed 11–29–10; 8:45 am]

BILLING CODE 4510–26–P

DEPARTMENT OF LABOR

Office of the Secretary

Agency Information Collection Activities; Submission for OMB Review; Comment Request; Portable Fire Extinguishers—Annual Maintenance Certification Record

ACTION: Notice.

SUMMARY: The Department of Labor (DOL) hereby announces the submission of the Occupational Safety and Health Administration (OSHA) sponsored information collection request (ICR) titled, "Portable Fire Extinguishers—Annual Maintenance Certification Record," to the Office of Management and Budget (OMB) for review and approval for continued use in accordance with the Paperwork Reduction Act of 1995 (Pub. L. 104–13, 44 U.S.C. chapter 35).

DATES: Submit comments on or before December 30, 2010.

ADDRESSES: A copy of this ICR, with applicable supporting documentation; including a description of the likely respondents, proposed frequency of response, and estimated total burden may be obtained from the *RegInfo.gov* Web site, *http://www.reginfo.gov/public/do/PRAMain* or by contacting Michel Smyth by telephone at 202–693–4129 (this is not a toll-free number) or sending an e-mail to *DOL_PRA_PUBLIC@dol.gov.*

Submit comments about this request to the Office of Information and Regulatory Affairs, Attn: OMB Desk Officer for the Department of Labor, Occupational Safety and Health Administration (OSHA), Office of Management and Budget, Room 10235, Washington, DC 20503, Telephone: 202–395–6929/Fax: 202–395–6881 (these are not toll-free numbers), e-mail: *OIRA_submission@omb.eop.gov.*

FOR FURTHER INFORMATION CONTACT: Contact Michel Smyth by telephone at 202–693–4129 (this is not a toll-free number) or by e-mail at *DOL_PRA_PUBLIC@dol.gov.*

SUPPLEMENTARY INFORMATION: This ICR relates to the regulatory requirement that employers must subject each portable fire extinguisher to an annual maintenance inspection and record the date of the inspection. This provision requires employers to retain the inspection record for one year after the last entry or for the life of the shell, whichever is less, and to make the record available to OSHA on request. This recordkeeping requirement assures employees and OSHA compliance officers that portable fire extinguishers located in the workplace will operate normally in case of fire; in addition, this requirement provides evidence to OSHA compliance officers during an inspection that the employer performed the required maintenance checks on the portable fire extinguishers.

This information collection is subject to the PRA. A Federal agency generally cannot conduct or sponsor a collection of information, and the public is generally not required to respond to an information collection, unless it is currently approved by the OMB under the PRA and displays a currently valid OMB Control Number. In addition, notwithstanding any other provisions of law, no person shall generally be subject to penalty for failing to comply with a collection of information if the collection of information does not display a currently valid OMB Control Number. *See* 5 CFR 1320.5(a) and 1320.6. The DOL obtains OMB approval for this information collection under OMB Control Number 1218–0238. The current OMB approval is scheduled to expire on November 30, 2010; however, it should be noted that information collections submitted to the OMB receive a month-to-month extension while they undergo review. For additional information, see the related notice published in the **Federal Register** on August 24, 2010 (75 FR 52034).

Interested parties are encouraged to send comments to the OMB, Office of Information and Regulatory Affairs at the address shown in the **ADDRESSES** section within 30 days of publication of this notice in the **Federal Register**. In order to ensure the appropriate consideration, comments should reference OMB Control Number 1218–0238. The OMB is particularly interested in comments that:

• Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

• Evaluate the accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;

• Enhance the quality, utility, and clarity of the information to be collected; and

• Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology,

e.g., permitting electronic submission of responses.

Agency: Occupational Safety and Health Administration (OSHA).

Type of Review: Extension without change of a currently approved collection.

Title of Collection: Portable Fire Extinguishers—Annual Maintenance Certification Record.

OMB Control Number: 1218–0238.

Affected Public: Private sector—Businesses or other for profits.

Total Estimated Number of Respondents: 135,990.

Total Estimated Number of Responses: 135,990.

Total Estimated Annual Burden Hours: 67,995.

Total Estimated Annual Costs Burden: $19,888,538.

Dated: November 23, 2010.

Michel Smyth,

Departmental Clearance Officer.

[FR Doc. 2010–30052 Filed 11–29–10; 8:45 am]

BILLING CODE 4510–26–P

DEPARTMENT OF LABOR

Office of the Secretary

Agency Information Collection Activities; Submission for OMB Review; Comment Request; Application for Occupational Safety and Health Administration Training Grant

ACTION: Notice.

SUMMARY: The Department of Labor (DOL) hereby announces the submission of the Occupational Safety and Health Administration (OSHA) sponsored information collection request (ICR) titled, "Application for OSHA Training Grant," to the Office of Management and Budget (OMB) for review and approval for continued use in accordance with the Paperwork Reduction Act of 1995 (Pub. L. 104–13, 44 U.S.C. chapter 35).

DATES: Submit comments on or before December 30, 2010.

ADDRESSES: A copy of this ICR, with applicable supporting documentation; including a description of the likely respondents, proposed frequency of response, and estimated total burden may be obtained from the RegInfo.gov Web site, *http://www.reginfo.gov/public/do/PRAMain* or by contacting Michel Smyth by telephone at 202–693–4129 (this is not a toll-free number) or sending an e-mail to *DOL_PRA_PUBLIC@dol.gov.*

Submit comments about this request to the Office of Information and Regulatory Affairs, Attn: OMB Desk Officer for the Department of Labor, Occupational Safety and Health Administration (OSHA), Office of Management and Budget, Room 10235, Washington, DC 20503, Telephone: 202–395–6929/Fax: 202–395–6881 (these are not toll-free numbers), e-mail: *OIRA_submission@omb.eop.gov.*

FOR FURTHER INFORMATION CONTACT: Contact Michel Smyth by telephone at 202–693–4129 (this is not a toll-free number) or by e-mail at *DOL_PRA_PUBLIC@dol.gov.*

SUPPLEMENTARY INFORMATION: The OSHA awards grants to non-profit organizations to provide training under the Occupation Safety and Health Act. To obtain such a grant, an organization must complete the training grant application. The OSHA uses the information in this application to evaluate: the organization's competence to provide the proposed training (including the qualifications of the personnel who manage and implement the training); the goals and objectives of the proposed training program; a work plan that describes in detail the tasks that the organization will implement to meet these goals and objectives; the appropriateness of the proposed costs; and compliance with Federal regulations governing nonprocurement, debarment, and suspension, maintaining a drug-free workplace, and lobbying activities. Also required is a program summary that Agency officials use to review and evaluate the highlights of the overall proposal. After awarding a training grant, the OSHA uses the work plan and budget information provided in the application to monitor the organization's progress in meeting training goals and objectives, as well as planned expenditures. The initial grant award is for one year.

This information collection is subject to the PRA. A Federal agency generally cannot conduct or sponsor a collection of information, and the public is generally not required to respond to an information collection, unless it is currently approved by the OMB under the PRA and displays a currently valid OMB Control Number. In addition, notwithstanding any other provisions of law, no person shall generally be subject to penalty for failing to comply with a collection of information if the collection of information does not display a currently valid OMB control number. *See* 5 CFR 1320.5(a) and 1320.6. The DOL obtains OMB approval for this information collection under OMB Control Number 1218–0020. The current OMB approval is scheduled to expire on November 30, 2010; however, it should be noted that information collections submitted to the OMB receive a month-to-month extension while they undergo review. For additional information, see the related notice published in the **Federal Register** on September 21, 2010 (75 FR 57503).

Interested parties are encouraged to send comments to the OMB, Office of Information and Regulatory Affairs at the address shown in the **ADDRESSES** section within 30 days of publication of this notice in the **Federal Register**. In order to ensure the appropriate consideration, comments should reference OMB Control Number 1218–0020. The OMB is particularly interested in comments that:

- Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;
- Evaluate the accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;
- Enhance the quality, utility, and clarity of the information to be collected; and
- Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, *e.g.,* permitting electronic submission of responses.

Agency: Occupational Safety and Health Administration (OSHA).

Title of Collection: Application for OSHA Training Grant.

OMB Control Number: 1218–0020.

Affected Public: Private sector—Not-for-profit institutions.

Total Estimated Number of Respondents: 205.

Total Estimated Number of Responses: 205.

Total Estimated Annual Burden Hours: 11,480.

Total Estimated Annual Costs Burden: $0.

Dated: November 24, 2010.

Michel Smyth,

Departmental Clearance Officer.

[FR Doc. 2010–30080 Filed 11–29–10; 8:45 am]

BILLING CODE 4510–26–P

DEPARTMENT OF LABOR

Office of the Secretary

Agency Information Collection Activities; Submission for OMB Review; Comment Request; Benefits Timeliness and Quality Review System

ACTION: Notice.

SUMMARY: The Department of Labor (DOL) hereby announces the submission of the Employment and Training Administration (ETA) sponsored information collection request (ICR) titled, "Benefits Timeliness and Quality Review System," (BTQ) to the Office of Management and Budget (OMB) for review and approval for continued use in accordance with the Paperwork Reduction Act of 1995 (Pub. L. 104–13, 44 U.S.C. chapter 35).

DATES: Submit comments on or before December 30, 2010.

ADDRESSES: A copy of this ICR, with applicable supporting documentation; including a description of the likely respondents, proposed frequency of response, and estimated total burden may be obtained from the RegInfo.gov Web site, *http://www.reginfo.gov/public/do/PRAMain* or by contacting Michel Smyth by telephone at 202–693–4129 (this is not a toll-free number) or sending an e-mail to *DOL_PRA_PUBLIC@dol.gov.*

Submit comments about this request to the Office of Information and Regulatory Affairs, Attn: OMB Desk Officer for the Department of Labor, Employment and Training Administration (ETA), Office of Management and Budget, Room 10235, Washington, DC 20503, Telephone: 202–395–6929/Fax: 202–395–6881 (these are not toll-free numbers), e-mail: *OIRA_submission@omb.eop.gov.*

FOR FURTHER INFORMATION CONTACT: Michel Smyth by telephone at 202–693–4129 (this is not a toll-free number) or by e-mail at *DOL_PRA_PUBLIC@dol.gov.*

SUPPLEMENTARY INFORMATION: The Secretary of Labor, under the Social Security Act, Title III, Section 302 (42 U.S.C. 502), funds the necessary cost of proper and efficient administration of each State Unemployment Insurance law. The BTQ system collects information and analyzes data. BTQ data measure the timeliness and quality of states' administrative actions and administrative decisions related to Unemployment Insurance benefit payments.

This information collection is subject to the PRA. A Federal agency generally cannot conduct or sponsor a collection of information, and the public is generally not required to respond to an information collection, unless it is currently approved by the OMB under the PRA and displays a currently valid OMB Control Number. In addition, notwithstanding any other provisions of law, no person shall generally be subject to penalty for failing to comply with a collection of information if the collection of information does not display a currently valid OMB control number. *See* 5 CFR 1320.5(a) and 1320.6. The DOL obtains OMB approval for this information collection under OMB Control Number 1205–0359. The current OMB approval is scheduled to expire on November 30, 2010; however, it should be noted that information collections submitted to the OMB receive a month-to-month extension while they undergo review. For additional information, see the related notice published in the **Federal Register** on September 10, 2010 (75 FR 55357).

Interested parties are encouraged to send comments to the OMB, Office of Information and Regulatory Affairs at the address shown in the **ADDRESSES** section within 30 days of publication of this notice in the **Federal Register**. In order to ensure the appropriate consideration, comments should reference OMB Control Number 1205–0357. The OMB is particularly interested in comments that:

- Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;
- Evaluate the accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;
- Enhance the quality, utility, and clarity of the information to be collected; and
- Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, *e.g.,* permitting electronic submission of responses.

Agency: Employment and Training Administration (ETA).

Type of Review: Extension without change of a currently approved collection.

Title of Collection: Benefits Timeliness and Quality Review System.

Form Numbers: ETA 9050, ETA 9051, ETA 9052, ETA 9054, ETA 9055, ETA 9056, ETA 9057.

OMB Control Number: 1205–0359.

Affected Public: State, local, and tribal governments.

Total Estimated Number of Respondents: 53.

Total Estimated Number of Responses: 29,636.

Total Estimated Annual Burden Hours: 39,892.

Total Estimated Annual Costs Burden: $0.

Dated: November 23, 2010.

Michel Smyth,

Departmental Clearance Officer.

[FR Doc. 2010–30081 Filed 11–29–10; 8:45 am]

BILLING CODE 4510–30–P

DEPARTMENT OF LABOR

Office of the Secretary

Agency Information Collection Activities; Submission for OMB Review; Comment Request; Nonmonetary Determination Activity Report

ACTION: Notice.

SUMMARY: The Department of Labor (DOL) hereby announces the submission of the Employment and Training Administration (ETA) sponsored information collection request (ICR) titled, "Nonmonetary Determination Activity Report," to the Office of Management and Budget (OMB) for review and approval for continued use in accordance with the Paperwork Reduction Act of 1995 (Pub. L. 104–13, 44 U.S.C. chapter 35).

DATES: Submit comments on or before December 30, 2010.

ADDRESSES: A copy of this ICR, with applicable supporting documentation; including a description of the likely respondents, proposed frequency of response, and estimated total burden may be obtained from the RegInfo.gov Web site, *http://www.reginfo.gov/public/do/PRAMain* or by contacting Michel Smyth by telephone at 202–693–4129 (this is not a toll-free number) or sending an e-mail to *DOL_PRA_PUBLIC@dol.gov.*

Submit comments about this request to the Office of Information and Regulatory Affairs, Attn: OMB Desk Officer for the Department of Labor, Employment and Training Administration (ETA), Office of Management and Budget, Room 10235, Washington, DC 20503, Telephone: 202–395–6929/Fax: 202–395–6881

(these are not toll-free numbers), e-mail: *OIRA_submission@omb.eop.gov.*

FOR FURTHER INFORMATION CONTACT: Michel Smyth by telephone at 202–693–4129 (this is not a toll-free number) or by e-mail at *DOL_PRA_PUBLIC@dol.gov.*

SUPPLEMENTARY INFORMATION: Form ETA 207 collects data on the number and types of issues that are adjudicated when unemployment insurance (UI) claims are filed. The Form also collects data on the number of disqualifications that are issued for reasons associated with a claimant's separation from employment and reasons related to a claimant's continuing eligibility for benefits. These data are used by the Office of Unemployment Insurance to determine workload counts for allocation of administrative funds, to analyze the ratio of disqualifications to determinations, and to examine and evaluate the program effect of nonmonetary activities.

This information collection is subject to the PRA. A Federal agency generally cannot conduct or sponsor a collection of information, and the public is generally not required to respond to an information collection, unless it is currently approved by the OMB under the PRA and displays a currently valid OMB Control Number. In addition, notwithstanding any other provisions of law, no person shall generally be subject to penalty for failing to comply with a collection of information if the collection of information does not display a currently valid OMB control number. *See* 5 CFR 1320.5(a) and 1320.6. The DOL obtains OMB approval for this information collection under OMB Control Number 1205–0150. The current OMB approval is scheduled to expire on November 30, 2010; however, it should be noted that information collections submitted to the OMB receive a month-to-month extension while they undergo review. For additional information, see the related notice published in the **Federal Register** on September 2, 2010 (75 FR 53982).

Interested parties are encouraged to send comments to the OMB, Office of Information and Regulatory Affairs at the address shown in the **ADDRESSES** section within 30 days of publication of this notice in the **Federal Register**. In order to ensure the appropriate consideration, comments should reference OMB Control Number 1205–0150. The OMB is particularly interested in comments that:

- Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;
- Evaluate the accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;
- Enhance the quality, utility, and clarity of the information to be collected; and
- Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses.

Agency: Employment and Training Administration (ETA).

Type of Review: Extension without change of a currently approved collection.

Title of Collection: Nonmonetary Determination Activity Report.

Form Number: ETA 207.

OMB Control Number: 1205–0150.

Affected Public: State, local, and tribal governments.

Total Estimated Number of Respondents: 53.

Total Estimated Number of Responses: 636.

Total Estimated Annual Burden Hours: 2,544.

Total Estimated Annual Costs Burden: $0.

Dated: November 23, 2010.

Michel Smyth,

Departmental Clearance Officer.

[FR Doc. 2010–29984 Filed 11–29–10; 8:45 am]

BILLING CODE 4510–30–P

DEPARTMENT OF LABOR

Office of the Secretary

Agency Information Collection Activities; Submission for OMB Review; Comment Request; Benefit Appeals Report

ACTION: Notice.

SUMMARY: The Department of Labor (DOL) hereby announces the submission of the Employment and Training Administration (ETA) sponsored information collection request (ICR) titled, "Benefit Appeals Report," to the Office of Management and Budget (OMB) for review and approval for continued use in accordance with the Paperwork Reduction Act of 1995 (Pub. L. 104–13, 44 U.S.C. chapter 35).

DATES: Submit comments on or before December 30, 2010.

ADDRESSES: A copy of this ICR, with applicable supporting documentation; including a description of the likely respondents, proposed frequency of response, and estimated total burden may be obtained from the RegInfo.gov Web site, *http://www.reginfo.gov/public/do/PRAMain* or by contacting Michel Smyth by telephone at 202–693–4129 (this is not a toll-free number) or sending an e-mail to *DOL_PRA_PUBLIC@dol.gov.*

Submit comments about this request to the Office of Information and Regulatory Affairs, Attn: OMB Desk Officer for the Department of Labor, Employment and Training Administration (ETA), Office of Management and Budget, Room 10235, Washington, DC 20503, Telephone: 202–395–6929/Fax: 202–395–6881 (these are not toll-free numbers), e-mail: *OIRA_submission@omb.eop.gov.*

FOR FURTHER INFORMATION CONTACT: Michel Smyth by telephone at 202–693–4129 (this is not a toll-free number) or by e-mail at *DOL_PRA_PUBLIC@dol.gov.*

SUPPLEMENTARY INFORMATION: The Benefit Appeals Report contains information on the number of unemployment insurance appeals and the resultant decisions classified by program, appeals level, cases filed and disposed of (workflow), and decisions by level, appellant, and issue. The data in this report are used by the DOL to monitor the benefit appeals process in the State Workforce Agencies and to develop any needed plans for remedial action. The data are also needed for workload forecasts and to determine administrative funding. If this information were not available, developing problems might not be discovered early enough to allow for timely solutions and avoidance of time consuming and costly corrective action.

This information collection is subject to the PRA. A Federal agency generally cannot conduct or sponsor a collection of information, and the public is generally not required to respond to an information collection, unless it is currently approved by the OMB under the PRA and displays a currently valid OMB Control Number. In addition, notwithstanding any other provisions of law, no person shall generally be subject to penalty for failing to comply with a collection of information if the collection of information does not display a currently valid OMB control number. *See* 5 CFR 1320.5(a) and 1320.6. The DOL obtains OMB approval for this information collection under OMB Control Number 1205–0172. The current OMB approval is scheduled to

expire on November 30, 2010; however, it should be noted that information collections submitted to the OMB receive a month-to-month extension while they undergo review. For additional information, see the related notice published in the **Federal Register** on September 2, 2010 (75 FR 53983).

Interested parties are encouraged to send comments to the OMB, Office of Information and Regulatory Affairs at the address shown in the **ADDRESSES** section within 30 days of publication of this notice in the **Federal Register**. In order to ensure the appropriate consideration, comments should reference OMB Control Number 1205–0172. The OMB is particularly interested in comments that:

- Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;
- Evaluate the accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;
- Enhance the quality, utility, and clarity of the information to be collected; and
- Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses.

Agency: Employment and Training Administration (ETA).

Type of Review: Extension without change of a currently approved collection.

Title of Collection: Benefit Appeals Report.

Form Number: ETA 9130.

OMB Control Number: 1205–0172.

Affected Public: State, local, and tribal governments.

Total Estimated Number of Respondents: 53.

Total Estimated Number of Responses: 636.

Total Estimated Annual Burden Hours: 1908.

Total Estimated Annual Costs Burden: $0.

Dated: November 23, 2010.

Michel Smyth,

Departmental Clearance Officer.

[FR Doc. 2010–29985 Filed 11–29–10; 8:45 am]

BILLING CODE 4510–30–P

DEPARTMENT OF LABOR

Office of the Secretary

Agency Information Collection Activities; Submission for OMB Review; Comment Request; Job Corps Enrollee Allotment Determination

ACTION: Notice.

SUMMARY: The Department of Labor (DOL) hereby announces the submission of the Employment and Training Administration (ETA) sponsored information collection request (ICR) titled, "Job Corps Enrollee Allotment Determination," to the Office of Management and Budget (OMB) for review and approval for continued use in accordance with the Paperwork Reduction Act of 1995 (Pub. L. 104–13, 44 U.S.C. chapter 35).

DATES: Submit comments on or before December 30, 2010.

ADDRESSES: A copy of this ICR, with applicable supporting documentation; including a description of the likely respondents, proposed frequency of response, and estimated total burden may be obtained from the RegInfo.gov Web site, *http://www.reginfo.gov/public/do/PRAMain,* or by contacting Michel Smyth by telephone at 202–693–4129 (this is not a toll-free number) or sending an e-mail to *DOL_PRA_PUBLIC@dol.gov.*

Submit comments about this request to the Office of Information and Regulatory Affairs, Attn: OMB Desk Officer for the Department of Labor, Employment and Training Administration (ETA), Office of Management and Budget, Room 10235, Washington, DC 20503, Telephone: 202–395–6929/Fax: 202–395–6881 (these are not toll-free numbers), e-mail: *OIRA_submission@omb.eop.gov.*

FOR FURTHER INFORMATION CONTACT: Michel Smyth by telephone at 202–693–4129 (this is not a toll-free number) or by e-mail at *DOL_PRA_PUBLIC@dol.gov.*

SUPPLEMENTARY INFORMATION: Job Corps enrollees may elect to have a portion of their readjustment allowance/transition payment sent to a dependent biweekly, and Form ETA 658 provides the information necessary to administer these allotments. This information collection is subject to the PRA. A Federal agency generally cannot conduct or sponsor a collection of information, and the public is generally not required to respond to an information collection, unless it is currently approved by the OMB under the PRA and displays a currently valid OMB Control Number. In addition, notwithstanding any other provisions of law, no person shall generally be subject to penalty for failing to comply with a collection of information if the collection of information does not display a currently valid OMB control number. *See* 5 CFR 1320.5(a) and 1320.6. The DOL obtains OMB approval for this information collection under OMB Control Number 1205–0030. The current OMB approval is scheduled to expire on November 30, 2010; however, it should be noted that information collections submitted to the OMB receive a month-to-month extension while they undergo review. For additional information, see the related notice published in the **Federal Register** on August 20, 2010 (75 FR 51486).

Interested parties are encouraged to send comments to the OMB, Office of Information and Regulatory Affairs at the address shown in the **ADDRESSES** section within 30 days of publication of this notice in the **Federal Register**. In order to ensure the appropriate consideration, comments should reference OMB Control Number 1205–0030. The OMB is particularly interested in comments that:

- Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;
- Evaluate the accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;
- Enhance the quality, utility, and clarity of the information to be collected; and
- Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, *e.g.,* permitting electronic submission of responses.

Agency: Employment and Training Administration (ETA).

Type of Review: Extension without change of a currently approved collection.

Title of Collection: Job Corps Enrollee Allotment Determination.

Form Number: ETA 658.

OMB Control Number: 1205–0030.

Affected Public: Individuals or Households.

Total Estimated Number of Respondents: 1100.

Total Estimated Number of Responses: 1100.

Total Estimated Annual Burden Hours: 55.

Total Estimated Annual Costs Burden: $0.

Dated: November 22, 2010.

Michel Smyth,

Departmental Clearance Officer.

[FR Doc. 2010–29991 Filed 11–29–10; 8:45 am]

BILLING CODE 4510–30–P

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

[Notice (10–149)]

NASA Advisory Council; Science Committee; Astrophysics Subcommittee; Meeting

AGENCY: National Aeronautics and Space Administration.

ACTION: Notice of meeting.

SUMMARY: In accordance with the Federal Advisory Committee Act, Public Law 92–463, as amended, the National Aeronautics and Space Administration (NASA) announces a meeting of the Astrophysics Subcommittee of the NASA Advisory Council (NAC). This Subcommittee reports to the Science Committee of the NAC. The Meeting will be held for the purpose of soliciting from the scientific community and other persons scientific and technical information relevant to program planning.

DATES: Wednesday, December 22, 2010, 1 p.m. to 2 p.m. EST.

ADDRESSES: This meeting will take place telephonically and by WebEx. Any interested person may call the USA toll free conference call number 888–972–9925 or toll number 312–470–0184, pass code APS, to participate in this meeting by telephone. The WebEx link is *https://nasa.webex.com,* meeting number 996 142 777, and password APS$Dec2010.

SUPPLEMENTARY INFORMATION: The meeting will be open to the public. The agenda for the meeting includes the following topics:

—Astrophysics Division Update

—James Webb Space Telescope Update

It is imperative that the meeting be held on these dates to accommodate the scheduling priorities of the key participants.

Dated: November 23, 2010.

P. Diane Rausch,

Advisory Committee Management Officer, National Aeronautics and Space Administration.

[FR Doc. 2010–29972 Filed 11–29–10; 8:45 am]

BILLING CODE P

NATIONAL ARCHIVES AND RECORDS ADMINISTRATION

Records Schedules; Availability and Request for Comments

AGENCY: National Archives and Records Administration (NARA).

ACTION: Notice of availability of proposed records schedules; request for comments.

SUMMARY: The National Archives and Records Administration (NARA) publishes notice at least once monthly of certain Federal agency requests for records disposition authority (records schedules). Once approved by NARA, records schedules provide mandatory instructions on what happens to records when no longer needed for current Government business. They authorize the preservation of records of continuing value in the National Archives of the United States and the destruction, after a specified period, of records lacking administrative, legal, research, or other value. Notice is published for records schedules in which agencies propose to destroy records not previously authorized for disposal or reduce the retention period of records already authorized for disposal. NARA invites public comments on such records schedules, as required by 44 U.S.C. 3303a(a).

DATES: Requests for copies must be received in writing on or before *December 30, 2010.* Once the appraisal of the records is completed, NARA will send a copy of the schedule. NARA staff usually prepare appraisal memorandums that contain additional information concerning the records covered by a proposed schedule. These, too, may be requested and will be provided once the appraisal is completed. Requesters will be given 30 days to submit comments.

ADDRESSES: You may request a copy of any records schedule identified in this notice by contacting the Life Cycle Management Division (NWML) using one of the following means:

Mail: NARA (NWML), 8601 Adelphi Road, College Park, MD 20740–6001.

E-mail: request.schedule@nara.gov.

Fax: 301–837–3698.

Requesters must cite the control number, which appears in parentheses after the name of the agency which submitted the schedule, and must provide a mailing address. Those who desire appraisal reports should so indicate in their request.

FOR FURTHER INFORMATION CONTACT: Laurence Brewer, Director, Life Cycle Management Division (NWML), National Archives and Records Administration, 8601 Adelphi Road, College Park, MD 20740–6001. *Telephone:* 301–837–1539. *E-mail: records.mgt@nara.gov.*

SUPPLEMENTARY INFORMATION: Each year Federal agencies create billions of records on paper, film, magnetic tape, and other media. To control this accumulation, agency records managers prepare schedules proposing retention periods for records and submit these schedules for NARA's approval, using the Standard Form (SF) 115, Request for Records Disposition Authority. These schedules provide for the timely transfer into the National Archives of historically valuable records and authorize the disposal of all other records after the agency no longer needs them to conduct its business. Some schedules are comprehensive and cover all the records of an agency or one of its major subdivisions. Most schedules, however, cover records of only one office or program or a few series of records. Many of these update previously approved schedules, and some include records proposed as permanent.

The schedules listed in this notice are media neutral unless specified otherwise. An item in a schedule is media neutral when the disposition instructions may be applied to records regardless of the medium in which the records are created and maintained. Items included in schedules submitted to NARA on or after December 17, 2007, are media neutral unless the item is limited to a specific medium. (*See* 36 CFR 1225.12(e).)

No Federal records are authorized for destruction without the approval of the Archivist of the United States. This approval is granted only after a thorough consideration of their administrative use by the agency of origin, the rights of the Government and of private persons directly affected by the Government's activities, and whether or not they have historical or other value.

Besides identifying the Federal agencies and any subdivisions requesting disposition authority, this public notice lists the organizational unit(s) accumulating the records or indicates agency-wide applicability in the case of schedules that cover records that may be accumulated throughout an agency. This notice provides the control number assigned to each schedule, the total number of schedule items, and the number of temporary items (the records proposed for destruction). It also includes a brief description of the temporary records. The records schedule itself contains a full

description of the records at the file unit level as well as their disposition. If NARA staff has prepared an appraisal memorandum for the schedule, it too includes information about the records. Further information about the disposition process is available on request.

Schedules Pending

1. Department of the Army, Agency-wide (N1–AU–10–34, 1 item, 1 temporary item). Master files of an electronic information system used to identify and prioritize construction and repair projects for Installation Management Command.

2. Department of the Army, Agency-wide (N1–AU–10–58, 3 items, 3 temporary items). Master files of electronic information systems that contain maintenance and repair management information, including work plans, inventories, inspections, and budgeting information.

3. Department of the Army, Agency-wide (N1–AU–10–63, 1 item, 1 temporary item). Master files of an electronic information system that contains energy consumption data for active Army, Reserve, and National Guard installations.

4. Department of the Army, Agency-wide (N1–AU–11–24, 1 item, 1 temporary item). Master files of an electronic information system containing information on inventories of military equipment and ammunition.

5. Department of Commerce, Census Bureau (N1–29–10–5, 66 items, 45 temporary items). Records relating to the 2010 Census, covering such processes as address list development, testing of approaches and techniques for implementing the census, data collection, capture and processing, and resolution of challenges to counts. Proposed for permanent retention are scanned images of respondent census forms; the Individual Census Record File containing response data and linkage information to the scanned images; summary data files that provide population totals and counts of population characteristics sorted at a variety of geographic levels; a public use microdata sample file providing demographic, social, economic, and housing data for a sample of the population; record set of publications, studies, and reports; and geographic products and outputs, including maps showing boundaries and names of geographic areas covered by the census and thematic maps illustrating the distribution of population characteristics.

6. Department of Health and Human Services, Office of the Secretary (N1–468–10–2, 1 item, 1 temporary item). Master files of an electronic information system containing data about grants awarded by all operating divisions of the Department of Health and Human Services.

Department of Homeland Security, U.S. Citizenship and Immigration Services (N1–566–10–4, 1 item, 1 temporary item). Master files of an electronic information system containing information necessary to support monitoring and compliance activities for researching and managing misuse, abuse, discrimination, breach of privacy, and fraudulent use of immigration status verification information.

7. Department of Homeland Security, U.S. Coast Guard (N1–26–10–1, 3 items, 3 temporary items). Master files and outputs of an electronic information system used to provide Search and Rescue authorities with accurate information on the positions and characteristics of vessels near a reported distress.

8. Department of the Interior, National Business Center, (N1–48–09–4, 1 item, 1 temporary item). Master files of an electronic information system used to catalog materials housed in the agency's library system, including titles, authors, subject headings, call numbers, and bibliographic entries.

9. Department of the Interior, National Business Center, (N1–48–09–4, 1 item, 1 temporary item). Master files of an electronic information system used to catalog materials housed in the agency's museum system, including information used to identify and track museum objects.

10. Department of Justice, Tax Division (N1–60–09–57, 1 item, 1 temporary item). Master files of an electronic information system containing human resources tracking data.

11. Department of Justice, Justice Management Division (N1–60–10–22, 1 item, 1 temporary item). Files maintained by the Special Authorizations Unit approving the use of funds to cover expenses for witnesses appearing in Federal courts on behalf of the Department of Justice attorneys.

12. Department of Labor, Occupational Safety and Health Administration (N1–100–07–1, 20 items, 14 temporary items). Records pertaining to the Voluntary Protection Program and Strategic Partnership Program, including site approval files, administrative documents, outreach materials, and verification reports. Proposed for permanent retention are program policy files.

13. Department of State, Bureau of Administration (N1–059–10–16, 13 items, 13 temporary items). Master files and reports of an electronic information system that contains data on the agency's Freedom of Information Act requests and responses, including full and partial releases and denied requests. Also includes non-responsive documents, internal research requests, ethics in government and constituent congressional requests, special collections, pre-publication reviews of manuscripts, and other review requests. Statistical and case management reports are also covered on this schedule.

14. Department of State, Bureau of Administration (N1–59–10–17, 13 items, 13 temporary items). Records include department notices and announcements; post reports; records related to requesting, tracking, and billing for printing jobs; service reports for equipment; records related to ordering and maintaining photocopiers; master files of an electronic information system containing information on publication distribution; and an intranet site. The intranet site contains notices and announcements, post reports, post information, photos, forms, and other product and service information for the Office of Global Publishing Solutions.

15. Administrative Office of the United States Courts, Agency-wide (N1–116–10–1, 1 item, 1 temporary item). Working papers used in conducting voluntary management reviews.

16. Export-Import Bank of the United States, Agency-wide (N1–275–10–6, 1 item, 1 temporary item). Master files of an electronic information system used to validate data used for reporting requirements for medium-term loan guarantees, insurance policies, and working capital.

17. National Aeronautics and Space Administration, Agency-wide (N1–255–10–2, 3 items, 3 temporary items). Master files of electronic information systems containing information on quality and management, including audits, evaluations, quality reports, customer feedback surveys, survey responses, and corrective actions.

18. National Aeronautics and Space Administration, Agency-wide (N1–255–10–5, 24 items, 21 temporary items). Records relating to environmental management files, including routine correspondence, baseline documents, summaries, monitoring activities, waste manifests, permit applications, and functional review reports. Proposed for permanent retention are records and waste manifests of significant programs, projects, and incidents that have large impacts on the environment.

19. National Archives and Records Administration, Office of the General Counsel (DAA–64–2010–5, 1 item, 1 temporary item). Master files of an electronic information system used to track garnishment actions.

20. National Mediation Board, Agency-wide (N1–13–11–1, 4 items, 1 temporary item). Records of the Presidential Emergency Boards, including routine case notes. Proposed for permanent retention are official case files and reports.

Dated: November 24, 2010.

Michael J. Kurtz,

Assistant Archivist for Records Services—Washington, DC.

[FR Doc. 2010–30216 Filed 11–29–10; 8:45 am]

BILLING CODE 7515–01–P

NATIONAL ARCHIVES AND RECORDS ADMINISTRATION

Senior Executive Service (SES) Performance Review Board; Members

AGENCY: National Archives and Records Administration.

ACTION: Notice; SES Performance Review Board.

SUMMARY: Notice is hereby given of the appointment of members of the National Archives and Records Administration (NARA) Performance Review Board.

DATES: *Effective Date:* This appointment is effective on November 30, 2010.

FOR FURTHER INFORMATION CONTACT: Pamela S. Pope, Human Resources Services Division (NAH), National Archives and Records Administration, 9700 Page Avenue, St. Louis, MO 63132, (314) 801–0882.

SUPPLEMENTARY INFORMATION: Section 4314(c) of Title 5, U.S.C., requires each agency to establish, in accordance with regulations prescribed by the Office of Personnel Management, one or more SES Performance Review Boards. The Board shall review the initial appraisal of a senior executive's performance by the supervisor and recommend final action to the appointing authority regarding matters related to senior executive performance.

The members of the Performance Review Board for the National Archives and Records Administration are: Adrienne C. Thomas, Deputy Archivist of the United States, Michael J. Kurtz, Assistant Archivist for Records Services—Washington, DC, Thomas E. Mills, Assistant Archivist for Regional Records Services, and Miriam M. Nisbet, Director, Office of Government Information Services. These appointments supersede all previous appointments.

Dated: November 23, 2010.

David S. Ferriero,

Archivist of the United States.

[FR Doc. 2010–30064 Filed 11–29–10; 8:45 am]

BILLING CODE 7515–01–P

NUCLEAR REGULATORY COMMISSION

[NRC–2010–0367]

Biweekly Notice; Applications and Amendments to Facility Operating Licenses Involving No Significant Hazards Considerations

I. Background

Pursuant to section 189a.(2) of the Atomic Energy Act of 1954, as amended (the Act), the U.S. Nuclear Regulatory Commission (NRC or the Commission) is publishing this regular biweekly notice. The Act requires the Commission publish notice of any amendments issued, or proposed to be issued and grants the Commission the authority to issue and make immediately effective any amendment to an operating license upon a determination by the Commission that such amendment involves no significant hazards consideration, notwithstanding the pendency before the Commission of a request for a hearing from any person.

This biweekly notice includes all notices of amendments issued, or proposed to be issued from November 3, 2010, to November 17, 2010. The last biweekly notice was published on November 16, 2010 (75 FR 70032).

Notice of Consideration of Issuance of Amendments To Facility Operating Licenses, Proposed No Significant Hazards Consideration Determination, and Opportunity for a Hearing

The Commission has made a proposed determination that the following amendment requests involve no significant hazards consideration. Under the Commission's regulations in Title 10 of the *Code of Federal Regulations* (10 CFR), 50.92, this means that operation of the facility in accordance with the proposed amendment would not (1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety. The basis for this proposed determination for each amendment request is shown below.

The Commission is seeking public comments on this proposed determination. Any comments received within 30 days after the date of publication of this notice will be considered in making any final determination.

Normally, the Commission will not issue the amendment until the expiration of 60 days after the date of publication of this notice. The Commission may issue the license amendment before expiration of the 60-day period provided that its final determination is that the amendment involves no significant hazards consideration. In addition, the Commission may issue the amendment prior to the expiration of the 30-day comment period should circumstances change during the 30-day comment period such that failure to act in a timely way would result, for example in derating or shutdown of the facility. Should the Commission take action prior to the expiration of either the comment period or the notice period, it will publish in the **Federal Register** a notice of issuance. Should the Commission make a final No Significant Hazards Consideration Determination, any hearing will take place after issuance. The Commission expects that the need to take this action will occur very infrequently.

Written comments may be submitted by mail to the Chief, Rules, Announcements and Directives Branch (RADB), TWB–05–B01M, Division of Administrative Services, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001, and should cite the publication date and page number of this **Federal Register** notice. Written comments may also be faxed to the RADB at 301–492–3446. Documents may be examined, and/or copied for a fee, at the NRC's Public Document Room (PDR), located at One White Flint North, Room O1–F21, 11555 Rockville Pike (first floor), Rockville, Maryland 20852.

Within 60 days after the date of publication of this notice, any person(s) whose interest may be affected by this action may file a request for a hearing and a petition to intervene with respect to issuance of the amendment to the subject facility operating license. Requests for a hearing and a petition for leave to intervene shall be filed in accordance with the Commission's "Rules of Practice for Domestic Licensing Proceedings" in 10 CFR Part 2. Interested person(s) should consult a current copy of 10 CFR 2.309, which is available at the Commission's PDR, located at One White Flint North, Room O1–F21, 11555 Rockville Pike (first floor), Rockville, Maryland 20854. Publicly available records will be accessible from the Agencywide

Documents Access and Management System's (ADAMS) Public Electronic Reading Room on the Internet at the NRC Web site, *http://www.nrc.gov/reading-rm/doc-collections/cfr/.* If a request for a hearing or petition for leave to intervene is filed by the above date, the Commission or a presiding officer designated by the Commission or by the Chief Administrative Judge of the Atomic Safety and Licensing Board Panel, will rule on the request and/or petition; and the Secretary or the Chief Administrative Judge of the Atomic Safety and Licensing Board will issue a notice of a hearing or an appropriate order.

As required by 10 CFR 2.309, a petition for leave to intervene shall set forth with particularity the interest of the petitioner in the proceeding, and how that interest may be affected by the results of the proceeding. The petition should specifically explain the reasons why intervention should be permitted with particular reference to the following general requirements: (1) The name, address, and telephone number of the requestor or petitioner; (2) the nature of the requestor's/petitioner's right under the Act to be made a party to the proceeding; (3) the nature and extent of the requestor's/petitioner's property, financial, or other interest in the proceeding; and (4) the possible effect of any decision or order which may be entered in the proceeding on the requestor's/petitioner's interest. The petition must also identify the specific contentions which the requestor/petitioner seeks to have litigated at the proceeding.

Each contention must consist of a specific statement of the issue of law or fact to be raised or controverted. In addition, the requestor/petitioner shall provide a brief explanation of the bases for the contention and a concise statement of the alleged facts or expert opinion which support the contention and on which the requestor/petitioner intends to rely in proving the contention at the hearing. The requestor/petitioner must also provide references to those specific sources and documents of which the petitioner is aware and on which the requestor/petitioner intends to rely to establish those facts or expert opinion. The petition must include sufficient information to show that a genuine dispute exists with the applicant on a material issue of law or fact. Contentions shall be limited to matters within the scope of the amendment under consideration. The contention must be one which, if proven, would entitle the requestor/petitioner to relief. A requestor/petitioner who fails to satisfy these requirements with respect to at least one contention will not be permitted to participate as a party.

Those permitted to intervene become parties to the proceeding, subject to any limitations in the order granting leave to intervene, and have the opportunity to participate fully in the conduct of the hearing.

If a hearing is requested, the Commission will make a final determination on the issue of no significant hazards consideration. The final determination will serve to decide when the hearing is held. If the final determination is that the amendment request involves no significant hazards consideration, the Commission may issue the amendment and make it immediately effective, notwithstanding the request for a hearing. Any hearing held would take place after issuance of the amendment. If the final determination is that the amendment request involves a significant hazards consideration, any hearing held would take place before the issuance of any amendment.

All documents filed in NRC adjudicatory proceedings, including a request for hearing, a petition for leave to intervene, any motion or other document filed in the proceeding prior to the submission of a request for hearing or petition to intervene, and documents filed by interested governmental entities participating under 10 CFR 2.315(c), must be filed in accordance with the NRC E-Filing rule (72 FR 49139, August 28, 2007). The E-Filing process requires participants to submit and serve all adjudicatory documents over the internet, or in some cases to mail copies on electronic storage media. Participants may not submit paper copies of their filings unless they seek an exemption in accordance with the procedures described below.

To comply with the procedural requirements of E-Filing, at least ten (10) days prior to the filing deadline, the participant should contact the Office of the Secretary by e-mail at *hearing.docket@nrc.gov,* or by telephone at 301–415–1677, to request (1) a digital ID certificate, which allows the participant (or its counsel or representative) to digitally sign documents and access the E-Submittal server for any proceeding in which it is participating; and (2) advise the Secretary that the participant will be submitting a request or petition for hearing (even in instances in which the participant, or its counsel or representative, already holds an NRC-issued digital ID certificate). Based upon this information, the Secretary will establish an electronic docket for the hearing in this proceeding if the Secretary has not already established an electronic docket.

Information about applying for a digital ID certificate is available on NRC's public Web site at *http://www.nrc.gov/site-help/e-submittals/apply-certificates.html.* System requirements for accessing the E-Submittal server are detailed in NRC's "Guidance for Electronic Submission," which is available on the agency's public Web site at *http://www.nrc.gov/site-help/e-submittals.html.* Participants may attempt to use other software not listed on the Web site, but should note that the NRC's E-Filing system does not support unlisted software, and the NRC Meta System Help Desk will not be able to offer assistance in using unlisted software.

If a participant is electronically submitting a document to the NRC in accordance with the E-Filing rule, the participant must file the document using the NRC's online, Web-based submission form. In order to serve documents through the Electronic Information Exchange System, users will be required to install a Web browser plug-in from the NRC Web site. Further information on the Web-based submission form, including the installation of the Web browser plug-in, is available on the NRC's public Web site at *http://www.nrc.gov/site-help/e-submittals.html.*

Once a participant has obtained a digital ID certificate and a docket has been created, the participant can then submit a request for hearing or petition for leave to intervene. Submissions should be in Portable Document Format (PDF) in accordance with NRC guidance available on the NRC public Web site at *http://www.nrc.gov/site-help/e-submittals.html.* A filing is considered complete at the time the documents are submitted through the NRC's E-Filing system. To be timely, an electronic filing must be submitted to the E-Filing system no later than 11:59 p.m. Eastern Time on the due date. Upon receipt of a transmission, the E-Filing system time-stamps the document and sends the submitter an e-mail notice confirming receipt of the document. The E-Filing system also distributes an e-mail notice that provides access to the document to the NRC Office of the General Counsel and any others who have advised the Office of the Secretary that they wish to participate in the proceeding, so that the filer need not serve the documents on those participants separately. Therefore, applicants and other participants (or their counsel or representative) must

apply for and receive a digital ID certificate before a hearing request/petition to intervene is filed so that they can obtain access to the document via the E-Filing system.

A person filing electronically using the agency's adjudicatory E-Filing system may seek assistance by contacting the NRC Meta System Help Desk through the "Contact Us" link located on the NRC Web site at *http://www.nrc.gov/site-help/e-submittals.html,* by e-mail at MSHD.Resource@nrc.gov, or by a toll-free call at 1–866–672–7640. The NRC Meta System Help Desk is available between 8 a.m. and 8 p.m., Eastern Time, Monday through Friday, excluding government holidays.

Participants who believe that they have a good cause for not submitting documents electronically must file an exemption request, in accordance with 10 CFR 2.302(g), with their initial paper filing requesting authorization to continue to submit documents in paper format. Such filings must be submitted by: (1) First class mail addressed to the Office of the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001, Attention: Rulemaking and Adjudications Staff; or (2) courier, express mail, or expedited delivery service to the Office of the Secretary, Sixteenth Floor, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852, Attention: Rulemaking and Adjudications Staff. Participants filing a document in this manner are responsible for serving the document on all other participants. Filing is considered complete by first-class mail as of the time of deposit in the mail, or by courier, express mail, or expedited delivery service upon depositing the document with the provider of the service. A presiding officer, having granted an exemption request from using E-Filing, may require a participant or party to use E-Filing if the presiding officer subsequently determines that the reason for granting the exemption from use of E-Filing no longer exists.

Documents submitted in adjudicatory proceedings will appear in NRC's electronic hearing docket which is available to the public at *http://ehd.nrc.gov/EHD_Proceeding/home.asp,* unless excluded pursuant to an order of the Commission, or the presiding officer. Participants are requested not to include personal privacy information, such as social security numbers, home addresses, or home phone numbers in their filings, unless an NRC regulation or other law requires submission of such information. With respect to copyrighted works, except for limited excerpts that serve the purpose of the adjudicatory filings and would constitute a Fair Use application, participants are requested not to include copyrighted materials in their submission.

Petitions for leave to intervene must be filed no later than 60 days from the date of publication of this notice. Non-timely filings will not be entertained absent a determination by the presiding officer that the petition or request should be granted or the contentions should be admitted, based on a balancing of the factors specified in 10 CFR 2.309(c)(1)(i)–(viii).

For further details with respect to this license amendment application, *see* the application for amendment which is available for public inspection at the Commission's PDR, located at One White Flint North, Public File Area O1F21, 11555 Rockville Pike (first floor), Rockville, Maryland. Publicly available records will be accessible from the ADAMS Public Electronic Reading Room on the Internet at the NRC Web site, *http://www.nrc.gov/reading-rm/adams.html.* Persons who do not have access to ADAMS or who encounter problems in accessing the documents located in ADAMS, should contact the NRC PDR Reference staff at 1–800–397–4209, 301–415–4737, or by e-mail to *pdr.resource@nrc.gov.*

Detroit Edison Company, Docket No. 50–341, Fermi 2, Monroe County, Michigan

Date of amendment request: September 24, 2010.

Description of amendment request: The proposed amendment would revise the Fermi 2 Radiological Emergency Response Preparedness (RERP) Plan to increase the staff augmentation times for Technical Support Center-related functions from 30 to 60 minutes and for Emergency Operations Facility-related functions from 60 to 90 minutes.

Basis for proposed no significant hazards consideration determination: As required by 10 CFR 50.91(a), the licensee has provided its analysis of the issue of no significant hazards consideration, which is presented below:

1. The proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed extension of staff augmentation times has no effect on normal plant operation or on any accident initiator. The change affects the response to radiological emergencies under the Fermi 2 Radiological Emergency Response Preparedness (RERP) Plan. The ability of the emergency response organization to respond adequately to radiological emergencies has been evaluated. Improvements have been made to equipment, procedures, and training since initial approval of the Fermi 2 Emergency Plan that have resulted in a significant increase in the on-shift capabilities and knowledge such that there would be no degradation or loss of Emergency Plan function as a result of the proposed change. A functional analysis was also performed on the effect of the proposed change on the timeliness of performing major tasks for the major functional areas of the RERP Plan. The analysis concluded that extension of staff augmentation times would not significantly affect the ability to perform the required tasks.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. The proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed change affects the required response times for supplementing onsite personnel in response to a Radiological emergency. It has been evaluated and determined not to significantly affect the ability to perform that function. It has no effect on the plant design or on the normal operation of the plant and does not affect how the plant is physically operated under emergency conditions. The extension of staff augmentation times in the RERP Plan does not affect the plant Operating, Abnormal Operating, or Emergency Operating procedures which are performed by plant staff during all plant conditions.

Therefore, since the proposed change does not affect the design or method of operation of the plant, it does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. The proposed change does not involve a significant reduction in the margin of safety.

The proposed change does not affect plant design or method of operation. 10 CFR 50.47(b) and 10 CFR Part 50, Appendix E establish emergency planning standards that require adequate staffing, satisfactory performance of key functional areas and critical tasks; and timely augmentation of the response capability. Since the initial NRC approval of the Emergency Plan, there have been improvements in the technology used to support the RERP functions and in the capabilities of onsite personnel. A functional analysis was performed on the effect of the proposed change on the timeliness of performing major tasks for the functional areas of the RERP Plan. The analysis concluded that an increase in staff augmentation times would not significantly affect the ability to perform the required RERP tasks. Thus, the proposed change has been determined not to adversely affect the ability to meet the emergency planning standards as described in 10 CFR 50.47(b) and 10 CFR Part 50, Appendix E.

Therefore, the proposed change will not involve a significant reduction in a margin of safety.

The NRC staff has reviewed the licensee's analysis and, based on this

review, it appears that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff proposes to determine that the amendment request involves no significant hazards consideration.

Attorney for licensee: David G. Pettinari, Attorney—Corporate Matters, 688 WCB, Detroit Edison Company, One Energy Plaza, Detroit, Michigan 48226–1279.

NRC Branch Chief: Robert J. Pascarelli.

Exelon Generation Company, LLC, and PSEG Nuclear, LLC, Docket Nos. 50–277 and 50–278, Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3, York and Lancaster Counties, Pennsylvania

Date of amendment request: January 6, 2010, as supplemented by letters dated August 20, 2010, and October 14, 2010.

Description of amendment request: The proposed amendment would enable PBAPS, Units 2 and 3, to possess byproduct and special nuclear material from Limerick Generating Station (LGS), Units 1 and 2. Specifically, the revised license paragraph would permit storage of low-level radioactive waste (LLRW) from LGS in the PBAPS LLRW Storage Facility. The PBAPS LLRW Storage Facility currently provides storage for LLRW generated at PBAPS.

Basis for proposed no significant hazards consideration determination: As required by 10 CFR 50.91(a), the licensee has provided its analysis of the issue of no significant hazards consideration (NSHC), which is presented below:

1. Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

The proposed change is an amendment to the PBAPS FOLs [Facility Operating Licenses] that will enable PBAPS to receive and store Class B/C LLRW from LGS in the PBAPS LLRWSF [Low Level Radioactive Waste Storage Facility]. This proposed change does not impact any initiators or precursors of previously analyzed accidents. The storage of Class B/C LLRW from LGS does not impact the failure of any plant structures, systems, or components. The proposed change does not have a detrimental impact on the integrity of any plant structure, system, or component that initiates an analyzed event. The proposed change does not affect any active or passive failure mechanisms that could lead to an accident. The PBAPS LLRWSF is not safety related, and is not used for plant shutdown resulting from accident or nonstandard operational conditions.

The proposed change does not significantly increase the consequences of postulated design basis events (i.e., seismic, flood, tornado, fire, and container drop events), in that the postulated impact of these events remains well below regulatory requirements (i.e., less than 10 percent of 10 CFR Part 100, "Reactor Site Criteria" acceptance criteria).

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed change create the possibility of a new or different kind of accident from any previously evaluated?

Response: No.

The proposed change is an amendment to the PBAPS FOLs that will enable PBAPS to receive and store Class B/C LLRW from LGS in the PBAPS LLRWSF. The proposed amendment does not involve any change to the plant equipment or system design functions. EGC has verified that the storage of Class B/C LLRW from LGS in the PBAPS LLRWSF does not affect the ability of the PBAPS LLRWSF to perform its design function, including compliance with NRC regulatory requirements and guidance. No new accident initiators are introduced by this amendment.

Therefore, the proposed amendment does not create the possibility of a new or different kind of accident from any previously evaluated.

3. Does the proposed change involve a significant reduction in the margin of safety?

Response: No.

The proposed change is an amendment to the PBAPS FOLs that will enable PBAPS to receive and store Class B/C LLRW from LGS in the PBAPS LLRWSF. The proposed amendment does not involve any change to plant equipment or system design functions. The margin of safety is established through the design of the plant structures, systems, and components, the parameters within which the plant is operated, and the setpoints for the actuation of equipment relied upon to respond to an event. The proposed amendment does not affect the PBAPS safety limits or setpoints at which protective actions are initiated.

The proposed amendment does not significantly increase the dose rate at the exterior wall of the LLRWSF, the nearest restricted area boundary, and the nearest residence when the LLRWSF is filled to capacity with Class B/C LLRW. Therefore, these dose rates will remain within limits specified in 10 CFR Part 20 and 40 CFR Part 190.

Additionally, the potential radiological impact of a postulated design basis container drop accident is less than 10 percent of the 10 CFR Part 100 acceptance criteria.

Therefore the margin of safety is not reduced by the proposed change.

The NRC staff has reviewed the licensee's analysis and, based on this review, it appears that the three standards of 50.92(c) are satisfied. Therefore, the NRC staff proposes to determine that the amendment request involves NSHC.

Attorney for licensee: Mr. J. Bradley Fewell, Associate General Counsel, Exelon Generation Company LLC, 4300 Winfield Road, Warrenville, IL 60555.

NRC Branch Chief: Harold K. Chernoff.

Exelon Generation Company, LLC, and PSEG Nuclear, LLC, Docket Nos. 50–277 and 50–278, Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3, York and Lancaster Counties, Pennsylvania.

Date of amendment request: June 25, 2010, as supplemented by letter dated August 16, 2010.

Description of amendment request: The proposed amendment would revise Technical Specification (TS) Surveillance Requirement (SR) 3.6.1.3, "Primary Containment Isolation Valves (PCIVs)," and SR 3.6.1.5, "Reactor Building-to-Suppression Chamber Vacuum Breakers," to modify the required level for the liquid nitrogen storage tank.

Basis for proposed no significant hazards consideration determination: As required by 10 CFR 50.91(a), the licensee has provided its analysis of the issue of no significant hazards consideration (NSHC), which is presented below:

1. Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

The proposed TS changes to increase the level in the liquid nitrogen storage tank from ≥ 16 inches water column to a level of ≥ 22 inches water column, or equivalent volume of ≥ 124,000 scf [standard cubic feet] at 250 psig, is necessary in order to correct a non-conservative TS value. Increasing the level is intended to ensure continued operability of the PCIVs (SR 3.6.1.3.1) and Reactor Building-to-Suppression Chamber Vacuum Breakers (SR 3.6.1.5.1) via the SGIG [safety grade instrument gas] system. The non-conservative TS condition was identified based on a re-analysis of the liquid nitrogen storage tank operation. The leakage allowance that was previously assumed was not based on a rigorous empirical value. The re-analysis of the leakage allowance assumes more reasonable system leakage based on operational data. Exelon determined that the current PBAPS, Units 2 and 3, TS SR value for the minimum level in the liquid nitrogen storage tank of ≥ 16 inches water column is non-conservative and that the guidance of Nuclear Regulatory Commission (NRC) Administrative Letter 98–10, "*Dispositioning of Technical Specifications that are Insufficient to Assure Plant Safety,*" applies. Exelon has implemented administrative controls to maintain the amount of nitrogen in the liquid nitrogen storage tank at a level of > 22 inches water column in support of SGIG system operation.

Exelon is submitting this License Amendment Request to address this non-conservative condition. The proposed TS

changes do not introduce new equipment or new equipment operating modes, nor do the proposed changes alter existing system relationships. The proposed changes do not affect plant operation, design function or any analysis that verifies the capability of a system, structure or component (SSC) to perform a design function. Further, the proposed changes do not increase the likelihood of the malfunction of any SSC or impact any analyzed accident. Consequently, the probability or consequences of an accident previously evaluated are not affected.

Therefore, the proposed amendments do not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The proposed TS change to increase the level in the liquid nitrogen storage tank from ≥16 inches water column to a level of ≥22 inches water column, or equivalent volume of ≥124,000 scf at 250 psig, for the PCIVs (SR 3.6.1.3.1) and Reactor Building-to-Suppression Chamber Vacuum Breakers (SR 3.6.1.5.1) is needed to correct a non-conservative value based on a revised analysis. The proposed TS changes do not alter the design function or operation of any SSC. There is no new system component being installed, no construction of a new facility, and no performance of a new test or maintenance function. The proposed TS changes do not create the possibility of a new credible failure mechanism or malfunction. The proposed changes do not modify the design function or operation of any SSC. Further, the proposed changes do not introduce new accident initiators. Consequently, the proposed changes cannot create the possibility of a new or different kind of accident from any accident previously evaluated.

Therefore, the proposed amendments do not create the possibility of a new or different kind of accident from any accident previously analyzed.

3. Does the proposed amendment involve a significant reduction in a margin of safety?

Response: No.

The proposed TS changes to increase the level in the liquid nitrogen storage tank from ≥16 inches water column to a level of ≥22 inches water column, or equivalent volume of ≥124,000 scf at 250 psig, for the PCIVs (SR 3.6.1.3.1) and Reactor Building-to-Suppression Chamber Vacuum Breakers (SR 3.6.1.5.1) are necessary to correct an existing non-conservative TS value. The proposed TS changes are needed based on a revised analysis that utilizes empirical data for nitrogen system uses and losses. The proposed changes do not exceed or alter a design basis or a safety limit for a parameter established in the PBAPS, Units 2 and 3, Updated Final Safety Analysis Report (UFSAR) or the PBAPS, Units 2 and 3, Renewed Facility Operating License (FOL). Consequently, the proposed changes do not result in a reduction in the margin of safety.

Therefore, the proposed amendments do not involve a significant reduction in a margin of safety.

The NRC staff has reviewed the licensee's analysis and, based on this review, it appears that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff proposes to determine that the amendment request involves NSHC.

Attorney for licensee: Mr. J. Bradley Fewell, Associate General Counsel, Exelon Generation Company LLC, 4300 Winfield Road, Warrenville, IL 60555.

NRC Branch Chief: Harold K. Chernoff.

Exelon Generation Company, LLC, Docket No. 50–289, Three Mile Island Nuclear Station, Unit 1, Dauphin County, Pennsylvania

Date of amendment request: September 22, 2010.

Description of amendment request: The proposed amendment would relocate the list of pumps, fans, and valves in Technical Specification (TS) 4.5.1.1b, Sequence and Power Transfer Test, to the Three Mile Island, Unit 1 (TMI–1) Updated Final Safety Analysis Report. In addition, TS 4.5.1.2b, TS 4.5.2.2a, and TS 4.5.2.2b refer to this test and are proposed for revision to reflect the proposed change to TS 4.5.1.1b.

Basis for proposed no significant hazards consideration determination: As required by 10 CFR 50.91(a), the licensee has provided its analysis of the issue of no significant hazards consideration, which is presented below with an NRC edit in brackets:

1. Does the proposed amendment involve a significant increase in the probability or consequences of any accident previously evaluated?

Response: No.

The proposed license amendment does not add, delete or modify plant equipment. The proposed changes are administrative in nature. The proposed amendment would relocate the list of pumps, fans and valves in Technical Specification (TS) 4.5.1.1b, Sequence and Power Transfer Test, to the TMI–1 Updated Final Safety Analysis Report (UFSAR) Section 8.3, Tests and Inspections.

The proposed changes relocate surveillance requirement details that are not required by 10 CFR 50.36, and are [partially] consistent with standard technical specifications, NUREG–1430, "Standard Technical Specifications Babcock and Wilcox Plants." The proposed changes do not change current surveillance requirements. The subject list of pumps, fans and valves that will be relocated to the UFSAR Section 8.3 will continue to be administratively controlled and future changes will be controlled under 10 CFR 50.59.

The probability of an accident is not increased by these proposed changes because the Sequence and Power Transfer Test is not an initiator of any design basis event. Additionally, the proposed changes do not involve any physical changes to plant structures, systems, or components (SSCs), or the manner in which these SSCs are operated, maintained, or controlled. The consequences of an accident will not be increased because the proposed administrative changes to the Sequence and Power Transfer Test and Sequence Test will continue to provide a high degree of assurance that the Electric Power System will meet its safety related function.

Therefore, the proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed amendment create the possibility of a new or different kind of accident from any previously evaluated?

Response: No.

The proposed changes do not alter the physical design, safety limits, safety analyses assumptions, or the manner in which the plant is operated or tested. The proposed changes are administrative in nature and the surveillance requirements remain the same. Accordingly, the proposed changes do not introduce any new accident initiators, nor do they reduce or adversely affect the capabilities of any plant SSC in the performance of their safety function.

Therefore, the proposed changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the proposed amendment involve a significant reduction in the margin of safety?

Response: No.

The margin of safety is associated with the confidence in the ability of the fission product barriers (*i.e.,* fuel cladding, reactor coolant pressure boundary, and containment structure) to limit the level of radiation to the public. There are no physical changes to SSCs or operating and testing procedures associated with the proposed amendment.

The proposed changes do not impact the assumptions of any design basis accident, and do not alter assumptions relative to the mitigation of an accident or transient event. The proposed changes are administrative in nature and the surveillance requirements remain the same.

Therefore, the proposed changes do not involve a significant reduction in a margin of safety.

The NRC staff has reviewed the licensee's analysis and, based on this review, with the NRC edit noted above incorporated, it appears that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff proposes to determine that the amendment request involves no significant hazards consideration.

Attorney for licensee: J. Bradley Fewell, Esquire, Associate General Counsel, Exelon Generation Company, LLC, 4300 Winfield Road, Warrenville, IL 60555.

NRC Branch Chief: Harold K. Chernoff.

Exelon Generation Company, LLC, Docket No. 50–289, Three Mile Island Nuclear Station, Unit 1, Dauphin County, Pennsylvania

Date of amendment request: September 24, 2010.

Description of amendment request: The proposed amendment would revise Technical Specification (TS) 3.4.1.2.3, to allow up to two Main Steam Safety Valves (MSSVs) per steam generator to be inoperable with no required reduction in power level. It would also revise the required maximum overpower trip setpoints for any additional inoperable MSSVs consistent with the plant transient analysis. The proposed change requires that with less than four MSSVs associated with either steam generator operable, the plant would be required to be brought to the hot shutdown condition.

Basis for proposed no significant hazards consideration determination: As required by 10 CFR 50.91(a), the licensee has provided its analysis of the issue of no significant hazards consideration, which is presented below, with NRC edits in brackets:

1. Does the proposed amendment involve a significant increase in the probability or consequences of any accident previously evaluated?

Response: No.

The proposed amendment is not a change to the plant structures, systems, or components. There is no increase to the likelihood of Main Steam Safety Valve (MSSV) related failures. The MSSVs are relied upon to mitigate the effects of Updated Final Safety Analysis Report (UFSAR) Chapter 14 design basis events including the loss of load (turbine trip), which is the limiting event for secondary system overpressure. Analyses, performed in accordance with NRC approved methods, have demonstrated that with reduced MSSV availability and following the specified power level restrictions, the MSSVs will continue to limit the secondary system pressure to less than 110 percent of the design pressure of the Once Through Steam Generators (OTSGs) and the Main Steam (MS) System as required by [the American Society of Mechanical Engineers] ASME code. Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed amendment create the possibility of a new or different kind of accident from any previously evaluated?

Response: No.

The proposed amendment is not a change to the plant structures, systems, or components (SSCs). Furthermore, within the current licensing basis, the MSSVs are accident mitigation SSCs. The current licensing basis does not [explicitly] include consideration of a MSSV failure as an event initiator [and a failed open MSSV has been shown to be bounded by the larger maximum break size analysis presented in the TMI–1 UFSAR]. The proposed amendment will not fundamentally alter or create any new operator actions. Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the proposed amendment involve a significant reduction in the margin of safety?

Response: No.

The limiting event for secondary system overpressure is a loss of load event (turbine trip). The event has been analyzed for varying MSSVs out of service, using NRC approved methods. The results of the analysis demonstrate that the existing design acceptance criteria (i.e., MS and OTSG pressure remain less than 110 percent of the design pressure) are met for all combinations of inoperable MSSVs and initial power levels described in the proposed change. Therefore, the proposed change does not involve a significant reduction in a margin of safety.

The NRC staff has reviewed the licensee's analysis, and based on this review, including the edits listed above, it appears that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff proposes to determine that the amendment request involves no significant hazards consideration.

Attorney for licensee: J. Bradley Fewell, Esquire, Associate General Counsel, Exelon Generation Company, LLC, 4300 Winfield Road, Warrenville, IL 60555.

NRC Branch Chief: Harold K. Chernoff.

FPL Energy, Point Beach, LLC, Docket Nos. 50–266 and 50–301, Point Beach Nuclear Plant, Units 1 and 2, Town of Two Creeks, Manitowoc County, Wisconsin

Date of amendment request: January 27, 2010.

Description of amendment request: The proposed changes would amend Renewed Facility Operating Licenses DPR–24 and DPR–27 for the Point Beach Nuclear Plant, Units 1 and 2, respectively. The proposed amendment consists of changes to Technical Specification 3.8.3, "Diesel Fuel Oil and Starting Air."

Basis for proposed no significant hazards consideration determination: As required by 10 CFR 50.91(a), the licensee has provided its analysis of the issue of no significant hazards consideration which is presented below:

1. Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

This proposed change increases the minimum required amount of stored diesel fuel in the associated common fuel oil storage tank [FOST] for two standby emergency power sources to start, load to their respective loading limits and to operate continuously up to a maximum of 48 hours. An increase in the minimum required fuel oil volume required in the fuel oil storage tanks does not increase the probability or consequences of an accident previously evaluated.

[Limiting Condition for Operation] LCO 3.8.3 Condition A, currently requires that one or more standby emergency power sources have ≥ 11,000 gallons of fuel when the associated [emergency diesel generator] EDG is declared operable. The proposed change increases the amount of stored fuel to ≥ 24,000 gallons for two standby EDGs. It further adds new Required Action A.2 if the FOST stored capacity falls below the minimum required values. The proposed change also accounts for instrument indicator loop uncertainty values for unusable volume.

New LCO [3.8.3] Condition B, addresses the case of one EDG operating in either Train "A" or Train "B." The new condition specifies that the minimum volume of diesel fuel required to support continued operation of a single EDG for 48 hours at rated load is ≥ 13,000 gallons. This proposed change also accounts for instrument indicator loop uncertainty values for unusable volume.

[Surveillance Requirement] SR 3.8.3.1 is revised to reflect the increased amount of diesel fuel required to be maintained to support operation of the EDGs following recalculation of required values.

Following implementation of this proposed change, there will be no change in the ability of the EDGs to supply maximum post-accident load demands for 48 hours. The proposed minimum volume of fuel, ≥ 24,000 gallons for two EDGs and ≥ 13,000 gallons for one EDG per train, ensures that a 48-hour supply of fuel is available when the associated standby emergency power source is required to be operable.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The EDGs and the associated support systems, such as the fuel oil storage and transfer systems, are designed to mitigate accidents and are not accident initiators. Following this change, the EDGs will continue to supply the required maximum post-accident load demand. The current 48-hour fuel supply requirements will be maintained following this change. The new required fuel oil volumes are within the capacities of the fuel oil storage tanks.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the proposed amendment involve a significant reduction in a margin of safety?

Response: No.

There are two underground fuel oil storage tanks on site. Each tank has a capacity of approximately 35,000 gallons and each common fuel tank supports one EDG train.

Fuel can be manually transferred from one tank to another via a cross-connect valve. Sufficient fuel is maintained between the two tanks to allow one EDG to operate continuously at the required load for seven (7) days. At the proposed minimum required level, which is ≥ 24,000 gallons in the common fuel oil storage tanks for two standby emergency power sources, one tank could provide enough fuel for two EDGs in either Train A or Train B to continue operation for great than 48 hours. At the proposed minimum required level, which is ≥ 13,000 gallons in each fuel oil storage tanks, one tank could provide enough fuel for one EDG in Train A and Train B to continue operation for greater than 48 hours.

Therefore, the proposed change does not involve a significant reduction in a margin of safety.

The NRC staff has reviewed the licensee's analysis and, based on this review, it appears that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff proposes to determine that the amendment request involves no significant hazards consideration.

Attorney for licensee: William Blair, Senior Attorney, NextEra Energy Point Beach, LLC, P.O. Box 14000, Juno Beach, FL 33408–0420.

NRC Branch Chief: Robert J. Pascarelli.

Tennessee Valley Authority, Docket Nos. 50–259, 50–260 and 50–296, Browns Ferry Nuclear Plant, Units 1, 2 and 3, Limestone County, Alabama

Date of amendment request: August 27, 2010.

Description of amendment request: The proposed amendment would add a new Action to Technical Specification (TS) 3.7.3, "Control Room Emergency Ventilation (CREV) System," to permit one or more CREV subsystems to be inoperable for up to 90 days when the inoperability is due to inoperable CREV System High Efficiency Particulate Air (HEPA) filter and/or charcoal absorbers. The proposed TS changes also include an administrative change to correct errors in Unit 2 TS page header information that occurred during issuance of TS pages for a previous amendment.

Basis for proposed no significant hazards consideration determination: As required by 10 CFR 50.91(a), the licensee has provided its analysis of the issue of no significant hazards consideration, which is presented below:

1. Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

UFSAR [Updated Finale Safety Analysis Report] Chapter 14, "Plant Safety Analysis," evaluates operational transients and accidents that result in radiological releases that affect control room occupants. UFSAR section 14.6, "Analysis of Design Basis Accidents—Uprated," evaluates accidents that release fission products to the environment. The CREV System is not an accident initiator for any of the accidents described. The CREV System processes outside air needed to provide ventilation and pressurization for control room habitability to limit the control room dose during accidents evaluated in the UFSAR. Without crediting the performance of the HEPA filter or charcoal adsorbers, the analyses results concludes that the 30[-]day integrated post-accident doses in the control room are within the limits of 5 rem TEDE [total effective dose equivalent], as specified in 10 CFR 50.67 and GDC [General Design Criterion]-19. The control room dose increase is less than 10 percent; leaving more than 60 percent remaining margin to the regulatory limit.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The CREV System is a ventilation system that filters outside air used to pressurize the control rooms to provide a protected environment from which operators can control the unit during airborne challenges from radioactivity during accident conditions. The CREV System does not initiate accidents. The proposed amendment allows the CREV HEPA filters and charcoal adsorbers to be repaired or replaced without shutting down the operating unit(s). No new modes of operation are introduced.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the proposed amendment involve a significant reduction in a margin of safety?

Response: No.

Analyses associated with the prior approval of Alternate Source Term methodology for design basis accident dose consequences previously did not credit the CREV System charcoal adsorbers. Recent analyses have been performed to assess the post-accident 30-day control room dose removing credit for the CREV System HEPA filter. The results indicate a minimal increase in dose consequences (9.5 percent increase) due to removing credit for the CREV System HEPA filter. Even with no credit for either the CREV System HEPA filter or CREV System charcoal filter, the resultant control room dose maintains more than 60 percent margin to the regulatory limit of 5 rem TEDE. As such there is no reduction in a margin of safety for any duration of inoperability of the CREV System HEPA filter or charcoal adsorbers. While the HEPA filter and charcoal adsorbers are not credited for accident mitigation, they remain required by the BFN TS for compliance with the LCO 3.7.3, "Control Room Emergency Ventilation (CREV) System," further minimizing any potential reduction in a margin of safety.

Therefore, the proposed change does not involve a significant reduction in a margin of safety.

The NRC staff has reviewed the licensee's analysis and, based on this review, it appears that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff proposes to determine that the amendment request involves no significant hazards consideration.

Attorney for licensee: General Counsel, Tennessee Valley Authority, 400 West Summit Hill Drive, 6A West Tower, Knoxville, Tennessee 37902.

NRC Branch Chief: Douglas A. Broaddus.

Virginia Electric and Power Company, Docket Nos. 50–338 and 50–339, North Anna Power Station, Units No. 1 and No. 2, Louisa County, Virginia

Date of amendment request: October 21, 2010.

Description of amendment request: The proposed action involves the inclusion of the Westinghouse Best-Estimate (BE) Large Break Loss-of-Coolant Accident (LBLOCA) analysis methodology using the Automated Statistical Treatment of Uncertainty Method (ASTRUM) for the analysis of LBLOCA to the list of methodologies approved for reference in the Core Operating Limits Report (COLR) in Technical Specification (TS) 5.6.5.b. This action also removes four obsolete COLR references that supported North Anna Improved Fuel (NAIF) product, Westinghouse Vantage 5, since this product is not planned to be used in future North Anna cores.

Basis for proposed no significant hazards consideration determination: As required by 10 CFR 50.91(a), the licensee has provided its analysis of the issue of no significant hazards consideration, which is presented below:

[Criterion 1]

Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

No physical plant changes are being made as a result of using the Westinghouse Best Estimate Large Break LOCA (BE–LBLOCA) analysis methodology. The proposed TS change simply involves updating the references in TS 5.6.5.b, Core Operating Limits Report (COLR), to reference the Westinghouse BE–LBLOCA analysis methodology, which is an NRC approved methodology, and to delete unnecessary references. Therefore, the probability of LOCA occurrence is not affected by the change. Further, the consequences of a LOCA are not increased, since the BE–LBLOCA analysis has demonstrated that the performance of the Emergency Core Cooling

System (ECCS) continues to conform to the criteria contained in 10 CFR 50.46, "Acceptance Criteria for Emergency Core Cooling Systems for Light-Water Nuclear Power Reactors." No other accident consequence is potentially affected by this change.

Systems will continue to be operated in accordance with current design requirements under the new analysis, therefore no new components or system interactions have been identified that could lead to an increase in the probability of any accident previously evaluated in the Updated Final Safety Analysis Report (UFSAR). No changes were required to the Reactor Protection System (RPS) or Engineering Safety Features (ESF) setpoints because of the new analysis methodology.

An analysis of the LBLOCA accident for North Anna Units 1 and 2 has been performed with the Westinghouse BE–LBLOCA analysis methodology using ASTRUM. The analysis was performed in compliance with the NRC conditions and limitations as identified in WCAP–1 6009–P–A. Based on the analysis results, it is concluded that the North Anna Units 1 and 2 continue to satisfy the limits prescribed by 10 CFR 50.46.

There are no changes to assumptions of the radiological dose calculations. Hence, there is no increase in the predicted radiological consequences of accidents postulated in the UFSAR.

Therefore, neither the probability of occurrence nor the consequences of an accident previously evaluated is significantly increased.

[Criterion 2]

Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The use of the Westinghouse BE–LBLOCA analysis methodology with ASTRUM does not impact any of the applicable design criteria and pertinent licensing basis criteria continue to be met. Demonstrated adherence to the criteria in 10 CFR 50.46 precludes new challenges to components and systems that could introduce a new type of accident. Safety analysis evaluations have demonstrated that the use of Westinghouse BE–LBLOCA analysis methodology with ASTRUM is acceptable. Design and performance criteria continue to be met and no new single failure mechanisms have been created. The use of the Westinghouse BE–LBLOCA analysis methodology with ASTRUM does not involve any alteration to plant equipment or procedures that would introduce any new or unique operational modes or accident precursors. Furthermore, no changes have been made to any RPS or ESF actuation setpoints. Based on this review, it is concluded that no new accident scenarios, failure mechanisms, or limiting single failures are introduced as a result of the proposed changes.

Therefore, the possibility for a new or different kind of accident from any accident previously evaluated is not created.

[Criterion 3]

Does this change involve a significant reduction in a margin of safety?

Response: No.

It has been demonstrated that the analytical technique used in the Westinghouse BE–LBLOCA analysis methodology using ASTRUM realistically describes the expected behavior of the reactor system during a postulated LOCA. Uncertainties have been accounted for as required by 10 CFR 50.46. A sufficient number of LOCAs with different break sizes, different locations, and other variations in properties have been considered to provide assurance that the most severe postulated LOCAs have been evaluated. The analysis has demonstrated that the acceptance criteria contained in 10 CFR 50.46 continue to be satisfied.

Therefore, it is concluded that this change does not involve a significant reduction in the margin of safety.

The NRC staff has reviewed the licensee's analysis and, based on this review, it appears that the three standards of 50.92(c) are satisfied. Therefore, the NRC staff proposes to determine that the amendment request involves no significant hazards consideration.

Attorney for licensee: Lillian M. Cuoco, Senior Counsel, Dominion Resources Services, Inc., 120 Tredegar Street, RS–2, Richmond, VA 23219.

NRC Branch Chief: Gloria Kulesa.

Notice of Issuance of Amendments to Facility Operating Licenses

During the period since publication of the last biweekly notice, the Commission has issued the following amendments. The Commission has determined for each of these amendments that the application complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment.

Notice of Consideration of Issuance of Amendment to Facility Operating License, Proposed No Significant Hazards Consideration Determination, and Opportunity for a Hearing in connection with these actions was published in the **Federal Register** as indicated.

Unless otherwise indicated, the Commission has determined that these amendments satisfy the criteria for categorical exclusion in accordance with 10 CFR 51.22. Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared for these amendments. If the Commission has prepared an environmental assessment under the special circumstances provision in 10 CFR 51.22(b) and has made a determination based on that assessment, it is so indicated.

For further details with respect to the action see (1) The applications for amendment, (2) the amendment, and (3) the Commission's related letter, Safety Evaluation and/or Environmental Assessment as indicated. All of these items are available for public inspection at the Commission's Public Document Room (PDR), located at One White Flint North, Room O1–F21, 11555 Rockville Pike (first floor), Rockville, Maryland 20854. Publicly available records will be accessible from the Agencywide Documents Access and Management System (ADAMS) Public Electronic Reading Room on the internet at the NRC Web site, *http://www.nrc.gov/reading-rm/adams.html.* If you do not have access to ADAMS or if there are problems in accessing the documents located in ADAMS, contact the PDR Reference staff at 1–800–397–4209, 301–415–4737 or by e-mail to *pdr.resource@nrc.gov.*

Arizona Public Service Company, et al., Docket Nos. STN 50–528, STN 50–529, and STN 50–530, Palo Verde Nuclear Generating Station, Unit Nos. 1, 2, and 3, Maricopa County, Arizona

Date of application for amendment: April 29, 2010.

Brief description of amendment: The amendments adopted Nuclear Regulatory Commission (NRC)-approved TS Task Force (TSTF) Standard Technical Specification change traveler TSTF–491, Revision 2, "Removal of Main Steam and Main Feedwater Valve Isolation Times from Technical Specifications." The isolation times will be located outside of the TSs in a document subject to control by the 10 CFR 50.59 process.

Date of issuance: November 5, 2010.

Effective Date: As of the date of issuance and shall be implemented within 90 days from the date of issuance.

Amendment No.: Unit 1—181; Unit 2—181; Unit 3—181.

Facility Operating License Nos. NPF–41, NPF–51, and NPF–74: The amendment revised the Operating Licenses and Technical Specifications.

Date of initial notice in the ***Federal Register***: July 27, 2010 (75 FR 44024).

The Commission's related evaluation of the amendments is contained in a Safety Evaluation dated November 5, 2010.

No significant hazards consideration comments received: No.

Entergy Operations, Inc., Docket No. 50–368, Arkansas Nuclear One, Unit No. 2, Pope County, Arkansas

Date of application for amendment: June 23, 2010.

Brief description of amendment: Current Technical Specification (TS) 6.5.8, "Inservice Testing Program," contains references to the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI as the source of requirements for the inservice testing (IST) of ASME Code Class 1, 2, and 3 pumps and valves. The amendment deleted the references to Section XI of the Code and incorporated references to the ASME Code for Operation and Maintenance of Nuclear Power Plants (ASME OM Code). The amendment also indicates that there may be some nonstandard frequencies utilized in the IST Program in which the provisions of Surveillance Requirement (SR) 3.0.2 are applicable. The changes are consistent with Technical Specification Task Force (TSTF) Technical Change Travelers TSTF–479–A, "Changes to Reflect Revision of 10 CFR 50.55a," and TSTF–497–A, "Limit Inservice Testing Program SR 3.0.2 Application to Frequencies of 2 Years or Less."

Date of issuance: November 5, 2010.

Effective Date: As of the date of issuance and shall be implemented within 90 days from the date of issuance.

Amendment No.: 291.

Renewed Facility Operating License No. NPF–6: Amendment revised the Technical Specifications/license.

Date of initial notice in the ***Federal Register***: August 10, 2010 (75 FR 48375).

The Commission's related evaluation of the amendment is contained in a Safety Evaluation dated November 5, 2010.

No significant hazards consideration comments received: No.

Luminant Generation Company LLC, Docket Nos. 50–445 and 50–446, Comanche Peak Nuclear Power Plant, Unit Nos. 1 and 2, Somervell County, Texas

Date of amendment request: May 27, 2010, as supplemented by letter dated August 26, 2010.

Brief description of amendments: The amendments revised Technical Specification (TS) 3.8.3, "Diesel Fuel Oil, Lube Oil, and Starting Air," by relocating the current stored diesel fuel oil and lube oil numerical volume and level requirements from the TSs to the TS Bases so that it may be modified under licensee control. The TSs have been modified so that the stored diesel fuel oil and lube oil inventory will require that a 7-day supply be available for each diesel generator. Condition A and Condition B in the Action table and Surveillance Requirements (SRs) 3.8.3.1 and 3.8.3.2 are also revised to reflect the above change. The changes are consistent with NRC-approved Revision 1 to Technical Specification Task Force (TSTF) Improved Standard Technical Specification Change Traveler TSTF–501, "Relocate Stored Fuel Oil and Lube Oil Volume Values to Licensee Control." The availability of the TS improvement was announced in the **Federal Register** on May 26, 2010, as part of the consolidated line item improvement process.

Date of issuance: November 4, 2010.

Effective Date: As of the date of issuance and shall be implemented within 120 days from the date of issuance.

Amendment Nos.: Unit 1—153; Unit 2—153.

Facility Operating License Nos. NPF–87 and NPF–89: The amendments revised the Facility Operating Licenses and Technical Specifications.

Date of initial notice in the ***Federal Register***: August 10, 2010 (75 FR 48376). The supplemental letter dated August 26, 2010, provided additional information that clarified the application, did not expand the scope of the application as originally noticed, and did not change the staff's original proposed no significant hazards consideration determination as published in the **Federal Register**.

The Commission's related evaluation of the amendments is contained in a Safety Evaluation dated November 4, 2010.

No significant hazards consideration comments received: No.

Southern Nuclear Operating Company, Inc., Georgia Power Company, Oglethorpe Power Corporation, Municipal Electric Authority of Georgia, City of Dalton, Georgia, Docket Nos. 50–321 and 50–366, Edwin I. Hatch Nuclear Plant, Units 1 and 2, Appling County, Georgia

Date of application for amendments: December 17, 2009.

Brief description of amendments: The amendments revised the Technical Specifications (TSs) for Limiting Condition for Operations 3.1.2 "Reactivity Anomalies" changing Surveillance Requirement 3.1.2.1 methodology.

Date of issuance: November 4, 2010.

Effective Date: As of the date of issuance and shall be implemented within 60 days from the date of issuance.

Amendment Nos.: 263 and 207.

Renewed Facility Operating License Nos. DPR–57 and NPF–5: Amendments revised the licenses and the TSs.

Date of initial notice in ***Federal Register***: February 23, 2010.

The Commission's related evaluation of the amendments is contained in a Safety Evaluation dated November 4, 2010.

No significant hazards consideration comments received: No.

Dated at Rockville, Maryland, this 19th day of November 2010.

For the Nuclear Regulatory Commission.

Joseph G. Giitter,

Director, Division of Operating Reactor Licensing, Office of Nuclear Reactor Regulation.

[FR Doc. 2010–29941 Filed 11–29–10; 8:45 am]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

[Docket No. 70–143; License No. SNM–124; EA–10–076; NRC–2010–0365]

In the Matter of Nuclear Fuel Services, Inc., Erwin, TN; Confirmatory Order Modifying License (Effective Immediately)

I

Nuclear Fuel Services, Inc. (NFS or Licensee) is the holder of Special Nuclear Materials License No. SNM–124 issued by the Nuclear Regulatory Commission (NRC or Commission) pursuant to Title 10 of the Code of Federal Regulations (10 CFR) part 70 on July 2, 1999. The license authorizes the operation of the NFS facility in accordance with the conditions specified therein. The facility is located on the Licensee's site in Erwin, Tennessee.

This Confirmatory Order is the result of an agreement reached during an Alternative Dispute Resolution (ADR) session conducted on October 4, 2010.

II

On October 7, 2009, the NRC Office of Investigations (OI) began an investigation (OI Case No. 2–2010–001) at NFS. Based on the evidence developed during its investigation, OI substantiated that a former Industrial Safety Specialist at NFS willfully provided the NRC incomplete and inaccurate information concerning fire damper inspections at NFS on two separate occasions. The results of the investigation, completed on February 26, 2010, were sent to NFS in a letter

dated July 20, 2010. The NRC's July 20, 2010, letter offered NFS the opportunity to resolve the enforcement aspects of this matter through the NRC's normal enforcement process, or through ADR. In response to the NRC's offer, NFS requested use of the NRC ADR process to resolve the matter.

On October 4, 2010, the NRC and NFS met in an ADR session mediated by a professional mediator, arranged through Cornell University's Institute on Conflict Resolution. ADR is a process in which a neutral mediator with no decision-making authority assists the parties in reaching an agreement on resolving any differences regarding the dispute. This confirmatory order is issued pursuant to the agreement reached during the ADR process.

III

During the ADR session, a preliminary settlement agreement was reached. The elements of the agreement consisted of the following:

1. NFS agreed that two examples of a violation of 10 CFR 70.9(a), occurred, which requires that information provided to the NRC be complete and accurate in all material respects. The violation involved the following:

a. On November 25, 2008, NFS submitted to the NRC a Reply to Notice of Violation that was not complete and accurate in all material respects. NFS's letter documented that all fire dampers in procedure NFS–GH–22 were inspected in September of 2008, and passed the inspection, when in fact, 12 of the fire dampers had not been inspected (three of which were designated as items relied on for safety). The NRC preliminarily concluded that the submittal of inaccurate information was due, in part, to the willful actions of a former Industrial Safety Specialist at NFS who was tasked with drafting the written reply to the Notice of Violation. The inaccurate information was material to the NRC because it was used by the NRC to confirm that the required fire damper inspections had been completed.

b. During the NRC's August 2009 inspection, the NRC attempted to verify the corrective actions as documented in the November 25, 2008 Reply to Notice of Violation. In support of the inspection, the aforementioned former Industrial Safety Specialist at NFS created and provided a document to the NRC inspector, which indicated that all but one of the fire dampers had been fully inspected during 2008, when in fact, more than one of the dampers had not been fully inspected. The NRC preliminarily concluded that this inaccurate information was willfully provided to the NRC. This information was material to the NRC because it was used during the inspection to confirm that the required fire damper inspections had been completed.

2. The NRC concluded that the actions of the former NFS Industrial Safety Specialist were willful. In its investigation, NFS did not reach any conclusions regarding willfulness.

3. In response to the violation described above, NFS implemented numerous corrective actions and enhancements, including but not limited to a prompt investigation into the incident, a root cause and corrective action review, an extent of condition and extent of cause review, a Safety Culture Implications Review, organizational and process changes in response to the 10 CFR 70.9 violation, training and communication initiatives, initiatives to improve employee awareness of the incident and lessons learned, and initiatives to gauge employee awareness of NFS's corrective actions, enhancements, and lessons learned.

4. In response to the issues as described in Section III.1(a) and (b) above, NFS agreed to the following actions:

a. Within 30 days of issuance of this Confirmatory Order, NFS will submit a Reply to a Notice of Violation, which documents its corrective actions and enhancements as discussed in Section III.3 above. NFS's Reply to a Notice of Violation will be consistent with the requirements of 10 CFR 2.201.

b. Within one year of issuance of this Confirmatory Order, NFS will conduct an effectiveness review of each completed corrective action identified in its written Reply to a Notice of Violation. In response to its effectiveness review, NFS will implement additional corrective actions to address any deficiencies or weaknesses, and will continue to do so until such deficiencies and weaknesses are resolved.

c. Within six months of issuance of this Confirmatory Order, NFS will conduct an assessment of the effectiveness of its actions to assure the adequacy and accuracy of information submitted to the NRC, including continuous improvements to its processes and changes to its organizational structure. The assessment will be conducted by an independent group (*i.e.,* from outside the safety organization). NFS will address, through enhancements and corrective actions, the issues identified as a result of the assessment.

d. NFS agrees to develop and implement an appropriate safety culture improvement plan to address the findings identified in the second Safety Culture Assessment report that was provided to the NRC on June 29, 2010. NFS also agrees to assess the effectiveness of its plan and implement additional corrective actions for any weaknesses or deficiencies identified, by June 2012. Corrective actions will continue to be implemented until such time that NFS demonstrates to NRC that the actions were fully effective.

e. NFS will conduct integrated independent safety culture assessments using a variety of appropriate assessment tools (which may include, but are not limited to, an independent third party review, employee surveys, Nuclear Safety Review Board inputs, self-assessments), no later than June 2013, and at least every 24 months thereafter, to an accepted nuclear industry standard. The safety culture assessments will include the following provisions and attributes:

i. The integrated assessment results will be shared with NFS staff within 30 days of completion of results.

ii. The integrated assessment results will be provided to the NRC within 30 days of completion of results.

iii. The corrective action plans to address the issues identified in these integrated assessments will be provided to the NRC within 60 days of completion of results.

iv. Appropriate and timely corrective actions will be implemented to address the issues identified in these assessments.

v. Effectiveness reviews of corrective actions will be implemented within one year of completion of the corrective action. Additional corrective action will be taken to address those actions which were not fully effective.

vi. NFS will inform the NRC when it has determined that improvements in safety culture are sufficient and sustainable.

vii. The above actions involving independent safety culture assessments will continue until NRC has concluded that the actions were fully effective.

f. NFS will complete an assessment of its current corrective action program against the requirements of NQA–1–2008, Part III, Subpart 3.1, "Non-Mandatory Appendix 16A–1." Based on this assessment, NFS will submit a license amendment request within nine months of the date of issuance of this Confirmatory Order incorporating into the license its current corrective action program including the additional enhancements made to the program as a result of the assessment.

g. NFS shall implement metrics to measure overall safety performance at the facility.

5. The NRC and NFS agree that the above elements will be incorporated into a Confirmatory Order, and that the two examples of a violation of 10 CFR 70.9 will be cited as a Notice of Violation, and included as an attachment to the final Confirmatory Order. In addition, NFS agrees to waive its hearing rights for the issues documented in the Confirmatory Order.

6. In consideration of the commitments delineated in Section III.4 above and in Section V, the NRC agrees to refrain from proposing a civil penalty for all matters discussed in the NRC's letter to NFS of July 20, 2010 (EA–10–076).

7. Issuance of this Confirmatory Order for the above actions supersedes the NRC's Confirmatory Order to NFS, dated February 21, 2007, which is now closed.

8. This agreement is binding upon successors and assigns of NFS.

IV

Since the licensee has agreed to take additional actions to address NRC concerns, as set forth in Section V, the NRC has concluded that its concerns can be resolved through issuance of this Confirmatory Order.

I find that NFS's commitments as set forth in Section V are acceptable and necessary and conclude that with these commitments, the public health and safety are reasonably assured. In view of the foregoing, I have determined that public health and safety require that NFS's commitments be confirmed by this Order. Based on the above and NFS's consent, this Confirmatory Order is immediately effective upon issuance.

V

Accordingly, pursuant to Sections 51, 53, 161b, 161i, 161o, 182 and 186 of the Atomic Energy Act of 1954, as amended, and the Commission's regulations in 10 CFR 2.202 and 10 CFR part 70, *it is hereby ordered,* effective immediately, that License No. SNM–124 Is modified as follows:

1. Within 30 days of issuance of this Confirmatory Order, NFS will submit a Reply to a Notice of Violation, which documents its corrective actions and enhancements as discussed in Section III.3 above. NFS's Reply to the Notice of Violation will be consistent with the requirements of 10 CFR 2.201.

2. Within one year of issuance of this Confirmatory Order, NFS will conduct an effectiveness review of each completed corrective action identified in its written Reply to a Notice of Violation. In response to its effectiveness review, NFS will implement additional corrective actions to address any deficiencies or weaknesses, and will continue to do so until such deficiencies and weaknesses are resolved.

3. Within six months of issuance of this Confirmatory Order, NFS will conduct an assessment of the effectiveness of its actions to assure the adequacy and accuracy of information submitted to the NRC, including continuous improvements to its processes and changes to its organizational structure. The assessment should be conducted by an independent group (i.e., from outside the safety organization). NFS will then address the issues identified as a result of the assessment.

4. NFS agrees to develop and implement an appropriate safety culture improvement plan to address the findings identified in the second Safety Culture Assessment report that was provided to the NRC on June 29, 2010. NFS also agrees to assess the effectiveness of its plan, and implement additional corrective actions for any weaknesses or deficiencies identified, by June 2012. Corrective actions will continue to be implemented until such time that NFS has demonstrated that the actions were fully effective.

5. NFS will conduct integrated independent safety culture assessments using a variety of appropriate assessment tools (which may include, but are not limited to, an independent third party review, employee surveys, Nuclear Safety Review Board inputs, self-assessments), no later than June 2013, and at least every 24 months thereafter, to an accepted nuclear industry standard. The safety culture assessments will include the following provisions and attributes:

a. The integrated assessment results will be shared with NFS staff within 30 days of completion of results.

b. The integrated assessment results will be provided to the NRC within 30 days of completion of results.

c. The corrective action plans to address the issues identified in these integrated assessments will be provided to the NRC within 60 days of completion of results.

d. Appropriate and timely corrective actions will be implemented to address the issues identified in these assessments.

e. Effectiveness reviews of corrective actions will be implemented within one year of completion of the corrective action. Additional corrective action is taken to address those actions which were not fully effective.

f. NFS will inform the NRC when it has determined that improvements in safety culture are sufficient and sustainable.

g. The above actions involving independent safety culture assessments will continue until NRC has concluded that the actions were fully effective.

6. NFS will complete an assessment of its current corrective action program against the requirements of NQA–1–2008, Part III, Subpart 3.1, "Non-Mandatory Appendix 16A–1." Based on this assessment, NFS will submit a license amendment request within nine months of the date of issuance of this Confirmatory Order, incorporating into the license its current corrective action program including the additional enhancements made to the program as a result of the assessment.

7. NFS shall implement metrics to measure overall safety performance at the facility.

The Regional Administrator, NRC Region II, may relax or rescind, in writing, any of the above conditions upon a showing by NFS of good cause.

VI

Any person adversely affected by this Confirmatory Order, other than NFS, may request a hearing within 20 days of its publication in the **Federal Register**. Where good cause is shown, consideration will be given to extending the time to request a hearing. A request for extension of time must be made in writing to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555, and include a statement of good cause for the extension.

All documents filed in NRC adjudicatory proceedings, including a request for hearing, a petition for leave to intervene, any motion or other document filed in the proceeding prior to the submission of a request for hearing or petition to intervene, and documents filed by interested governmental entities participating under 10 CFR 2.315(c), must be filed in accordance with the NRC E-Filing rule (72 FR 49139, August 28, 2007). The E-Filing process requires participants to submit and serve all adjudicatory documents over the internet, or in some cases to mail copies on electronic storage media. Participants may not submit paper copies of their filings unless they seek an exemption in accordance with the procedures described below.

To comply with the procedural requirements of E-Filing, at least ten (10) days prior to the filing deadline, the participant should contact the Office of the Secretary by e-mail at

hearing.docket@nrc.gov, or by telephone at (301) 415–1677, to request (1) a digital ID certificate, which allows the participant (or its counsel or representative) to digitally sign documents and access the E-Submittal server for any proceeding in which it is participating; and (2) advise the Secretary that the participant will be submitting a request or petition for hearing (even in instances in which the participant, or its counsel or representative, already holds an NRC-issued digital ID certificate). Based upon this information, the Secretary will establish an electronic docket for the hearing in this proceeding if the Secretary has not already established an electronic docket.

Information about applying for a digital ID certificate is available on NRC's public Web site at *http://www.nrc.gov/site-help/e-submittals/apply-certificates.html.* System requirements for accessing the E-Submittal server are detailed in NRC's "Guidance for Electronic Submission," which is available on the agency's public Web site at *http://www.nrc.gov/site-help/e-submittals.html.* Participants may attempt to use other software not listed on the Web site, but should note that the NRC's E-Filing system does not support unlisted software, and the NRC Meta System Help Desk will not be able to offer assistance in using unlisted software.

If a participant is electronically submitting a document to the NRC in accordance with the E-Filing rule, the participant must file the document using the NRC's online, Web-based submission form. In order to serve documents through the Electronic Information Exchange (EIE), users will be required to install a Web browser plug-in from the NRC Web site. Further information on the Web-based submission form, including the installation of the Web browser plug-in, is available on the NRC's public Web site at *http://www.nrc.gov/site-help/e-submittals.html.*

Once a participant has obtained a digital ID certificate and a docket has been created, the participant can then submit a request for hearing or petition for leave to intervene. Submissions should be in Portable Document Format (PDF) in accordance with NRC guidance available on the NRC public Web site at *http://www.nrc.gov/site-help/e-submittals.html.* A filing is considered complete at the time the documents are submitted through the NRC's E-Filing system. To be timely, an electronic filing must be submitted to the E-Filing system no later than 11:59 p.m. Eastern Time on the due date. Upon receipt of a transmission, the E-Filing system time-stamps the document and sends the submitter an e-mail notice confirming receipt of the document. The E-Filing system also distributes an e-mail notice that provides access to the document to the NRC Office of the General Counsel and any others who have advised the Office of the Secretary that they wish to participate in the proceeding, so that the filer need not serve the documents on those participants separately. Therefore, applicants and other participants (or their counsel or representative) must apply for and receive a digital ID certificate before a hearing request/petition to intervene is filed so that they can obtain access to the document via the E-Filing system.

A person filing electronically using the agency's adjudicatory E-Filing system may seek assistance by contacting the NRC Meta System Help Desk through the "Contact Us" link located on the NRC Web site at *http://www.nrc.gov/site-help/e-submittals.html*, by e-mail at *MSHD.Resource@nrc.gov,* or by a toll-free call at (866) 672–7640. The NRC Meta System Help Desk is available between 8 a.m. and 8 p.m., Eastern Time, Monday through Friday, excluding government holidays.

Participants who believe that they have a good cause for not submitting documents electronically must file an exemption request, in accordance with 10 CFR 2.302(g), with their initial paper filing requesting authorization to continue to submit documents in paper format. Such filings must be submitted by: (1) First class mail addressed to the Office of the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001, Attention: Rulemaking and Adjudications Staff; or (2) courier, express mail, or expedited delivery service to the Office of the Secretary, Sixteenth Floor, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852, Attention: Rulemaking and Adjudications Staff. Participants filing a document in this manner are responsible for serving the document on all other participants. Filing is considered complete by first-class mail as of the time of deposit in the mail, or by courier, express mail, or expedited delivery service upon depositing the document with the provider of the service. A presiding officer, having granted an exemption request from using E-Filing, may require a participant or party to use E-Filing if the presiding officer subsequently determines that the reason for granting the exemption from use of E-Filing no longer exists.

Documents submitted in adjudicatory proceedings will appear in NRC's electronic hearing docket which is available to the public at *http://ehd.nrc.gov/EHD_Proceeding/home.asp,* unless excluded pursuant to an order of the Commission, or the presiding officer. Participants are requested not to include personal privacy information, such as social security numbers, home addresses, or home phone numbers in their filings, unless an NRC regulation or other law requires submission of such information. With respect to copyrighted works, except for limited excerpts that serve the purpose of the adjudicatory filings and would constitute a Fair Use application, participants are requested not to include copyrighted materials in their submission.

If a person (other than NFS) requests a hearing, that person shall set forth with particularity the manner in which his interest is adversely affected by this Confirmatory Order and shall address the criteria set forth in 10 CFR 2.309(d) and (f).

If a hearing is requested by a person whose interest is adversely affected, the Commission will issue an order designating the time and place of any hearing. If a hearing is held, the issue to be considered at such hearing shall be whether this Confirmatory Order should be sustained.

In the absence of any request for hearing, or written approval of an extension of time in which to request a hearing, the provisions specified in Section V above shall be final 20 days from the date this Confirmatory Order is published in the **Federal Register** without further order or proceedings. If an extension of time for requesting a hearing has been approved, the provisions specified in Section V shall be final when the extension expires if a hearing request has not been received.

A request for hearing shall not stay the immediate effectiveness of this order.

Dated this 16th day of November 2010.

For the Nuclear Regulatory Commission.

Victor M. McCree,

Deputy Regional Administrator for Operations.

[FR Doc. 2010–30116 Filed 11–29–10; 8:45 am]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

Advisory Committee on Reactor Safeguards (ACRS) Meeting of the ACRS Subcommittee on AP1000; Notice of Meeting

The ACRS Subcommittee on AP1000 will hold a meeting on December 15–16, 2010, Room T–2B1, 11545 Rockville Pike, Rockville, Maryland.

The meeting will be open to public attendance with the exception of portions that may be closed to protect unclassified safeguards information, pursuant to 5 U.S.C. 552b(c)(3), and information designated as proprietary to Westinghouse Electric Company and its contractors, pursuant to 5 U.S.C. 552b(c)(4).

The agenda for the subject meeting shall be as follows:

Wednesday, December 15, 2010 and Thursday, December 16, 2010—8:30 a.m. Until 5 p.m.

The Subcommittee will review the Final Safety Evaluation Report associated with the combined license application for the Vogtle Units 3 and 4. The Subcommittee will also review the staff's evaluation of the Aircraft Impact Assessment for the proposed AP1000 design. The Subcommittee will hear presentations by and hold discussions with the NRC staff, Westinghouse, and other interested persons regarding these matters. The Subcommittee will gather information, analyze relevant issues and facts, and formulate proposed positions and actions, as appropriate, for deliberation by the Full Committee.

Members of the public desiring to provide oral statements and/or written comments should notify the Designated Federal Official (DFO), Weidong Wang (Telephone 301–415–6279 or E-mail: *Weidong.Wang@nrc.gov*) five days prior to the meeting, if possible, so that appropriate arrangements can be made. Thirty-five hard copies of each presentation or handout should be provided to the DFO thirty minutes before the meeting. In addition, one electronic copy of each presentation should be emailed to the DFO one day before the meeting. If an electronic copy cannot be provided within this timeframe, presenters should provide the DFO with a CD containing each presentation at least thirty minutes before the meeting. Electronic recordings will be permitted only during those portions of the meeting that are open to the public. Detailed procedures for the conduct of and participation in ACRS meetings were published in the **Federal Register** on October 21, 2010, (75 FR 65038–65039).

Detailed meeting agendas and meeting transcripts are available on the NRC Web site at *http://www.nrc.gov/reading-rm/doc-collections/acrs.* Information regarding topics to be discussed, changes to the agenda, whether the meeting has been canceled or rescheduled, and the time allotted to present oral statements can be obtained from the website cited above or by contacting the identified DFO. Moreover, in view of the possibility that the schedule for ACRS meetings may be adjusted by the Chairman as necessary to facilitate the conduct of the meeting, persons planning to attend should check with these references if such rescheduling would result in a major inconvenience.

Dated: *November 23, 2010.*

Antonio Dias,

Chief Reactor Safety Branch B, Advisory Committee on Reactor Safeguards.

[FR Doc. 2010–30108 Filed 11–29–10; 8:45 am]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

[NRC–2010–0002]

Sunshine Act Notice

DATES: Weeks of November 29, December 6, 13, 20, 27, 2010, January 3, 2011.

PLACE: Commissioners' Conference Room, 11555 Rockville Pike, Rockville, Maryland.

STATUS: Public and Closed.

Week of November 29, 2010

Tuesday, November 30, 2010

10 a.m.—Affirmation Session (Public Meeting) (Tentative)

a. *Tennessee Valley Authority* (Watts Bar Nuclear Plant, Unit 2), Southern Alliance for Clean Energy's Petition for Interlocutory Review of LBP–10–12 (Denying SACE's Waiver Petition) (July 14, 2010) (Tentative).

b. *Entergy Nuclear Operations, Inc.* (Indian Point Nuclear Generating Units 2 and 3) Motions for Interlocutory Review by Staff and Applicant of LBP–10–13 (contention admissibility decision) (Tentative).

c. *Final Rule:* Decommissioning Planning (10 CFR parts 20, 30, 40, 50, 70, and 72; RIN–3150–AI55) (Tentative).

1 p.m.—Briefing on Security Issues (Closed—Ex. 1)

Week of December 6, 2010—Tentative

There are no meetings scheduled for the week of December 6, 2010.

Week of December 13, 2010—Tentative

Thursday, December 16, 2010

2 p.m.—Briefing on Construction Reactor Oversight Program (cROP) (Public Meeting) (*Contact:* Aida Rivera-Varona, 301–415–4001)

This meeting will be webcast live at the Web address—*http://www.nrc.gov.*

Week of December 20, 2010—Tentative

Tuesday, December 21, 2010

9:30 a.m.—Briefing on the Threat Environment Assessment (Closed—Ex. 1)

1 p.m.—Briefing on Security Issues (Closed—Ex. 1)

Week of December 27, 2010—Tentative

There are no meetings scheduled for the week of December 27, 2010.

Week of January 3, 2011—Tentative

There are no meetings scheduled for the week of January 3, 2011.

* * * * *

* The schedule for Commission meetings is subject to change on short notice. To verify the status of meetings, call (recording)—(301) 415–1292. Contact person for more information: Rochelle Bavol, (301) 415–1651.

* * * * *

The NRC Commission Meeting Schedule can be found on the Internet at: *http://www.nrc.gov/about-nrc/policy-making/schedule.html.*

* * * * *

The NRC provides reasonable accommodation to individuals with disabilities where appropriate. If you need a reasonable accommodation to participate in these public meetings, or need this meeting notice or the transcript or other information from the public meetings in another format (*e.g.* braille, large print), please notify Angela Bolduc, Chief, Employee/Labor Relations and Work Life Branch, at 301–492–2230, TDD: 301–415–2100, or by *e-mail at angela.bolduc@nrc.gov.* Determinations on requests for reasonable accommodation will be made on a case-by-case basis.

* * * * *

This notice is distributed electronically to subscribers. If you no longer wish to receive it, or would like to be added to the distribution, please contact the Office of the Secretary, Washington, DC 20555 (301–415–1969), or send an e-mail to *darlene.wright@nrc.gov.*

Dated: November 24, 2010.

Rochelle C. Bavol,

Policy Coordinator, Office of the Secretary.

[FR Doc. 2010–30220 Filed 11–26–10; 4:15 pm]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

[NRC–2010–0002]

Sunshine Act Notice

DATE: Week of November 29, 2010.

PLACE: Commissioners' Conference Room, 11555 Rockville Pike, Rockville, Maryland.

STATUS: Public and Closed.

ADDITIONAL ITEMS TO BE CONSIDERED: Week of November 29, 2010

Tuesday, November 30, 2010

10 a.m.—Affirmation Session (Public Meeting) (Tentative)

b. *Entergy Nuclear Operations, Inc.* (Indian Point Nuclear Generating Units 2 and 3) Motions for Interlocutory Review by Staff and Applicant of LBP–10–13 (contention admissibility decision) (Tentative)

c. Final Rule: Decommissioning Planning (10 CFR parts 20, 30, 40, 50, 70, and 72; RIN–3150–AI55) (Tentative)

* * * * *

* The schedule for Commission meetings is subject to change on short notice. To verify the status of meetings, call (recording)—(301) 415–1292. Contact person for more information: Rochelle Bavol, (301) 415–1651.

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* * * * *

This notice is distributed electronically to subscribers. If you no longer wish to receive it, or would like to be added to the distribution, please contact the Office of the Secretary, Washington, DC 20555 (301–415–1969), or send an e-mail to *darlene.wright@nrc.gov.*

Dated: November 23, 2010.

Rochelle C. Bavol,

Policy Coordinator, Office of the Secretary.

[FR Doc. 2010–30193 Filed 11–26–10; 8:45 am]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

Request for a License To Export Radioactive Waste

Pursuant to 10 CFR 110.70 (b) "Public Notice of Receipt of an Application," please take notice that the Nuclear Regulatory Commission (NRC) has received the following request for an export license. Copies of the request are available electronically through ADAMS and can be accessed through the Public Electronic Reading Room (PERR) link *http://www.nrc.gov/reading-rm.html* at the NRC Homepage.

A request for a hearing or petition for leave to intervene may be filed within thirty days after publication of this notice in the **Federal Register**. Any request for hearing or petition for leave to intervene shall be served by the requestor or petitioner upon the applicant, the office of the General Counsel, U.S. Nuclear Regulatory Commission, Washington, DC 20555; the Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555; and the Executive Secretary, U.S. Department of State, Washington, DC 20520.

A request for a hearing or petition for leave to intervene may be filed with the NRC electronically in accordance with NRC's E–Filing rule promulgated in August 2007, 72 FR 49139 (Aug. 28, 2007). Information about filing electronically is available on the NRC's public Web site at *http://www.rnc.gov/site-help/e-submittals.html.* To ensure timely electronic filing, at least 5 (five) days prior to the filing deadline, the petitioner/requestor should contact the Office of the Secretary by e-mail at *HEARINGDOCKET@NRC.GOV,* or by calling (301) 415–1677, to request a digital ID certificate and allow for the creation of an electronic docket.

In addition to a request for hearing or petition for leave to intervene, written comments, in accordance with 10 CFR 110.81, should be submitted within thirty (30) days after publication of this notice in the **Federal Register** to Office of the Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555, *Attention:* Rulemaking and Adjudications.

The information concerning this export license application follows.

NRC EXPORT LICENSE APPLICATION

Description of material

Name of applicant; date of application; date received; application no. docket No.	Material type	Total quantity	End use	Recipient country
EnergySolutions, August 27, 2010, November 3, 2010, XW018, 11005897.	Radioactive waste consisting of contaminated ash resulting from the incineration of contaminated materials as well as non-incinerable and non-conforming material.	Not to exceed 1,000 tons (amount imported).	Return to two licensed facilities for appropriate disposition.	Germany.

For The Nuclear Regulatory Commission.

Dated this 17th day of November 2010 at Rockville, Maryland.

Stephen Dembek,

Acting Deputy Director, Office of International Programs.

[FR Doc. 2010–30113 Filed 11–29–10; 8:45 am]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

[Docket No. 52–008; NRC–2008–0476]

Dominion Virginia Power and Old Dominion Electric Cooperative; Notice of Consideration of Issuance of Amendment to Early Site Permit, Proposed No Significant Hazards Consideration Determination, and Opportunity for a Hearing

AGENCY: U.S. Nuclear Regulatory Commission (NRC).

ACTION: Notice of license amendment request, opportunity to comment, and opportunity to request a hearing.

DATES: Submit comments by December 30, 2010. Requests for a hearing or leave to intervene must be filed by January 31, 2011.

FOR FURTHER INFORMATION CONTACT: Chandu Patel, Project Manager, US–APWR Projects Branch, Division of New Reactor Licensing, Office of New Reactors, U.S. Nuclear Regulatory Commission, Washington, DC 20555–001. Telephone: (301) 415–3025; fax number: (301) 415–6350; e-mail: *Chandu.Patel@nrc.gov.*

ADDRESSES: You may submit comments by any one of the following methods. Please include Docket ID NRC–2008–0476 in the subject line of your comments. Comments submitted in writing or in electronic form will be posted on the NRC Web site and on the Federal rulemaking Web site *http://www.regulations.gov.* Because your comments will not be edited to remove any identifying or contact information, the NRC cautions you against including any information in your submission that you do not want to be publicly disclosed. The NRC requests that any party soliciting or aggregating comments received from other persons for submission to the NRC inform those persons that the NRC will not edit their comments to remove any identifying or contact information, and therefore, they should not include any information in their comments that they do not want publicly disclosed.

You may submit comments by any one of the following methods.

Federal Rulemaking Web site: Go to *http://www.regulations.gov* and search for documents filed under Docket ID NRC–2008–0476. Address questions about NRC dockets to Carol Gallagher at 301–492–3668 or via e-mail at *Carol.Gallagher@nrc.gov.*

Mail comments to: Chief, Rules, Announcements and Directives Branch, Office of Administration, Mail Stop: TWB–05–B01M, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001, or via fax to RADB at (301) 492–3446.

You can access publicly available documents related to this notice using the following methods:

NRC's Public Document Room (PDR): The public may examine, and have copied for a fee, publicly available documents at the NRC's PDR, Room O–1 F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852. These documents may also be viewed electronically on the Public computer located at the NRC's PDR at 11555 Rockville Pike, Rockville, MD 20852.

NRC's Agencywide Documents Access and Management System (ADAMS): Publicly available documents created or received at the NRC are available electronically at the NRC's Electronic Reading Room at *http://www.nrc.gov/reading-rm/adams.html.* From this page, the public can gain entry into ADAMS, which provides text and image files of NRC's public documents. If you do not have access to ADAMS or if there are problems in accessing the documents located in ADAMS, contact the NRC's PDR reference staff at 1–800–397–4209, 301–415–4737, or via e-mail to *pdr.resource@nrc.gov.* The application for amendment dated September 2, 2010, is available electronically in ADAMS under accession number ML102500209.

Federal Rulemaking Web site: Public comments and supporting materials related to this notice can be found at *http://www.regulations.gov* by searching for Docket ID: NRC–2008–0476.

SUPPLEMENTARY INFORMATION:

I. Introduction

The NRC (the Commission) is considering issuance of an amendment to Early Site Permit (ESP) number ESP–003, issued to Virginia Electric and Power Company doing business as Dominion Virginia Power, and Old Dominion Electric Cooperative for the North Anna site located near Louisa, Virginia.

The proposed amendment would delete ESP permit condition 3.G, which prescribes the notification conditions associated with the implementation of certain activities authorized by the permit. Specifically, permit condition 3.G requires the permit holder to notify the NRC Regional Administrator for Region II and the operator of North Anna Power Station at least 120 days before the commencement of certain activities described in Appendix E of the permit, the Site Redress Plan. Condition 3.G also states that the permit holder will certify in the notification that it has obtained all other permits, licenses, and certifications required for those activities. The proposed amendment eliminates the notifications by deleting the condition in its entirety.

Before issuance of the proposed license amendment, the Commission will have made findings required by the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations.

The Commission has made a proposed determination that the amendment request involves no significant hazards consideration. Under the Commission's regulations in Title 10 of the Code of Federal Regulations, Section 50.92, this means that performance of site preparation and preliminary construction activities described in site redress plan at the North Anna ESP site in accordance with the proposed amendment would not (1) Involve a significant increase in the probability or consequences of an accident previously evaluated; (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety.

As required by 10 CFR 50.91(a), the applicant has provided its analysis of the issue of no significant hazards consideration, which is presented below:

1. Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

The proposed amendment deletes ESP condition 3.G, which prescribes the notification conditions associated with the implementation of activities authorized by the permit. This change is administrative in nature and does not affect the fabrication, construction, or operation of any plant structure, system, or component.

Therefore, the proposed ESP change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The proposed amendment deletes ESP condition 3.G, which prescribes the

notification conditions associated with the implementation of activities authorized by the permit. This change is administrative in nature and does not affect the fabrication, construction, or operation of any plant structure, system, or component.

Therefore, the proposed ESP change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the proposed amendment involve a significant reduction in a margin of safety?

Response: No.

The proposed amendment deletes ESP condition 3.G, which prescribes the notification conditions associated with the implementation of activities authorized by the permit. This change is administrative in nature and does not affect the fabrication, construction, or operation of any plant structure, system, or component.

Therefore, the proposed ESP change does not involve a significant reduction in a margin of safety.

The NRC staff has reviewed the applicant's analysis and, based on this review, it appears that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff proposes to determine that the amendment request involves no significant hazards consideration.

The Commission is seeking public comments on this proposed determination. Any comments received within 30 days after the date of publication of this notice will be considered in making any final determination. You may submit comments using any of the methods discussed under the **ADDRESSES** section of this notice, which is above.

Before issuing the amendment, regardless of whether a hearing is requested, the Commission will make a final determination on the issue of no significant hazards consideration. The final determination will serve to decide when the hearing is held, if one is requested. If the final determination is that the amendment request involves no significant hazards consideration, the Commission may issue the amendment and make it immediately effective, notwithstanding the request for a hearing. Any hearing held would take place after issuance of the amendment. If the final determination is that the amendment request involves a significant hazards consideration, any hearing held would take place before the issuance of any amendment.

II. Opportunity to Request a Hearing

Requirements for hearing requests and petitions for leave to intervene are found in 10 CFR 2.309, "Hearing requests, Petitions to Intervene, Requirements for Standing, and Contentions." Interested persons should consult 10 CFR 2.309, which is available at the NRC's PDR, located at O–1 F21, One White Flint North, 11555 Rockville Pike, Rockville, MD 20852 (or call the PDR at (800) 397–4209 or (301) 415–4737). NRC regulations are also accessible electronically from the NRC's Electronic Reading Room on the NRC Web site at *http://www.nrc.gov.*

III. Petitions for Leave to Intervene

Within 60 days of this notice, any person whose interest may be affected by this amendment and who wishes to participate as a party in the proceeding must file a written petition for leave to intervene. As required by 10 CFR 2.309, a petition for leave to intervene shall set forth with particularity the interest of the petitioner in the proceeding and how that interest may be affected by the results of the proceeding. The petition must provide the name, address, and telephone number of the petitioner and specifically explain the reasons why intervention should be permitted with particular reference to the following factors: (1) The nature of the petitioner's right under the Act to be made a party to the proceeding; (2) the nature and extent of the petitioner's property, financial, or other interest in the proceeding; and (3) the possible effect of any order that may be entered in the proceeding on the petitioner's interest.

A petition for leave to intervene must also include a specification of the contentions that the petitioner seeks to have litigated in the hearing. For each contention, the petitioner must provide a specific statement of the issue of law or fact to be raised or controverted, as well as a brief explanation of the basis for the contention. Additionally, the petitioner must demonstrate that the issue raised by each contention is within the scope of the proceeding and is material to the findings the NRC must make to support the granting of a license amendment in response to the application. The petition must also include a concise statement of the alleged facts or expert opinions which support the position of the petitioner and on which the petitioner intends to rely at hearing, together with references to the specific sources and documents on which the petitioner intends to rely. Finally, the petition must provide sufficient information to show that a genuine dispute exists with the applicant on a material issue of law or fact, including references to specific portions of the application for amendment that the petitioner disputes and the supporting reasons for each dispute, or, if the petitioner believes that the application for amendment fails to contain information on a relevant matter as required by law, the identification of each failure and the supporting reasons for the petitioner's belief.

Those permitted to intervene become parties to the proceeding, subject to any limitations in the order granting leave to intervene, and have the opportunity to participate fully in the conduct of the hearing. The Licensing Board will set the time and place for any prehearing conferences and evidentiary hearings, and the appropriate notices will be provided.

Non-timely petitions for leave to intervene and contentions, amended petitions, and supplemental petitions will not be entertained absent a determination by the Commission, the Licensing Board or a Presiding Officer that the petition should be granted and/or the contentions should be admitted based upon a balancing of the factors specified in 10 CFR 2.309(c)(1)(i)–(viii).

A State, county, municipality, Federally-recognized Indian Tribe, or agencies thereof, may submit a petition to the Commission to participate as a party under 10 CFR 2.309(d)(2). The petition should be submitted to the Commission by January 31, 2011. The petition must be filed in accordance with the filing instructions in Section IV of this document, and should meet the requirements for petitions for leave to intervene set forth in this section, except that State and Federally-recognized Indian Tribes do not need to address the standing requirements in 10 CFR 2.309(d)(1) if the facility is located within its boundaries. The entities listed above could also seek to participate in a hearing as a nonparty pursuant to 10 CFR 2.315(c).

Any person who does not wish, or is not qualified, to become a party to this proceeding may request permission to make a limited appearance pursuant to the provisions of 10 CFR 2.315(a). A person making a limited appearance may make an oral or written statement of position on the issues, but may not otherwise participate in the proceeding. A limited appearance may be made at any session of the hearing or at any prehearing conference, subject to such limits and conditions as may be imposed by the Licensing Board.

IV. Electronic Submissions (E–Filing)

All documents filed in the NRC adjudicatory proceedings, including a request for hearing, a petition for leave to intervene, any motion or other document filed in the proceeding prior to the submission of a request for hearing or petition to intervene, and documents filed by interested governmental entities participating under 10 CFR 2.315(c), must be filed in

accordance with the NRC E–Filing rule (72 FR 49139, August 28, 2007). The E–Filing process requires participants to submit and serve all adjudicatory documents over the Internet, or in some cases to mail copies on electronic storage media. Participants may not submit paper copies of their filings unless they seek an exemption in accordance with the procedures described below.

To comply with the procedural requirements of E–Filing, at least ten days prior to the filing deadline, the participant should contact the Office of the Secretary via e-mail at *hearing.docket@nrc.gov,* or via telephone at (301) 415–1677, to request (1) a digital ID certificate, which allows the participant (or its counsel or representative) to digitally sign documents and access the E–Submittal server for any proceeding in which it is participating; and (2) advise the Secretary that the participant will be submitting a request or petition for hearing (even in instances in which the participant, or its counsel or representative, already holds an NRC-issued digital ID certificate). Based upon this information, the Secretary will establish an electronic docket for the hearing in this proceeding if the Secretary has not already established an electronic docket.

Information about applying for a digital ID certificate is available on NRC's public Web site at *http://www.nrc.gov/site-help/e-submittals/apply-certificates.html.* System requirements for accessing the E–Submittal server are detailed in NRC's "Guidance for Electronic Submission," which is available on the agency's public Web site at *http://www.nrc.gov/site-help/e-submittals.html.* Participants may attempt to use other software not listed on the Web site, but should note that the NRC's E–Filing system does not support unlisted software, and the NRC Meta System Help Desk will not be able to offer assistance in using unlisted software.

If a participant is electronically submitting a document to the NRC in accordance with the E–Filing rule, the participant must file the document using the NRC's online, Web-based submission form. In order to serve documents through Electronic Information Exchange, users will be required to install a Web browser plug-in from the NRC Web site. Further information on the Web-based submission form, including the installation of the Web browser plug-in, is available on the NRC's public Web site at *http://www.nrc.gov/site-help/e-submittals.html.*

Once a participant has obtained a digital ID certificate and a docket has been created, the participant can then submit a request for hearing or petition for leave to intervene. Submissions should be in Portable Document Format in accordance with the NRC guidance available on the NRC public Web site at *http://www.nrc.gov/site-help/e-submittals.html.* A filing is considered complete at the time the documents are submitted through the NRC's E–Filing system. To be timely, an electronic filing must be submitted to the E–Filing system no later than 11:59 p.m. eastern time on the due date. Upon receipt of a transmission, the E–Filing system time-stamps the document and sends the submitter an e-mail notice confirming receipt of the document. The E–Filing system also distributes an e-mail notice that provides access to the document to the NRC Office of the General Counsel and any others who have advised the Office of the Secretary that they wish to participate in the proceeding, so that the filer need not serve the documents on those participants separately. Therefore, applicants and other participants (or their counsel or representative) must apply for and receive a digital ID certificate before a hearing request/petition to intervene is filed so that they can obtain access to the document via the E–Filing system.

A person filing electronically using the agency's adjudicatory E–Filing system may seek assistance by contacting the NRC Meta System Help Desk through the "Contact Us" link located on the NRC Web site at *http://www.nrc.gov/site-help/e-submittals.html,* via e-mail at *MSHD.Resource@nrc.gov,* or via toll-free call at (866) 672–7640. The NRC Meta System Help Desk is available between 8 a.m. and 8 p.m., Eastern Time, Monday through Friday, excluding government holidays.

Participants who believe that they have a good cause for not submitting documents electronically must file an exemption request, in accordance with 10 CFR 2.302(g), with their initial paper filing requesting authorization to continue to submit documents in paper format. Such filings must be submitted by: (1) First class mail addressed to the Office of the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001, Attention: Rulemaking and Adjudications Staff; or (2) courier, express mail, or expedited delivery service to the Office of the Secretary, Sixteenth Floor, One White Flint North, 11555 Rockville Pike, Rockville, Maryland, 20852, Attention: Rulemaking and Adjudications Staff.

Participants filing a document in this manner are responsible for serving the document on all other participants. Filing is considered complete by first-class mail as of the time of deposit in the mail, or by courier, express mail, or expedited delivery service upon depositing the document with the provider of the service. A presiding officer, having granted an exemption request from using E–Filing, may require a participant or party to use E–Filing if the presiding officer subsequently determines that the reason for granting the exemption from use of E–Filing no longer exists.

Documents submitted in adjudicatory proceedings will appear in the NRC's electronic hearing docket which is available to the public at *http://ehd.nrc.gov/EHD_Proceeding/home.asp,* unless excluded pursuant to an order of the Commission, or the presiding officer. Participants are requested not to include personal privacy information, such as social security numbers, home addresses, or home phone numbers in their filings, unless an NRC regulation or other law requires submission of such information. With respect to copyrighted works, except for limited excerpts that serve the purpose of the adjudicatory filings and would constitute a Fair Use application, participants are requested not to include copyrighted materials in their submission.

Petitions for leave to intervene must be filed no later than 60 days from November 30, 2010. Non-timely filings will not be entertained absent a determination by the presiding officer that the petition or request should be granted or the contentions should be admitted, based on a balancing of the factors specified in 10 CFR 2.309(c)(1)(i)–(viii).

Dated at Rockville, Maryland this 23rd day of November, 2010.

For the Nuclear Regulatory Commission.

Hossein G. Hamzehee,

Chief, US–APWR Projects Branch, Division of New Reactor Licensing, Office of New Reactors.

[FR Doc. 2010–30115 Filed 11–29–10; 8:45 am]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

Request for a License To Import Radioactive Waste

Pursuant to 10 CFR 110.70(b) "Public Notice of Receipt of an Application," please take notice that the Nuclear Regulatory Commission (NRC) has received the following request for an

export license. Copies of the request are available electronically through ADAMS and can be accessed through the Public Electronic Reading Room (PERR) link *http://www.nrc.gov/reading-rm.html* at the NRC Homepage.

A request for a hearing or petition for leave to intervene may be filed within thirty days after publication of this notice in the **Federal Register**. Any request for hearing or petition for leave to intervene shall be served by the requestor or petitioner upon the applicant, the office of the General Counsel, U.S. Nuclear Regulatory Commission, Washington, DC 20555; the Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555; and the Executive Secretary, U.S. Department of State, Washington, DC 20520.

A request for a hearing or petition for leave to intervene may be filed with the NRC electronically in accordance with NRC's E-Filing rule promulgated in August 2007, 72 FR 49139 (Aug. 28, 2007). Information about filing electronically is available on the NRC's public Web site at *http://www.rnc.gov/site-help/e-submittals.html.* To ensure timely electronic filing, at least 5 (five) days prior to the filing deadline, the petitioner/requestor should contact the Office of the Secretary by e-mail at *HEARINGDOCKET@NRC.GOV*, or by calling (301) 415–1677, to request a digital ID certificate and allow for the creation of an electronic docket.

In addition to a request for hearing or petition for leave to intervene, written comments, in accordance with 10 CFR 110.81, should be submitted within thirty (30) days after publication of this notice in the **Federal Register** to Office of the Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention Rulemaking and Adjudications.

The information concerning this export license application follows.

NRC IMPORT LICENSE APPLICATION

Description of material

Name of applicant, date of application, date received, application No., docket No.	Material type	Total quantity	End use	Country from
EnergySolutions, August 27, 2010, November 3, 2010 IW029, 11005896.	Radioactive waste consisting of contaminated materials for incineration.	1,000 tons incinerable dry active material.	Incineration for volume reduction at EnergySolutions in Oak Ridge, TN. The resultant ash and non-incinerable/non-conforming material will be returned to Germany under XW018.	Germany.

For the Nuclear Regulatory Commission.

Dated this 17th day of November 2010 at Rockville, Maryland.

Stephen Dembek,

Acting Deputy Director, Office of International Programs.

[FR Doc. 2010–30110 Filed 11–29–10; 8:45 am]

BILLING CODE 7590–01–P

POSTAL REGULATORY COMMISSION

[Docket No. A2011–4; Order No. 597]

Post Office Closing

AGENCY: Postal Regulatory Commission.

ACTION: Notice.

SUMMARY: This document informs the public that an appeal of the closing of the Eugene Post Office's University Station in Eugene, Oregon, has been filed. It identifies preliminary steps and provides a procedural schedule. Publication of this document will allow the Postal Service, petitioner, and others to take appropriate action.

DATES: *Answer to application for suspension due (from Postal Service):* December 2, 2010; *administrative record due (from Postal Service):* December 7, 2010; *deadline for petitions to intervene:* December 20, 2010. *See* the Procedural Schedule in the **SUPPLEMENTARY INFORMATION** section for other dates of interest.

ADDRESSES: Submit comments electronically via the Commission's Filing Online system at *http://www.prc.gov.* Those who cannot submit comments electronically should contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section by telephone for advice on filing alternatives.

FOR FURTHER INFORMATION CONTACT: Stephen L. Sharfman, General Counsel, at *stephen.sharfman@prc.gov* or 202–789–6820.

SUPPLEMENTARY INFORMATION: Notice is hereby given that pursuant to 39 U.S.C. 404(d), the Commission has received a petition for review of the closing of the Eugene Post Office's University Station located in Eugene, Oregon. The petition, which was filed by Steven Shapiro (Petitioner), is postmarked November 16, 2010, and was posted on the Commission's Web site November 22, 2010. The Commission hereby institutes a proceeding under 39 U.S.C. 404(d)(5) and designates the case as Docket No. A2011–4 to consider the Petitioner's appeal. If the Petitioner would like to further explain his position with supplemental information or facts, he may either file a Participant Statement on PRC Form 61 or file a brief with the Commission by no later than December 27, 2010.

Categories of issues apparently raised. The categories of issues raised include: Failure to follow the post office closure requirements and failure to consider the effect on the community. *See* 39 U.S.C. 39 U.S.C. 404(d)(1) and 404(d)(2)(A)(i).

After the Postal Service files the administrative record and the Commission reviews it, the Commission may find that there are more legal issues than the two set forth above, or that the Postal Service's determination disposes of one or more of those issues. The deadline for the Postal Service to file the administrative record with the Commission is December 7, 2010. *See* 39 CFR 3001.113.

Application for suspension. Petitioner also requests a suspension of the closing/consolidation process pending the outcome of the appeal. The post office is scheduled to close December 31, 2010. The answer to the application is due December 2, 2001. *See* 39 CFR 3001.114(b).

Availability; Web site posting. The Commission has posted the appeal and supporting material on its Web site at *http://www.prc.gov.* Additional filings in this case and participants' submissions also will be posted on the Web site, if provided in electronic format or amenable to conversion, and not subject to a valid protective order.

Information on how to use the Commission's Web site is available online or by contacting the Commission's webmaster via telephone at 202–789–6873 or via electronic mail at *prc-webmaster@prc.gov.*

The appeal and all related documents are also available for public inspection in the Commission's docket section. Docket section hours are 8 a.m. to 4:30 p.m., Monday through Friday, except on Federal government holidays. Docket section personnel may be contacted via electronic mail at *prc-dockets@prc.gov* or via telephone at 202–789–6846.

Filing of documents. All filings of documents in this case shall be made using the Internet (Filing Online) pursuant to Commission rules 9(a) and 10(a) at the Commission's Web site, *http://www.prc.gov,* unless a waiver is obtained. *See* 39 CFR 3001.9(a) and 10(a). Instructions for obtaining an account to file documents online may be found on the Commission's Web site, *http://www.prc.gov,* or by contacting the Commission's docket section at *prc-dockets@prc.gov* or via telephone at 202–789–6846.

Intervention. Those, other than the Petitioner and respondent, wishing to be heard in this matter are directed to file a notice of intervention. *See* 39 CFR 3001.111. Notices of intervention in this case are to be filed on or before December 20, 2010. A notice of intervention shall be filed using the Internet (Filing Online) at the Commission's Web site, *http://www.prc.gov,* unless a waiver is obtained for hardcopy filing. *See* 39 CFR 3001.9(a) and 10(a).

Further procedures. By statute, the Commission is required to issue its decision within 120 days from the date it receives the appeal. *See* 39 U.S.C. 404(d)(5). A procedural schedule has been developed to accommodate this statutory deadline. In the interest of expedition, in light of the 120-day decision schedule, the Commission may request the Postal Service or other participants to submit information or memoranda of law on any appropriate issue. As required by the Commission rules, if any motions are filed, responses are due 7 days after any such motion is filed. *See* 39 CFR 3001.21.

It is ordered:

1. The Postal Service shall file the administrative record in this appeal, or otherwise file a responsive pleading to the appeal, by December 7, 2010.

2. The answer to the application for suspension is due December 2, 2010.

3. The procedural schedule listed below is hereby adopted.

4. Pursuant to 39 U.S.C. 505, Cassandra L. Hicks is designated officer of the Commission (Public Representative) to represent the interests of the general public.

5. The Secretary shall arrange for publication of this notice and order and procedural schedule in the **Federal Register.**

PROCEDURAL SCHEDULE

November 22, 2010	Filing of Appeal.
December 2, 2010	Deadline for the Postal Service to answer application for suspension of the determination (*see* 39 CFR 3001.1114(a) and (b)).
December 7, 2010	Deadline for Postal Service to file administrative record in this appeal or responsive pleading.
December 20, 2010	Deadline for notices to intervene (*see* 39 CFR 3001.111(b)).
December 27, 2010	Deadline for Petitioner's Form 61 or initial brief in support of petition (*see* 39 CFR 3001.115(a) and (b)).
January 18, 2011	Deadline for answering brief in support of Postal Service (*see* 39 CFR 3001.115(c)).
February 2, 2011	Deadline for reply briefs in response to answering briefs (*see* 39 CFR 3001.115(d)).
February 9, 2011	Deadline for motions by any party requesting oral argument; the Commission will schedule oral argument only when it is a necessary addition to the written filings (*see* 39 CFR 3001.116).
March 16, 2011	Expiration of the Commission's 120-day decisional schedule (*see* 39 U.S.C. 404(d)(5)).

By the Commission.

Shoshana M. Grove,

Secretary.

[FR Doc. 2010–30075 Filed 11–29–10; 8:45 am]

BILLING CODE 7710–FW–P

POSTAL REGULATORY COMMISSION

[Docket No. A2011–3; Order No. 596]

Post Office Closing

AGENCY: Postal Regulatory Commission.

ACTION: Notice.

SUMMARY: This document informs the public that an appeal of the closing of the Graves Mill, Virginia post office has been filed. It identifies preliminary steps and provides a procedural schedule. Publication of this document will allow the Postal Service, petitioner, and others to take appropriate action.

DATES: *Administrative record due (from Postal Service):* December 7, 2010; *deadline for petitions to intervene:* December 20, 2010. *See* the Procedural Schedule in the **SUPPLEMENTARY INFORMATION** section for other dates of interest.

ADDRESSES: Submit comments electronically via the Commission's Filing Online system at *http://www.prc.gov.* Those who cannot submit comments electronically should contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section by telephone for advice on filing alternatives.

FOR FURTHER INFORMATION CONTACT: Stephen L. Sharfman, General Counsel, at 202–789–6820 or *stephen.sharfman@prc.gov.*

SUPPLEMENTARY INFORMATION: Notice is hereby given that pursuant to 39 U.S.C. 404(d), the Commission has received a petition for review of the closing of the Graves Mill Post Office located in Graves Mill, Virginia. The petition, which was filed by Douglas M. Graves (Petitioner), is postmarked November 15, 2010, and was posted on the Commission's Web site November 22, 2010. The Commission hereby institutes a proceeding under 39 U.S.C. 404(d)(5) and designates the case as Docket No. A2011–3 to consider the Petitioner's appeal. If the Petitioner would like to further explain his position with supplemental information or facts, he may either file a Participant Statement on PRC Form 61 or file a brief with the Commission by no later than December 27, 2010.

Categories of issues apparently raised. The categories of issues raised include: Failure to follow the post office closure requirements and failure to consider the effect on the community. *See* 39 U.S.C. 39 U.S.C. 404(d)(1) and 404(d)(2)(A)(i).

After the Postal Service files the administrative record and the Commission reviews it, the Commission may find that there are more legal issues than the two set forth above, or that the Postal Service's determination disposes

of one or more of those issues. The deadline for the Postal Service to file the administrative record with the Commission is December 7, 2010. *See* 39 CFR 3001.113.

Availability; Web site posting. The Commission has posted the appeal and supporting material on its Web site at *http://www.prc.gov.* Additional filings in this case and participants' submissions also will be posted on the Web site, if provided in electronic format or amenable to conversion, and not subject to a valid protective order. Information on how to use the Commission's Web site is available online or by contacting the Commission's webmaster via telephone at 202–789–6873 or via electronic mail at *prc-webmaster@prc.gov.*

The appeal and all related documents are also available for public inspection in the Commission's docket section. Docket section hours are 8 a.m. to 4:30 p.m., Monday through Friday, except on Federal government holidays. Docket section personnel may be contacted via electronic mail at *prc-dockets@prc.gov* or via telephone at 202–789–6846.

Filing of documents. All filings of documents in this case shall be made using the Internet (Filing Online) pursuant to Commission rules 9(a) and 10(a) at the Commission's Web site, *http://www.prc.gov,* unless a waiver is obtained. *See* 39 CFR 3001.9(a) and 10(a). Instructions for obtaining an account to file documents online may be found on the Commission's Web site, *http://www.prc.gov,* or by contacting the Commission's docket section at *prc-dockets@prc.gov* or via telephone at 202–789–6846.

Intervention. Those, other than the Petitioner and respondent, wishing to be heard in this matter are directed to file a notice of intervention. *See* 39 CFR 3001.111. Notices of intervention in this case are to be filed on or before December 20, 2010. A notice of intervention shall be filed using the Internet (Filing Online) at the Commission's Web site, *http://www.prc.gov,* unless a waiver is obtained for hardcopy filing. *See* 39 CFR 3001.9(a) and 10(a).

Further procedures. By statute, the Commission is required to issue its decision within 120 days from the date it receives the appeal. *See* 39 U.S.C. 404(d)(5). A procedural schedule has been developed to accommodate this statutory deadline. In the interest of expedition, in light of the 120-day decision schedule, the Commission may request the Postal Service or other participants to submit information or memoranda of law on any appropriate issue. As required by the Commission rules, if any motions are filed, responses are due 7 days after any such motion is filed. *See* 39 CFR 3001.21.

It is ordered:

1. The Postal Service shall file the administrative record in this appeal, or otherwise file a responsive pleading to the appeal, by December 7, 2010.

2. The procedural schedule listed below is hereby adopted.

3. Pursuant to 39 U.S.C. 505, Katrina Martinez is designated officer of the Commission (Public Representative) to represent the interests of the general public.

4. The Secretary shall arrange for publication of this Notice and Order and Procedural Schedule in the **Federal Register.**

PROCEDURAL SCHEDULE

November 22, 2010	Filing of Appeal.
December 7, 2010	Deadline for Postal Service to file administrative record in this appeal or responsive pleading.
December 20, 2010	Deadline for petitions to intervene (*see* 39 CFR 3001.111(b)).
December 27, 2010	Deadline for petitions to intervene (*see* 39 CFR 3001.111(b)).
December 13, 2010	Deadline for Petitioner's Form 61 or initial brief in support of petition (see 39 CFR 3001.115(a), (b) and (e)).
January 18, 2011	Deadline for answering brief in support of Postal Service (*see* 39 CFR 3001.115(c)).
February 2, 2011	Deadline for reply briefs in response to answering briefs (*see* 39 CFR 3001.115(d)).
February 9, 2011	Deadline for motions requesting oral argument; the Commission will schedule oral argument only when it is a necessary addition to the written filings (*see* 39 CFR 3001.116).
March 15, 2011	Expiration of the Commission 120-day decisional schedule (*see* 39 U.S.C. 404(d)(5)).

By the Commission.

Shoshana M. Grove,

Secretary.

[FR Doc. 2010–30046 Filed 11–29–10; 8:45 am]

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SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–63361; File No. SR–FICC–2010–09]

Self-Regulatory Organizations; Fixed Income Clearing Corporation; Notice of Filing of a Proposed Rule Change To Introduce Cross-Margining of Certain Positions Cleared at the Fixed Income Clearing Corporation and Certain Positions Cleared at New York Portfolio Clearing, LLC

November 23, 2010.

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 November 12, 2010, the Fixed Income Clearing Corporation ("FICC") filed with the Securities and Exchange Commission ("Commission") the proposed rule change as described in Items I and II below, which Items have been prepared primarily by FICC. 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 proposed rule change would allow FICC to offer cross-margining of certain positions cleared at its Government Securities Division ("GSD") and certain positions cleared at New York Portfolio Clearing, LLC ("NYPC"). The proposed rule change also would make certain other related changes to GSD's rules.

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, FICC 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. FICC has prepared summaries, set forth in sections (A), (B) and (C) below, of the most significant aspects of these statements.[3]

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

The purpose of the proposed rule change is to: (i) Introduce cross-margining of certain positions cleared at the GSD and of certain positions cleared at NYPC and (ii) make certain other changes to the GSD Rules as set forth below.[4]

NYPC has applied for registration with the Commodity Futures Trading Commission ("CFTC") as a derivatives clearing organization ("DCO") pursuant to Section 5b of the Commodity Exchange Act and Part 39 of the Regulations of the CFTC.[5] FICC would not implement the proposed rule change until NYPC obtains such registration. Upon registration as a DCO, NYPC proposes initially to clear U.S. dollar-denominated interest rate futures contracts.

The proposed rule change would allow certain GSD Members to combine their positions at the GSD with their positions or those of certain permitted affiliates cleared at NYPC, within a single margin portfolio ("Margin Portfolio").

1. Cross-Margining With NYPC

Background

Currently, the GSD maintains a clearing fund ("Clearing Fund") comprised of deposits of cash and eligible securities from its members (each a "GSD Member") to provide liquidity and satisfy any losses that might otherwise be incurred as a result of a GSD Member's default and the subsequent close out of its positions. The amount of a GSD Member's required deposit to the Clearing Fund ("Required Fund Deposit") is calculated with reference to several factors relating to an analysis of the possible losses associated with the GSD Member's positions. Currently, this analysis is performed with respect to the GSD Member's positions in a particular account.

Proposed Cross-Margining With NYPC

The cross-margining arrangement with NYPC contemplated herein ("NYPC Arrangement") is to be distinguished from the cross-margining arrangement currently conducted between the Chicago Mercantile Exchange ("CME") and FICC ("CME Arrangement"). In the CME Arrangement, each of FICC and CME holds and manages its own positions and collateral, and independently determines the amount of margin that it will make available for cross-margining, referred to as the "residual margin amount," that remains after each of FICC and CME conducts its own internal offsets. FICC then computes the amount by which the cross-margining participant's margin requirement can be reduced at each clearing organization ("cross-margining reduction") by comparing the participant's positions and the related margin requirements at FICC as against those at CME. FICC offsets each cross-margining participant's residual margin amount based on related positions at FICC against the offsetting residual margin amounts of the participant or its affiliate at CME. FICC and CME may then reduce the amount of collateral that they collect to reflect the offsets between the cross-margining participant's positions at FICC and its or its affiliate's positions at CME.

Under the proposed NYPC Arrangement, a member of FICC that is also an NYPC clearing member ("Joint Clearing Member") could, at the discretion of NYPC and FICC, and in accordance with the provisions of the GSD and NYPC Rules, elect to have its margin requirement with respect to eligible positions in its proprietary account at NYPC and its margin requirement with respect to eligible positions at FICC calculated by taking into consideration the net risk of such eligible positions at both clearing organizations. In addition, an affiliate of a member of FICC that is a clearing member of NYPC ("Permitted Margin Affiliate") could agree to have its positions and margin at NYPC margined together with eligible positions of the FICC member.

The NYPC Arrangement would allow (i) Joint Clearing Members and (ii) members of FICC and their Permitted Margin Affiliates to have their margin requirements for FICC and NYPC positions determined on a combined basis, with FICC and NYPC each having a security interest in such members' margin deposits and other collateral to secure such members' obligations to FICC and NYPC.

The following types of FICC members would not be eligible to participate in the NYPC Arrangement in order to allow FICC to maintain segregation of certain business or member types that are treated differently for purposes of loss allocation: (i) GSD Sponsored Members, (ii) Inter-Dealer Broker Netting Members and (iii) Dealer Netting Members with respect to their segregated brokered accounts. In addition, in order for a Banking Netting Member to combine its accounts into a Margin Portfolio with any other accounts, it would have to demonstrate to the satisfaction of FICC and NYPC that doing so would comply with the regulatory requirements applicable to the Bank Netting Member.

In order to distinguish between the CME Arrangement and the NYPC Arrangement, FICC is proposing to amend the definition of "Cross-Margining Agreement" in the GSD Rules, which would be defined as an agreement entered into between FICC and one or more FCOs (as defined in GSD Rule 1) pursuant to which a Cross-Margining Participant, at the discretion of FICC and in accordance with the provisions of the GSD Rules, could elect to have its Required Fund Deposit with respect to Eligible Positions at FICC, and its or its Permitted Margin Affiliate's, if applicable, margin requirements with respect to Eligible Positions at such FCO(s), calculated either (i) by taking into consideration the net risk of such Eligible Positions at each of the clearing organizations or (ii) as if such positions were in a single portfolio. Therefore, the CME Arrangement would fall into clause (i) of the definition whereas the NYPC Arrangement would fall into clause (ii). Conforming changes would be made to GSD Rule 1, Definitions, relating to cross-margining. GSD Rule 43, Cross-Margining Arrangements, also would be amended to add provisions regarding single-portfolio margining (*i.e.,* the proposed NYPC Arrangement). To implement this proposal, FICC and NYPC would enter into a cross-margining agreement ("NYPC Agreement"), which would be appended to the GSD Rules and made a part thereof.

Pursuant to the NYPC Agreement, and consistent with previous approvals of cross-margining arrangements involving

[3] The Commission has modified the text of the summaries prepared by FICC.

[4] The specific language of the proposed provision can be found at *http://www.dtcc.com/downloads/legal/rule_filings/2010/ficc/2010-09.pdf.*

[5] NYPC's DCO application may be viewed on the CFTC's Web site: *http://www.cftc.gov/IndustryOversight/IndustryFilings/index.htm.*

DCOs, cross-margining with certain NYPC positions would be limited to positions carried in proprietary accounts of clearing members of NYPC. Customers of NYPC clearing members would not be permitted to participate in the cross-margining arrangement. Participation in the NYPC Arrangement would be voluntary. Participants and their Permitted Margin Affiliates would be required to execute the requisite cross-margining participant agreements (the Joint Member or Affiliated Member version, as applicable), which are exhibits to the NYPC Agreement.

FICC would be responsible for performing the margin calculations in its capacity as the Administrator under the terms of the NYPC Agreement. Specifically, FICC would determine the combined FICC Clearing Fund and NYPC Original Margin [6] requirement for each participant. FICC would calculate those requirements using a Value-at-Risk ("VaR") methodology, with a 99 percent confidence level and a 3-day liquidation period for cash positions and a 1-day liquidation period for futures positions. In addition, each cross-margining participant's one-pot margin requirement would be subject to a daily back test, and a "coverage component" would be applied and charged to the participant in the event that the back test reflects insufficient coverage. The one-pot margin requirement for each participant would then be allocated between FICC and NYPC in proportion to the clearing organizations' respective "stand-alone" margin requirements—in other words, an amount reflecting the ratio of what each clearing organization would have required from that participant if it was not participating in the cross-margining program ("Constituent Margin Ratio"). The NYPC Agreement provides that either FICC or NYPC could, at any time, require additional margin to be deposited by a participant above what is calculated under the NYPC Agreement based upon the financial condition of the participant, unusual market conditions or other special circumstances. The standards that FICC proposes to use for these purposes are the standards currently contained in the GSD Rules, so that notwithstanding the calculation of a member's Clearing Fund requirement pursuant to the NYPC Agreement, FICC would still retain the rights contained within the GSD Rules to charge additional Clearing Fund under the circumstances specified in the GSD Rules. For example, the GSD Rules currently contain a provision providing that if a Dealer Netting Member falls below its minimum financial requirement it shall be required to post additional Clearing Fund equal to the greater of (i) $1 million or (ii) 25 percent of its Required Fund Deposit.

FICC would utilize the same VaR engine for futures and cash positions. Under this method, the prior 250 days of historical information for futures positions and the prior 252 days of historical information for cash positions, including prices, spreads and market variables such as Treasury zero-coupon yields and London Interbank Offered Rate curves, are used to simulate the market environments in the forthcoming 1 day for futures positions and the forthcoming 3 days for cash positions. Projected portfolio profits and losses are calculated assuming these simulated environments will actually be realized. These simulations would be used to calculate VaR. Historical simulation is a continuation of the FICC margin methodology.

With respect to the confidence level, FICC currently utilizes extreme value theory to determine the 99th percentile of loss distribution. Upon implementation of the FICC–NYPC one-pot margining, FICC would utilize a front-weighting mechanism to determine the 99th percentile of loss distribution. This front-weighting mechanism would place more emphasis on more recent observations. Additionally, FICC's VaR engine would be enhanced to accommodate more securities; this means that certain CUSIPs which are now considered to be "non-priceable" (because, for example, of a lack of historical information regarding the security) and subject to a "haircut" requirement (*i.e.,* fixed percentage charge) where offsets are not permitted, would be treated as "priceable" and therefore included in the core VaR calculation.

Based on preliminary analyses, FICC expects that the FICC VaR component of the Clearing Fund requirement may be reduced by as much as approximately 20 percent for common FICC–NYPC members as a result of the NYPC Arrangement. FICC has performed backtesting analysis to verify that there will be sufficient coverage after the FICC–NYPC cross-margining reductions are applied. Moreover, an independent firm has performed backtesting analysis of the FICC–NYPC one-pot methodology, as well as FICC's and NYPC's stand-alone methodologies. Both such analyses demonstrated that the VaR methodologies provide coverage at the 99th confidence level.

In the event of the insolvency or default of a member that participates in the NYPC Arrangement, the positions in such participant's one-pot portfolio including, where applicable, the positions of its Permitted Margin Affiliate at NYPC, would be liquidated by FICC and NYPC as a single portfolio and the liquidation proceeds would be applied to the defaulting participant's obligations to FICC and NYPC in accordance with the provisions of the NYPC Agreement.

The NYPC Agreement provides for the sharing of losses by FICC and NYPC in the event that the one-pot portfolio margin deposits of a defaulting participant would not be sufficient to cover the losses resulting from the liquidation of that participant's trades and positions:

- If either clearing organization had a net loss ("worse-off party"), and the other had a net gain ("better-off party") that is equal to or exceeds the worse-off party's net loss, then the better-off party pays the worse-off party the amount of the latter's net loss. In this scenario, one clearing organization's gain would extinguish the entire loss of the other clearing organization.
- If either clearing organization had a net loss ("worse-off party") and the other clearing organization had a net gain ("better-off party") that is less than or equal to the worse-off party's net loss, then the better-off party would pay the worse-off party an amount equal to the net gain. Thereafter, if such payment did not extinguish the net loss of the worse-off party, the better-off party would pay the worse-off party an amount equal to the lesser of: (i) The amount necessary to ensure that the net loss of each clearing organization is in proportion to the Constituent Margin Ratio or (ii) the better-off party's "Maximum Transfer Payment" less the better-off party's net gain. The "Maximum Transfer Payment" would be defined with respect to each clearing organization to mean an amount equal to the product of (i) the sum of the margin reductions of the clearing organizations and (ii) the other clearing organization's Constituent Margin Ratio—in other words, the amount by which the other clearing organization reduced its margin requirements in reliance on the cross-margining arrangement. In this scenario, one clearing organization's gain does not completely extinguish the entire loss of the other clearing organization, and the better-off clearing organization would be required to make an additional payment to the worse-off clearing organization. This potential additional payment would be capped as described in this paragraph.

[6] Original Margin is the NYPC equivalent of the Clearing Fund.

• If either clearing organization had a net loss, and the other had the same net loss, a smaller net loss, or no net loss, then:

○ In the event that the net losses of the clearing organizations were in proportion to the Constituent Margin Ratio, no payment would be made.

○ In the event that the net losses of the clearing organizations were not in proportion to the Constituent Margin Ratio, then the clearing organization that had a net loss which was less than its proportionate share of the total net losses incurred by the clearing organizations ("better-off party") would pay the other clearing organization ("worse-off party") an amount equal to the lesser of: (i) The better-off party's Maximum Transfer Payment or (ii) the amount necessary to ensure that the clearing organizations' respective net losses were allocated between them in proportion to the Constituent Margin Ratio.

• If FICC had a net gain after making a payment as described above, FICC would pay to NYPC the amount of any deficiency in the defaulting member's customer segregated funds accounts or, if applicable, such defaulting member's Permitted Margin Affiliate held at NYPC up to the amount of FICC's net gain.

• If FICC received a payment under the Netting Contract and Limited Cross-Guaranty ("Cross-Guaranty Agreement") to which it is a party (*i.e.,* because FICC had a net loss), and NYPC had a net loss, FICC would share the cross-guaranty payment with NYPC pro rata, where such pro rata share is determined by comparing the ratio of NYPC's net loss to the sum of FICC's and NYPC's net losses.[7] This allocation is appropriate because the "single pot" combines FICC and NYPC proprietary positions into a unified portfolio that would be margined and liquidated as a single unit. This requirement would not apply after NYPC becomes a party to the Cross-Guaranty Agreement. The GSD Rules would further provide that in the event of a close out of a cross-margining participant under the NYPC Agreement, FICC would offset its liquidation results first with NYPC because the liquidation will essentially be of a single portfolio and then present its results for purposes of the Cross-Guaranty Agreement.

The GSD Rules would further provide that FICC would offset its liquidation results in the event of a close out of a cross-margining participant in the NYPC Agreement first with NYPC because the liquidation would essentially be of a single Margin Portfolio and then would present its results for purposes of the multilateral Cross-Guaranty Agreement.

2. Other GSD Proposed Rule Changes

The proposed rule filing would allow FICC to permit margining of positions held in accounts of an affiliate of a member within GSD, akin to the inter-affiliate margining in the CME Arrangement and the proposed NYPC Arrangement. Thus, as in those arrangements, if a GSD member defaults, its GSD Clearing Fund deposits, cash settlement amounts and other available collateral would be available to FICC to cover the member's default, as would the GSD Clearing Fund deposits and available collateral of any Permitted Margin Affiliate with which it cross-margins.

Loss Allocation

Under the current loss allocation methodology in GSD Rule 4, Clearing Fund and Loss Allocation, GSD allocates losses first to the most recent counterparties of a defaulting member. The proposed changes to GSD Rule 4 would delete this step in the loss allocation methodology in order to achieve a more equitable result. Instead, any loss allocation would first be made against the retained earnings of FICC attributable to GSD in an amount up to 25 percent of FICC's retained earnings or such higher amount as may be approved by the Board of Directors of FICC.

If a loss still remained, GSD would divide the loss between the FICC Tier 1 Netting Members and the FICC Tier 2 Netting Members. "Tier One Netting Member" and "Tier Two Netting Member" have been introduced in the GSD Rules to reflect two different categories which have been designated as such by FICC for loss allocation purposes. Currently, only investment companies registered under the Investment Company Act of 1940, as amended, would qualify as Tier 2 Netting Members. Tier 2 Netting Members would only be subject to loss to the extent they traded with the defaulting members, due to regulatory requirements applicable to them.

Tier 1 Netting Members would be allocated the loss applicable to them first by assessing the Clearing Fund deposit of each such member in the amount of up to $50,000, equally. If a loss remains, Tier 1 Netting Members would be assessed ratably in accordance with the respective amounts of their Required Fund Deposits based on the average daily amount of the member's Required Fund Deposit over the prior twelve months. Consistent with the current Rules, GSD members that are acting as Inter-Dealer Brokers would be limited to a loss allocation of $5 million in respect of their inter-dealer broker activity.

Margin Calculation—Intraday Margin Calls

In order to facilitate the NYPC Arrangement, GSD is proposing to adopt the futures clearing house convention of calculating Clearing Fund requirements twice per day. GSD would retain its regular calculation and call as set out in the GSD Rules. An additional daily intra-day calculation and call ("Intraday Supplemental Clearing Fund Deposit") would be made subject to a threshold that would be identified in FICC's risk management procedures. In addition, the GSD would process a mark-to-market pass-through twice per day, instead of the current practice of once daily. The second collection and pass-through of mark-to-market amounts would include a limited set of components to be defined in FICC's risk management procedures. All mark-to-market debits would be collected in full. FICC would pay out mark-to-market credits only after any intra-day Clearing Fund deficit is met.

Since GSD would be recalculating and margining a GSD Member's exposure intra-day, the margin calculation methodology set forth in GSD Rule 4, Clearing Fund and Loss Allocation, would be revised to eliminate the Margin Requirement Differential component of the FICC Clearing Fund calculation. In addition, GSD Rule 4 would be revised to provide that in the case of a Margin Portfolio that contains accounts of a Permitted Margin Affiliate, FICC would apply the highest VaR confidence level applicable to the GSD Member or the Permitted Margin Affiliate. Application of a higher VaR confidence levels would result in a higher margin rate. Consistent with current GSD Rules, a minimum Required Fund Deposit of $5 million would apply to a member that maintains broker accounts.

Consolidated Funds-Only Settlement

The funds-only settlement process at GSD currently requires a member to appoint a settling bank that will settle the member's net debit or net credit amount due to or from the division by way of the National Settlement Service of the Board of Governors of the Federal Reserve System ("NSS"). Any funds-only settling bank that would settle for a member that is also an NYPC member or that would settle for a member and a Permitted Margin Affiliate that is an

[7] The other parties to the Cross-Guaranty Agreement are The Depository Trust Company, National Securities Clearing Corporation and The Options Clearing Corporation.

NYPC member would have its net-net credit or debit balances at each clearing corporation, other than balances with respect to futures positions of a "customer" as such term is defined in CFTC Regulation 1.3(k), aggregated and netted for operational convenience and would pay or be paid such netted amount. The proposed rule change makes clear that, notwithstanding the consolidated settlement, the member would remain obligated to GSD for the full amount of its funds-only settlement amount.

Submission of Locked-in Trades From NYPC

The current GSD Rules allow for submission of "locked-in trades" (*i.e.,* trades that are deemed compared when the data on the trade is received from a single source) submitted by a locked-in trade source on behalf of a GSD Member. Currently, designated locked-in trade sources are Federal Reserve Banks on behalf of the Treasury Department, Freddie Mac and GCF-Authorized Inter-Dealer Brokers for GCF Repo transactions. Under the proposed rule change, GSD Rule 6C, Locked-In Comparison, would be amended to include NYPC as an additional locked-in trade source. This would be necessary because there would be futures transactions cleared by NYPC that would proceed to physical delivery. NYPC would submit the trade data as a locked-in trade source for processing through FICC, identifying the GSD Member that had authorized FICC to accept the locked-in trade from NYPC. Once these transactions are submitted to FICC, they would no longer be futures but rather would be in the form of buy-sells eligible for processing by GSD. As would be the case with other locked-in trade submissions accepted by FICC, the GSD Member designated in the trade information would have executed FICC documentation evidencing to FICC its authorization of NYPC.

Deletion of Category 1/Category 2 Distinction

The proposed rule change would delete the legacy characterization of certain types of members as either "Category 1" or "Category 2", a distinction that currently applies to Dealer Netting Members, Futures Commission Merchant Netting Members and Inter-Dealer Broker Netting Members at GSD. Historically, the two categories were used to margin lower capitalized members (*i.e.,* Category 2) at a higher rate. With the adoption of the VaR margin methodology, this distinction is no longer necessary. Rather than margin Netting Members at higher rates solely due to a single static capitalization threshold, FICC is able, by use of the VaR margin methodology, to margin Netting Members at a higher rate by applying a higher confidence level against any Netting Member which, regardless of size, FICC believes may pose a higher risk.

With the deletion of the Category 1/Category 2 distinction, Section 1 of GSD Rule 13, Funds-Only Settlement, is proposed to be changed to provide that all Netting Members could receive forward mark adjustment payments, subject to FICC's general discretion to withhold credits that would be otherwise due to a distressed Netting Member.

Amendment of CME Agreement

The proposed NYPC Arrangement would necessitate an amendment to the CME Agreement to clarify that the NYPC Arrangement would take priority over the CME Arrangement when determining residual FICC positions that would be available for cross-margining with the CME. In addition, when calculating and presenting liquidation results under the CME Agreement, the amendment would provide that FICC's liquidation results would include FICC's liquidation results in combination with NYPC's liquidation results because the NYPC Agreement would provide for a right of first offset between FICC and NYPC. The CME Agreement showing the proposed changes was filed as an attachment to the proposed rule change as part of Exhibit 5.

3. Summary of Other Proposed Changes to Rule Text

In GSD Rule 1, Definitions, the following definitions are proposed to be added, revised or deleted:

The terms "Broker Account" and "Dealer Account" would be added to the text of the GSD Rules. A "Broker Account" is an account that is maintained by an inter-dealer broker netting member, or a segregated broker account of a netting member that is a not an inter-dealer broker netting member. An account that is not a Broker Account is referred to as a Dealer Account.

"Coverage Charge" would be revised to refer to the additional charge with respect to the member's Required Fund Deposit (rather that its VaR Charge) which brings the member's coverage to a targeted confidence level.

"Current Net Settlement Positions" would be corrected to clarify its current intent, that it is calculated with respect to a certain Business Day and not necessarily on that day, since it may be calculated after market close on the day prior to its application (*i.e.,* before or after midnight between the close of business one day and the open of business on the next day).

"Excess Capital Differential" would be corrected to refer to the amount by which a member's VaR Charge exceeds its Excess Capital, instead of by reference to the amount by which its required Clearing Fund deposit exceeds its Excess Capital.

"Excess Capital Premium Calculation Amount" would be deleted because, with the introduction of VaR methodology, the calculation is no longer applicable. The terms "Excess Capital Differential" and "Excess Capital Ratio" would be amended to delete archaic references to "Excess Capital Premium Calculation Amount" and to refer instead to the comparison of a member's capital calculation to its VaR Charge. In addition, the text of Section 14 of GSD Rule 3 would be amended to provide that the Excess Capital Premium charge applies to any type of entity that is a GSD Netting Member rather than limiting its applicability to only the specified types formerly identified in the text.

"Excess Capital Ratio" would be amended to mean the quotient resulting from dividing the amount of a member's VaR Charge by its Excess Net Capital.

"GSD Margin Group" would be added to refer to the GSD Accounts within a Margin Portfolio.

"Margin Portfolio" would be added to refer to the positions designated by the member as grouped for cross-margining, subject to the rules set forth in GSD Rule 4. Dealer Accounts and Broker Accounts could not be combined in a common Margin Portfolio. A Sponsoring Member Omnibus Account could not be combined with any other Accounts.

"Unadjusted GSD Margin Portfolio Amount" would be added to define the amount calculated by GSD with regard to a Margin Portfolio, before application of premiums, maximums or minimums. It includes the VaR Charge and the Coverage Charge for GSD. In the case of a cross-margining participant of GSD, the Unadjusted GSD Margin Portfolio Amount also would include the cross-margining reduction, if any.

The terms "Category 2 Gross Margin Amount", "Margin Adjustment Amount", "Repo Volatility Factor" and "Revised Gross Margin Amount" would be deleted from GSD Rule 1 since they are no longer used elsewhere in the GSD Rules. The Schedule of Repo Volatility Factors would be deleted because it is no longer applicable.

In Section 2 of GSD Rule 3, Ongoing Membership Requirements, the

requirement that GCF counterparties submit information relating to the composition of their NFE-related accounts, would be amended to require the submission of such information periodically, rather than on a quarterly basis. GSD currently requires this information every other month and by this change, FICC could institute periodic reporting on a schedule that is appropriate at such time, in response to current conditions.

In Section 9 of GSD Rule 4, Clearing Fund and Loss Allocation, concerning the return of excess deposits and payments, FICC's discretion to withhold the return of excess Clearing Fund to a member that has an outstanding payment obligation to FICC would be changed to refer to FICC's determination that the member's anticipated transactions or obligations in the near future (rather than specifying over the next 90 calendar days, as in the current text) may reasonably be expected to be materially different than those of the recent past rather than the 90 prior calendar days, as in the current text.

In addition, technical and clarifying changes are proposed to be made to the rules and cross-references to rule sections contained throughout. The rules have been reviewed by FICC and proposed to be corrected as needed to reflect the correct rule section references as originally intended.

The proposed rule change to permit cross-margining of positions held at FICC and NYPC may increase the available offsets among positions held at FICC and NYPC, thereby allowing a more efficient use of participant collateral and promoting efficiencies in the fixed income securities marketplace. The proposed rule change is therefore consistent with the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder because it supports the prompt and accurate clearance and settlement of securities transactions.

B. Self-Regulatory Organization's Statement on Burden on Competition

FICC does not believe that the proposed rule change would have any negative impact, or impose any burden, on competition. To the contrary, FICC believes NYPC would be a powerful catalyst for competition by offering all FICC members as well as other futures exchanges and DCOs an equal opportunity to benefit from the innovative efficiencies of "one-pot" portfolio margining. FICC states that, because of these unique and groundbreaking open access policies, NYPC would set a new industry standard as the most fair, open and accessible DCO in the market.

The NYPC Arrangement has been structured in a way that access to, and the benefits of, the "single pot" are provided to other futures exchanges and DCOs on fair and reasonable terms as described below. The proposed single pot is required to be accessed by other futures exchanges and DCOs via NYPC.[8] As described below, this is done to ensure the uniformity and consistency of risk methodologies and risk management, to simplify and standardize operational requirements for new participants and to maximize the effectiveness of the one-pot arrangement.

The proposed one-pot cross-margining method would allow members to post margin based on the net risk of their aggregate positions across asset classes, thereby releasing excess capital into the economy for more efficient use. By linking positions in fixed income securities held at FICC with interest rate products traded on NYSE Liffe U.S. and other designated contract markets ("DCMs"), the proposal between FICC and NYPC has the potential to create a substantial pool of highly correlated assets that are capable of being cross-margined. This pool will deepen as more DCOs and DCMs join NYPC, creating the potential for even greater margin and risk offsets.

NYPC will initially clear certain contracts transacted on NYSE Liffe U.S. NYPC will clear for additional DCMs that are interested in clearing through NYPC as soon as it is feasible for NYPC do so. Such additional DCMs will be treated in the same way as NYSE Liffe US, *i.e.,* they must: (i) Be eligible under the rules of NYPC, (ii) contribute to NYPC's guaranty fund, (iii) demonstrate that they have the operational and technical ability to clear through NYPC and (iv) enter into a clearing services agreement with NYPC.

Moreover, NYPC has also committed to admit other DCOs as limited purpose participants as soon as it is feasible, thereby allowing such DCOs to participate in the one-pot margining arrangement with FICC through their limited purpose membership in NYPC.[9] Such DCOs will be required to satisfy pre-defined, objective criteria set forth in NYPC's rules.[10] In particular, such DCOs must: (i) Submit trades subject to the limited purpose participant agreement between NYPC and each DCO that would otherwise be cleared by the DCO to NYPC, with NYPC acting as central counterparty and DCO with respect to such trades,[11] (ii) be eligible under the rules of NYPC and agree to be bound by the NYPC rules,[12] (iii) contribute to NYPC's guaranty fund,[13] (iv) provide clearing services to unaffiliated markets on a "horizontal" basis (*i.e.,* not limit their provision of clearing services on a vertical basis to a single market or limited number of markets) [14] and (v) agree to participate using the uniform risk methodology and risk management policies, systems and procedures that have been adopted by FICC and NYPC for implementation and administration of the NYPC Arrangement.[15] Reasonable clearing fees will be allocated between NYPC and the limited purpose participant DCO as may be agreed by NYPC and the DCO, taking into account factors such as the cost of services (including capital expenditures incurred by NYPC), technology that may be contributed by the limited purpose participant, the volume of transactions, and such other factors as may be relevant.

As a basic structure, FICC and NYPC anticipate that the limited purpose participant agreement will encompass the foregoing requirements for limited purpose membership contained in NYPC's rules. Because each DCO could present different operational issues, terms beyond the basic rules provisions will be discussed on a case-by-case basis and reflected in the respective limited purpose participant agreement accordingly. FICC and NYPC envision that a possible structure for DCO limited purpose participation could be an omnibus account, with the DCO limited

[8] Section 16 of the NYPC Agreement provides that FICC covenants and agrees that, during the term of the NYPC Agreement: (i) NYPC-cleared contracts shall have priority for margin offset purposes over any other cross-margining agreement; (ii) FICC will not enter into any other cross-margining agreement if such agreement would adversely affect the priority of NYPC and FICC under the NYPC Agreement with respect to available assets; and (iii) FICC will not, without the prior written consent of NYPC, amend the CME Agreement, if such further amendment would adversely affect NYPC's right to cross-margin positions in eligible products prior to any cross-margining of CME positions with FICC-cleared contracts or adversely affect the priority of NYPC and FICC under the NYPC Agreement with respect to available assets.

[9] *See* NYPC Agreement, Section 14.

[10] NYPC's rules can be viewed as part of NYPC's DCO registration application on the CFTC's Web site (*http://www.cftc.gov*), as well as on NYPC's Web site (*http://www.nypclear.com*).

[11] *See* NYPC Rule 801(b)(1).

[12] *See* NYPC Rule 801(b)(2).

[13] Pursuant to NYPC Rule 801(b)(3), limited purpose participants will be required to make a contribution to the NYPC guaranty fund in form and substance similar to and in an amount not less than the NYSE guaranty, which will initially consist of a $50,000,000 guaranty secured by $25,000,000 in cash during the first year of NYPC's operations.

[14] *See* NYPC Rule 801(c)(1)(i).

[15] *See* NYPC Rule 801(c)(1)(ii).

purpose participant essentially acting as a processing agent for its clearing members vis-a-vis NYPC with respect to the submission of eligible positions of the DCO's clearing members to NYPC for purposes of inclusion in the one-pot arrangement with FICC. In order for their eligible positions to be included in the single pot, clearing members of the DCO limited purpose participant would need to authorize the DCO to submit their positions to NYPC. Under such a structure, the DCO would be responsible for fulfilling all margin and guaranty fund requirements associated with the activity in the omnibus account.

With respect to both the clearance of trades for unaffiliated DCMs and the admission of DCOs as limited purpose participants, NYPC has committed that it will complete the substantial operational effort of admitting and integrating another DCM or DCO as soon as feasible, but no later than 24 months from the start of operations. FICC states that this provision is necessary to the effective implementation of the one-pot cross-margining methodology and that this narrow window of time is required to allow for refinement and enhancement of certain systems post go-live, to allow time for the possible simultaneous integration with multiple major clearing members so that fair market access is assured, and to allow time for the completion of the material operational challenge of connecting and integrating with the separate technologies of other DCMs and/or DCOs. However, this period does not preclude NYPC from engaging in discussions with other DCMs and DCOs immediately, and NYPC is currently, in fact, having such discussions with interested parties. NYPC anticipates that it will be able to complete the integration of additional DCMs and/or DCOs in advance of that two-year period.

DCMs and DCOs will be required to contribute to the NYPC guaranty fund in the same manner as NYSE Euronext has done. This provision is designed to ensure that the financial resources supporting NYPC remain robust as the risks of new DCMs and/or DCOs are introduced. As NYPC's business grows over time and more participants join NYPC and contribute to the guaranty fund, FICC would expect that the contribution from DCMs (including NYSE Euronext) and DCOs could be reduced across these entities on a pro rata basis as concentration risk is reduced. It should be noted that exchange contribution to clearing organization default resources is standard practice both in the U.S. and in Europe.

FICC further believes that the NYPC Arrangement meets the competition standard of Section 17A of the Exchange Act, which provides that the rules of a clearing agency may not impose any burden on competition not necessary or appropriate in furtherance of the purposes of the Exchange Act. The proposed one-pot method of cross-margining will allow NYPC to compete in the market for clearing U.S. dollar denominated interest rate futures products. NYPC, in turn, will commit to provide fair access to all DCMs and DCOs that are interested in participating as described above. FICC members and other market participants will benefit greatly from the entry of NYPC as a competitor in the U.S. futures market via greater competition, increased capital and operational efficiencies, and enhanced transparency.

FICC's cross-margining arrangement with NYPC will enable NYPC to provide an innovative and highly efficient clearing solution to the U.S. futures market, while, at the same time, providing enhanced cross-margining benefits to FICC members. By their terms, the rules and provisions governing the FICC–NYPC proposal would not affect the ability of another clearing organization to access NYPC, only the means of such access. As stated above, any qualified DCO may access the single pot and NYPC will offer the service on non-discriminatory terms to all qualified participants. FICC states that these unprecedented open access provisions are far superior to the cross-margining arrangements offered by any of NYPC's competitors and that there is no other clearinghouse in the global futures market that is similarly obligated by charter to inter-operate with other DCMs and/or DCOs, including, potentially, direct competitors.

With the recent passage of the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act"),[16] which states that "under no circumstances shall a derivatives clearing organization be compelled to accept the counterparty credit risk of another clearing organization",[17] this type of open access clearing for futures becomes even more difficult to achieve unless accomplished through industry-led initiative. NYPC's unprecedented admission policy sets such a new industry standard by both providing market participants with a real alternative from the dominant vertical clearing model and creating a level playing field that will enable multiple new entrants to compete in the U.S. futures market.

FICC strongly believes that the ability to deliver one-pot margin efficiencies depends on FICC's ability to appropriately manage its risk, which FICC believes can best be achieved by requiring other DCOs to link into NYPC to join the one-pot arrangement. Utilizing NYPC as a standardized portal for the one-pot arrangement provides FICC with needed assurance, in light of NYPC's contractual obligations to FICC, that operational issues and risk methodologies and management are understood, uniform and consistent for all participants in the one-pot arrangement. Without such a mechanism, this transformative innovation could not be delivered to the marketplace in a manner that minimizes systemic risk, thereby depriving the U.S. futures market of the most promising opportunity it has seen to-date for true competition.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants or Others

Prior to submitting this rule filing to the Commission, FICC received a letter in 2009 from the ELX Futures Exchange which encouraged FICC to reconsider its plan to enter into a relationship with NYSE. FICC has also received two letters from NASDAQ OMX in 2010 questioning the manner in which DTCC determined to enter into the joint venture with NYSE to form NYPC, arguing that the venture is contrary to DTCC's mission and suggesting that DTCC consider instead an enhanced form of "two-pot" cross-margining. FICC will notify the Commission of any additional written comments.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Within 45 days of the date of publication of this notice in the **Federal Register** or within such longer period up to 90 days (i) as the Commission may designate if it finds such longer period to be appropriate and publishes its reasons for so finding or (ii) as to which the self-regulatory organization consents, the Commission will:

(A) By order approve or disapprove the proposed rule change or

(B) Institute proceedings to determine whether the proposed rule change should be disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and

[16] Public Law 111–203 (July 21, 2010). *See* Dodd-Frank Wall Street Reform and Consumer Protection Act § 725(h).

[17] *See* Section 725(h) of the Dodd-Frank Act.

arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act and with respect to the following:

• The Commission requests comment on all aspects of the proposed single pot margining arrangement, including the risk management of the combined positions cleared by GSD and NYPC. What unique risk management issues does a single pot cross margining arrangement raise in comparison with the two pot arrangements previously approved by the Commission? Would the VaR margining methodology proposed to be used by FICC as the administrator of the single-pot margining arrangement adequately measure the risk exposures of the positions? Are there other risk management standards or requirements that should be established regarding a single-pot margining methodology?

• The Commission requests comment on the proposed loss allocation between FICC and NYPC. Does the loss allocation arrangement, in all scenarios, fairly reflect the risks presented by each clearing entity? Does it pose any undue risks to either FICC or NYPC or to any of their participants? If so, how would those risks be remediated?

• The Commission requests comment on the burden on competition, if any, that the proposed single pot cross margining arrangement may have. Does the proposal to admit other DCOs as limited purpose participants of NYPC mitigate any perceived burden on competition? If not, why not? Is there a more effective means of address concerns related to competition?

• The Commission requests comment on the implementation timeframe for the single pot margining arrangement and on the potential 24 month time period before unaffiliated DCOs or DCMs are admitted to the cross-margining arrangement. What are commenters' views on the proposed time period? Is a shorter or longer time period justified based on the operational issues associated with starting the new cross-margining arrangement?

• The Commission requests comment on the proposed guarantee fund contribution required of all DCOs (including NYPC) and DCMs. Is a sizable guarantee fund contribution needed to assure the safeguarding of securities and funds within the cross-margining arrangement? Is a higher or lower contribution justified? What is the impact on competition of such a requirement?

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 e-mail to *rule-comments@sec.gov.* Please include File Number SR–FICC–2010–09 on the subject line.

Paper Comments

• Send paper comments in triplicate to Elizabeth M. Murphy, Secretary, Securities and Exchange Commission, 100 F Street, NE., Washington, DC 20549–1090.

All submissions should refer to File Number SR–FICC–2010–09. This file number should be included on the subject line if e-mail is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for Web site viewing and printing in the Commission's Public Reference Section, 100 F Street, NE., Washington, DC 20549–1090, on official business days between the hours of 10 a.m. and 3 p.m. Copies of such filings will also be available for inspection and copying at the principal office of FICC and on FICC's Web site at *http://dtcc.com/downloads/legal/rule_filings/2010/ficc/2010-09.pdf.* All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–FICC–2010–09 and should be submitted on or before December 21, 2010.

For the Commission by the Division of Trading and Markets, pursuant to delegated authority.[18]

Elizabeth M. Murphy,

Secretary.

[FR Doc. 2010–30034 Filed 11–29–10; 8:45 am]

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[18] 17 CFR 200.30–3(a)(12).

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–63368; File No. SR–NSCC–2010–15]

Self-Regulatory Organizations; National Securities Clearing Corporation; Notice of Filing of Proposed Rule Change Relating to Establishing an Automated Service for the Processing of Transfers, Replacements, and Exchanges of Insurance and Retirement Products

November 23, 2010.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (the "Act"),[1] notice is hereby given that on November 18, 2010, the National Securities Clearing Corporation ("NSCC") filed with the Securities and Exchange Commission ("Commission") the proposed rule change as described in Items I and II below, which Items have been prepared primarily by NSCC. 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 proposed rule change would allow NSCC to add a new automated service to process transfers, replacements, and exchanges of insurance and retirement products through NSCC's Insurance and Retirement Processing Service ("IPS").

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, NSCC 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. NSCC has prepared summaries, set forth in sections A, B, and C below, of the most significant aspects of these statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

The purpose of the proposed rule change is to allow NSCC to offer a new automated service to transfer, replace, or exchange (collectively referred to as a "Replacement") an existing insurance contract that is eligible for NSCC's IPS.

[1] 15 U.S.C. 78s(b)(1).

1. Background

Currently, the Replacement process is not conducted through a centralized or automated process and requires extensive manual processing of paper forms and other documents. The insurance industry currently utilizes Transfer of Assets forms, 1035 Exchange Forms, or other similar paperwork (collectively referred to as "TOA") to document the request and the authorization for a Replacement. Currently, once an authorization has been obtained and the needed forms have been executed, the documents are transmitted by facsimile, mail, electronic mail, or other means. Because there is no centralized and automated mechanism for processing Replacements, there is also no centralized and automated settlement process for managing the movement of funds associated with Replacements. This lack of centralized and automated processing makes the overall Replacement process time consuming and labor intensive.

2. Proposed Amendments

NSCC proposes to add a new Section 11 to Rule 57 ("Insurance and Retirement Processing Services") so that NSCC can provide a service that will centralize and automate the processing of Replacements and will decrease the administrative burden on and risk to NSCC Members, Insurance Carrier/Retirement Service Members, Mutual Fund/Insurance Services Members, and Data Services Only Members.

Under the proposal, an Insurance Carrier/Retirement Services Member would be able to initiate a Replacement ("Receiving Carrier") by submitting an instruction to NSCC to process a Replacement ("Request for Replacement"). NSCC would then transmit the Request for Replacement to the designated Insurance Carrier/Retirement Services Member ("Delivering Carrier"). The Delivery Member would have to confirm, reject, or request modification to the Request for Replacement in the format and by such time as established by NSCC. NSCC would delete from the IPS transfers that are not confirmed or rejected. The IPS would also incorporate and automate the settlement of confirmed Replacements into NSCC's existing settlement process for IPS.

NSCC states that the proposed service would decrease the operational risk inherent in the processing of paper documentation, would provide a uniform platform for Replacements, and would provide uniform rules and procedures for Replacements.

Under the proposed new Section 11, the Delivering Carrier waives the obligation of the Receiving Carrier to submit a signed physical copy of the TOA unless specifically required by state or local law. The transfer of any physical documents related to Replacements that are required under state law would continue to be transferred outside of NSCC. It would be the sole obligation of the Insurance Carrier/Retirement Services Members involved in the Replacement to confirm that all legal requirements, including any requirement to obtain a signed physical copy of the TOA imposed by applicable state or local law, are satisfied prior to confirming a Request for Replacement. The Replacement service would permit the transfer of documentation as an attachment to the Request for Replacement, but this would not be a requirement to utilize the Replacement service. The waiver of the obligation to submit signed physical documents is intended to improve the orderly processing of Replacements.

Finally, NSCC proposes to update the Fee Schedule to incorporate the fees associated with processing a Request for Replacement. The fee associated with a Request for Replacement, including submitting incremental replacement status messages and money settlement would be $5.00 per Request for Replacement. The cost would be divided between the carriers associated with the transaction with the Receiving Carrier responsible for $3.75 per transaction, which is three-fourths of the cost of the Replacement service, and the Delivering Carrier responsible for the remaining $1.25 fee, which is one-fourth of the cost. The fee associated with obtaining the status of a pending Request for Replacement, including incremental statuses, would be $1.00 per pending status request. The cost would be divided evenly between the Receiving Carrier and the Distributor, each of which would be responsible for paying a fee of $0.50.

3. Implementation Timeframe

NSCC intends for the Replacement service to be implemented on or after January 1, 2011. Members would be advised of the specific implementation date through the issuance of an NSCC Important Notice.

NSCC states that the proposed rule change is consistent with the requirements of Section 17A of the Act[2] and the rules and regulations thereunder because it will assist NSCC's Members in processing Replacements in a timely and efficient manner. NSCC further states that the proposed rule change is also consistent with Recommendation 15 of the CPSS/IOSCO Recommendations for Securities Settlement Systems in that the Replacement service should reduce manual errors, lower costs, and increase the speed of processing Replacements through the use of automation.

B. Self-Regulatory Organization's Statement on Burden on Competition

NSCC believes that the proposed rule change will not impose any burden on competition not necessary or appropriate in furtherance of the purposes of the Act.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received from Members, Participants, or Others

NSCC has not solicited or received written comments relating to the 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 (i) as the Commission may designate up to 90 days of such date if it finds such longer period to be appropriate and publishes its reasons for so finding or (ii) as to which the self-regulatory organization consents, the Commission will:

(A) By order approve or disapprove such proposed rule change, or

(B) Institute proceedings to determine whether the proposed rule change should be disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

- Electronic comments may be submitted by using the Commission's Internet comment form *http://www.sec.gov/rules/sro.shtml,* or send an e-mail to *rule-comment@sec.gov.* Please include File No. SR–NSCC–2010–15 on the subject line.
- Paper comments should be sent in triplicate to Elizabeth M. Murphy, Secretary, Securities and Exchange Commission, 100 F Street, NE., Washington, DC 20549–1090.

All submissions should refer to File No. SR–NSCC–2010–15. This file

[2] 15 U.S.C. 78q–1.

number should be included on the subject line if e-mail is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site *http://www.sec.gov/rules/sro.shtml.* Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C 552, will be available for Web site viewing and printing in the Commission's Public Reference Room, 100 F Street, NE., Washington, DC 20549, on official business days between the hours of 10 a.m. and 3 p.m. Copies of such filing also will be available for inspection and copying at NSCC's principal office and NSCC's Web site *http://www.dtcc.com/legal/rule_filings/nscc/2010.php.* 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 submission should refer to File No. SR–NSCC–2010–15 and should be submitted within December 21, 2010 days after the date of publication.[3]

For the Commission by the Division of Trading and Markets, pursuant to delegated authority.

Elizabeth M. Murphy,

Secretary.

[FR Doc. 2010–30088 Filed 11–29–10; 8:45 am]

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[3] 17 CFR 200.30–3(a)(12).

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–63366; File No. SR–NYSEAmex–2010–103]

Self-Regulatory Organizations; NYSE Amex LLC; Notice of Filing and Immediate Effectiveness of Proposed Rule Change To Amend the NYSE Amex LLC Company Guide To Adopt Additional Criteria for Listing Special Purpose Acquisition Companies (SPACs) That Have Indicated That Their Business Plan Is To Engage in a Merger or Acquisition With an Unidentified Company or Companies

November 23, 2010.

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 November 12, 2010, NYSE Amex LLC ("Exchange" or "NYSE Amex") filed with the Securities and Exchange Commission ("Commission") the proposed rule change as described in Items I and II below, which Items have been prepared by the 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 amend the NYSE Amex LLC Company Guide (the "Guide") to adopt additional criteria for listing companies that have indicated that their business plan is to engage in a merger or acquisition with an unidentified company or companies (an "acquisition vehicle") and to provide transparency to the criteria the Exchange will apply in doing so. The text of the proposed rule change is available at the Exchange, the Commission's Public Reference Room, and *http://www.nyse.com.*

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

The Exchange proposes to amend the Guide to adopt additional criteria for listing companies that have indicated that their business plan is to engage in a merger or acquisition with an acquisition vehicle.[3] The Exchange has permitted certain of such companies to list on the Exchange under Initial Listing Standards 3 or 4, which do not require prior operating history, as long as certain protections were provided to investors in such companies.[4] In order to provide greater transparency to the listing criteria that would be applicable to such companies, the Exchange proposes to adopt new Section 119 of the Guide.[5]

First, these companies must meet all applicable initial listing requirements. Thus, for initial listing, companies seeking to list on the Exchange must meet NYSE Amex Initial Listing Standard 3 or 4, which require, among other things, a minimum market value of listed securities of $50 million or $75 million, respectively.[6] In addition, the Exchange has determined to impose the following additional criteria for listing a company whose business plan is to complete an initial public offering and

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] Section 101 of the Guide provides the Exchange with broad discretionary authority over the initial and continued listing of securities in order to maintain the quality of and public confidence in its market, to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, and to protect investors and the public interest, even though the securities meet all enumerated criteria for initial or continued listing.

[4] As it does with any initial listing, the Exchange will evaluate the reputation of the company's management pursuant to Section 101 of the Guide in determining whether listing is appropriate.

[5] New York Stock Exchange LLC ("NYSE") and The Nasdaq Stock Market also have adopted standards for listing acquisition companies. *See* NYSE Listed Company Manual Section 102.06, Nasdaq IM–5101–2. Except where otherwise noted, the new Section 119 standards are the same as Nasdaq's current standards. *See* infra notes 8 and 9.

[6] *See* Section 101(c) and (d) of the Guide, which sets forth these market capitalization standards as well as other listing standards relating to aggregate market value of publicly held shares, stock price, distribution and other requirements. Note that given the nature of these companies, they will not satisfy the initial listing requirements of Initial Listing Standards 1 and 2 because of the prior operating history requirements of those standards. As noted below, these companies will be required to satisfy the initial listing requirements following subsequent business combinations.

engage in a subsequent, unidentified merger or acquisition: [7]

(a) At least 90% of the gross proceeds from the initial public offering and any concurrent sale by the company of equity securities must be deposited in a trust account maintained by an independent trustee, an escrow account maintained by an "insured depository institution," as that term is defined in Section 3(c)(2) of the Federal Deposit Insurance Act [8] or in a separate bank account established by a registered broker or dealer (collectively, a "deposit account").

(b) Within 36 months of the effectiveness of its initial public offering registration statement, or such shorter period that the company specifies in its registration statement, the company must complete one or more business combinations having an aggregate fair market value of at least 80% of the value of the deposit account (excluding any deferred underwriter's fees and taxes payable on the income earned on the deposit account) at the time of the agreement to enter into the initial combination.

(c) Until the company has satisfied the condition in paragraph (b) above, each business combination must be approved by a majority of the company's independent directors.

(d) Until the company has satisfied the condition in paragraph (b) above, each business combination must be approved by a majority of the shares of common stock voting at the meeting at which the combination is being considered.

(e) Until the company has satisfied the condition in paragraph (b) above, public shareholders voting against a business combination must have the right to convert their shares of common stock into a pro rata share of the aggregate amount then in the deposit account (net of taxes payable and amounts distributed to management for working capital purposes) if the business combination is approved and consummated. A company may establish a limit (set no lower than 10% of the shares sold in the initial public offering) as to the maximum number of shares with respect to which any shareholder, together with any affiliate of such shareholder or any person with whom such shareholder is acting as a "group" (as such term is used in Sections 13(d) and 14(d) of the Securities Exchange Act of 1934 (the "Act") [9]), may exercise such conversion rights. For these purposes, "public shareholder" would be defined to exclude officers and directors of the company, the company's sponsor, the founding shareholders of the company, any family member or affiliate of any of the foregoing persons, and other concentrated holdings of 10% or more.[10] The Exchange proposes to define "family member" as a person's spouse, parents, children and siblings, whether by blood, marriage or adoption, or anyone residing in such person's home.[11]

The Exchange will also review such a company in connection with each acquisition to assure that it remains appropriate to continue to list the company. In that regard, the Exchange will require that the company meet the initial listing requirements upon conclusion of the transaction [12] and will conduct a regulatory review of any individuals that become newly involved with the company as a result of the transaction. If the company does not meet the requirements for initial listing following a business combination or does not comply with one of the requirements set forth above, the Exchange would commence delisting proceedings under Section 1010 to delist the company's securities; the company would not be eligible to follow the procedures to cure deficiencies outlined in Section 1009 of the Guide.[13]

2. Statutory Basis

The Exchange believes that its proposal is consistent with Section 6(b) of the Act,[14] in general, and furthers the objectives of Section 6(b)(5) of the Act,[15] in particular, in that it is designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general, to protect investors and the public interest. The Exchange believes the proposed rule change is consistent with these requirements in that it imposes additional requirements on acquisition vehicles, which are designed to protect investors and the public interest and prevent fraudulent and manipulative acts and practices on the part of acquisition vehicles and their promoters. The Exchange also notes that the provision of conversion rights for public shareholders that oppose a business combination offers investor protection and is consistent with SEC Rule 419.

B. Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposed rule change will impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received from Members, Participants, or Others

No written comments were solicited or received with respect to the proposed rule change.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

The foregoing rule change has become effective pursuant to Section 19(b)(3)(A) of the Act [16] and Rule 19b–4(f)(6) [17] thereunder because the proposal does not: (i) Significantly affect the protection of investors or the public

[7] These criteria originally were derived from protections the Exchange has observed built into recent transactions and Rule 419 under the Securities Act of 1933, 17 CFR 230.419. *See supra* n. 3 and Securities Exchange Act Release No. 57685 (April 18, 2008), 73 FR 22191 at n. 8 (April 24, 2008) (SR–NASDAQ–2008–013). Rule 419(b)(2)(vi), 17 CFR 230.419(b)(2)(vi), permits the registrant to receive up to 10 percent of the proceeds remaining after payment of underwriting commissions, underwriting expenses and permitted dealer allowances, exclusive of interest or dividends, as those proceeds are deposited into the escrow or trust account.

[8] 12 U.S.C. 1813(c)(2).

[9] 15 U.S.C. 78m(d) and 78n(d).

[10] Nasdaq currently excludes a beneficial holder of more than 10% of the total shares outstanding from its definition of "Public Holders" in Nasdaq's general listing rules. *See* Nasdaq Rule 5005(a)(34). However, Nasdaq does not exclude concentrated holders from its definition of "public Shareholder" in its acquisition vehicle rule (IM–5101–2) but has proposed to do so by defining public Shareholder to exclude the beneficial holder of more than 10% of the total shares outstanding. *See* Securities Exchange Act Release No. 63239 (November 3, 2010), 75 FR 68846 (November 9, 2010) (SR–NASDAQ–2010–137). The NYSE's acquisition company rule excludes concentrated holdings of 10% or more in calculating the number of publicly-held shares. *See* Section 102.06(A) of the NYSE Listed Company Manual. Similarly, the Exchange proposes to exclude concentrated holdings of 10% or more in calculating the number of publicly-held shares in proposed Section 119(e).

[11] The Guide does not currently define the term "family member." The Exchange proposes to adopt the definition of "Family Member" used in Nasdaq's Rules. *See* Nasdaq Rule 5005(a)(17) (referencing Nasdaq Rule 5605(a)(2)) and IM–5101–2.

[12] Companies will not be required to pay a new listing fee in connection with such a review. However, if there is a change of legal entity in connection with the business combination, the company will have to pay an original listing fee ($7,500). *See* Section 142(d) of the Guide. If additional shares are issued in the transaction, the company will pay initial listing fees on those shares. *See* Section 142(a) of the Guide.

[13] This aspect of the proposed rule change is based on Section 802.01B of the NYSE Listed Company Manual.

[14] 15 U.S.C. 78f(b).

[15] 15 U.S.C. 78f(b)(5).

[16] 15 U.S.C. 78s(b)(3)(A).

[17] 17 CFR 240.19b–4(f)(6).

interest; (ii) impose any significant burden on competition; and (iii) by its terms, become operative for 30 days from the date on which it was filed, or such shorter time as the Commission may designate if consistent with the protection of investors and the public interest, provided that the Exchange has given the Commission notice of its intent to file the proposed rule change, along with a brief description and text of the proposed rule change, at least five business days prior to the date of filing of the proposed rule change, or such shorter time as designated by the Commission.[18]

A proposed rule change filed under Rule 19b–4(f)(6) normally may not become operative prior to 30 days after the date of filing. However, Rule 19b–4(f)(6)(iii) [19] 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 requested that the Commission waive the 30-day operative delay period.

The Commission believes that waiver of the 30-day operative delay period is consistent with the protection of investors and the public interest. Specifically, the Commission notes that the proposal is substantially identical to Nasdaq's listing standards for special purpose acquisition companies ("SPACs") and raises no new or novel regulatory issues. The Commission notes that the proposal differs from Nasdaq's rules in three respects. First, the proposal's definition of "public shareholder" would exclude any person with concentrated holdings of 10% or more. The Commission notes that this proposed definition is consistent with the Exchange's current definition.[20] Second, the proposal would include a definition of "family member." The Commission notes that while the term "family member" is used in Nasdaq's SPAC rules, it is not specifically defined in those rules because it is defined elsewhere in Nasdaq's rules. The definition of "family member" in the Exchange's proposal, however, is identical to the definition of "family member" as defined in Nasdaq's rules and referenced in Nasdaq's SPAC listing standards.[21] Finally, the proposal would specify that SPACs that do not meet the Exchange's initial listing standards following a business combination or that do not comply with one of the SPAC listing standards in proposed Section 119 of the Guide would not be eligible to follow the cure procedures in Section 1009 of the Guide, which allows listed companies up to 18 months to cure certain continued listing standards deficiencies. Instead, under the proposal, the Exchange would immediately commence delisting proceedings pursuant to Section 1010 of the Guide. The Commission notes that this proposal is identical to NYSE's listing standards for SPACs and helps to ensure that a SPAC unable to meet listing standards will not remain listed for an extended period of time.[22] Accordingly, based on the above, the Commission designates, consistent with the protection of investors and public interest, that the proposed rule change be operative upon filing.[23]

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.[24]

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 e-mail to *rule-comments@sec.gov*. Please include File Number SR–NYSEAmex–2010–103 on the subject line.

Paper Comments

- Send paper comments in triplicate to Elizabeth M. Murphy, Secretary, Securities and Exchange Commission, 100 F Street, NE., Washington, DC 20549–1090.

All submissions should refer to File Number SR–NYSEAmex–2010–103. This file number should be included on the subject line if e-mail is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site *http://www.sec.gov/rules/sro.shtml.* Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for Web site viewing and printing in the Commission's Public Reference Room, 100 F Street, NE., Washington, DC 20549, on official business days between the hours of 10 a.m. and 3 p.m. Copies of such filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–NYSEAmex–2010–103 and should be submitted on or before December 21, 2010.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[25]

Elizabeth M. Murphy,

Secretary.

[FR Doc. 2010–30087 Filed 11–29–10; 8:45 am]

BILLING CODE 8011–01–P

[18] The Exchange has satisfied the five-day pre-filing notice requirement.

[19] 17 CFR 240.19b–4(f)(6)(iii).

[20] *See* Section 102 of the Guide; *see also* supra note 10.

[21] *See* supra note 11.

[22] *See* supra note 13.

[23] For purposes only of waiving the operative delay for this proposal, the Commission has considered the proposed rule's impact on efficiency, competition, and capital formation. *See* 15 U.S.C. 78c(f).

[24] 15 U.S.C. 78s(b)(3)(C).

[25] 17 CFR 200.30–3(a)(12).

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–63364; File No. SR–BX–2010–078]

Self-Regulatory Organizations; NASDAQ OMX BX; Notice of Filing and Immediate Effectiveness of Proposed Rule Change Extending the Pilot Period for Boston Options Exchange To Receive Inbound Routes of Orders From Nasdaq Options Services

November 23, 2010.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (the "Act") [1] and Rule 19b–4 thereunder,[2] notice is hereby given that, on November 17, 2010, NASDAQ OMX BX (the "Exchange") filed with the Securities and Exchange Commission ("Commission") the proposed rule change as described in Items I and II,

[1] 15 U.S.C.78s(b)(1).

[2] 17 CFR 240.19b–4.

below, which Items have been prepared by the Exchange. The Exchange has designated the proposed rule change as constituting a non-controversial rule change under Rule 19b–4(f)(6) under the Act,[3] which renders the proposal effective upon filing with the Commission. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of the Substance of the Proposed Rule Change

The Exchange submits this proposed rule change to extend the pilot period of the Exchange's prior approval for Boston Options Exchange ("BOX") to receive inbound routes of certain option orders from Nasdaq Options Services, LLC ("NOS") through May 18, 2011.

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

Currently, NOS is the approved outbound routing facility of the NASDAQ Exchange for NOM, providing outbound routing from NOM to other market centers.[4] The Exchange and the NASDAQ Exchange have previously adopted rules to permit BOX to receive inbound routes of certain option orders by NOS in its capacity as an order routing facility of the NASDAQ Exchange for NOM.[5] The Exchange specifically has adopted a rule to prevent potential informational advantages resulting from the affiliation between BOX and NOS, as related to NOS's authority to route certain orders from NOM to BOX without checking the NOM book prior to routing.[6] NOS's authority to route these orders to BOX is subject to a pilot period ending November 17, 2010.[7] The Exchange hereby seeks to extend the previously approved pilot period (with the attendant obligations and conditions) for an additional 6 months, through May 18, 2011.

2. Statutory Basis

The Exchange believes that the proposed rule change is consistent with the provisions of Section 6 of the Act,[8] in general, and with Section 6(b)(5) of the Act,[9] in particular, in that the proposal 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 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. Specifically, the proposed rule change will allow BOX to continue receiving inbound routes of equities orders from NOS, acting in its capacity as a facility of the NASDAQ Exchange, in a manner consistent with prior approvals and established protections. The Exchange believes that extending the previously approved pilot period for three [sic] months is of sufficient length to permit both the Exchange and the Commission to assess the impact of the Exchange's authority to permit BOX to receive direct inbound routes of certain option orders via NOS (including the attendant obligations and conditions).

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.

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 rule change does not: (1) Significantly affect the protection of investors or the public interest; (2) impose any significant burden on competition; and (3) become operative for 30 days after the date of this filing, or such shorter time as the Commission may designate, it has become effective pursuant to Section 19(b)(3)(A) of the Act[10] and Rule 19b–4(f)(6) thereunder.[11]

A proposed rule change filed under 19b–4(f)(6) normally may not become operative prior to 30 days after the date of filing.[12] However, Rule 19b–4(f)(6)(iii)[13] 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 requested that the Commission waive the 30-day operative delay. The Exchange notes that the proposal will allow BOX to continue receiving inbound routes of equities orders from NOS, in a manner consistent with prior approvals and established protections, while also permitting the Exchange and the Commission to assess the impact of the pilot.[14] The Commission believes that waiving the 30-day operative delay is consistent with the protection of investors and the public interest because such waiver would allow the

[3] 17 CFR 240.19b–4(f)(6).

[4] NOM Rule Chapter VI, Section 11(c). Under NOM Rule Chapter VI, Section 11(c): (1) NOM routes orders in options via NOS, which serves as the sole "routing facility" of NOM; (2) the sole function of the routing facility is to route orders in options to away markets pursuant to NOM rules, solely on behalf of NOM; (3) NOS is a member of an unaffiliated self-regulatory organization, which is the designated examining authority for the broker-dealer; (4) the routing facility is subject to regulation as a facility of the NASDAQ Exchange, including the requirement to file proposed rule changes under Section 19 of the Act; (5) use of NOS to route order to other market centers is optional; (6) NOM must establish and maintain procedures and internal controls reasonably designed to adequately restrict the flow of confidential and proprietary information between the NASDAQ Exchange and its facilities (including the routing facility), and any other entity; and (7) the books, records, premises, officers, directors, agents, and employees of the routing facility, as a facility of the NASDAQ Exchange, shall be subject at all times to inspection and copying by the NASDAQ Exchange and the Commission.

[5] *See* Securities Exchange Act Release No. 60349 (July 20, 2009), 74 FR 37071 (July 27, 2009) (SR–BX–2009–035); Securities Exchange Act Release No. 60354 (July 21, 2009), 74 FR 37074 (July 27, 2009) (SR–NASDAQ–2009–065).

[6] *See* Chapter XXXIX, Section 2(c) of the Grandfathered Rules of the Exchange.

[7] *See* Securities Exchange Act Release No. 62555 (July 22, 2010), 75 FR 44835 (July 29, 2010) (SR–BX–2010–051).

[8] 15 U.S.C. 78f.

[9] 15 U.S.C. 78f(b)(5).

[10] 15 U.S.C. 78s(b)(3)(A).

[11] 17 CFR 240.19b–4(f)(6).

[12] 17 CFR 240.19b–4(f)(6)(iii). In addition, Rule 19b–4(f)(6)(iii) requires that a self-regulatory organization submit to the Commission written notice of its intent to file the proposed rule change, along with a brief description and text of the proposed rule change, at least five business days prior to the date of filing of the proposed rule change, or such shorter time as designated by the Commission. The Exchange has satisfied this requirement.

[13] *Id.*

[14] *See supra* Section II.A.2.

pilot period to be extended without interruption delay through May 18, 2011. For this reason, the Commission designates the proposed rule change to be operative upon filing with the Commission.[15]

At any time within 60 days of the filing of such 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 e-mail to *rule-comments@sec.gov.* Please include File Number SR–BX–2010–078 on the subject line.

Paper Comments

- Send paper comments in triplicate to Elizabeth M. Murphy, Secretary, Securities and Exchange Commission, 100 F Street, NE., Washington, DC 20549–1090.

All submissions should refer to File Number SR–BX–2010–078. This file number should be included on the subject line if e-mail 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 on official business days between the hours of 10 a.m. and 3 p.m. Copies of such filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–BX–2010–078 and should be submitted on or before December 21, 2010.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[16]

Elizabeth M. Murphy,

Secretary.

[FR Doc. 2010–30035 Filed 11–29–10; 8:45 am]

BILLING CODE 8011–01–P

[15] For the 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).

[16] 17 CFR 200.30–3(a)(12).

SOCIAL SECURITY ADMINISTRATION

[Docket No. SSA–2010–0054]

Office of the Commissioner; Cost-of-Living Increase and Other Determinations for 2011; Correction

AGENCY: Social Security Administration.

ACTION: Notice; correction.

We published a document in the **Federal Register** of October 26, 2010, Cost-of-Living Increase and Other Determinations for 2011. (75 FR 65696; FR Doc. 2010–26983) Subsequently we identified two wage-reporting irregularities. We have now excluded the irregularities and posted the updated AWI and corresponding automatic adjustments on our Web site at *http://www.ssa.gov/OACT/COLA/index.html.*

The updated notice is republished here in its entirety.

SUMMARY: Under title II of the Social Security Act (Act), there will be no cost-of-living increase in Social Security benefits effective for December 2010. As a result, the following items will remain at their 2010 levels:

(1) The maximum Federal Supplemental Security Income (SSI) monthly benefit amounts for 2011, under title XVI of the Act, will remain $674 for an eligible individual, $1,011 for an eligible individual with an eligible spouse, and $338 for an essential person;

(2) The special benefit amount under title VIII of the Act for certain World War II veterans will remain $505.50 in 2011;

(3) The student earned income exclusion under title XVI of the Act will remain $1,640 per month in 2011, but not more than $6,600 in all of 2011;

(4) The dollar fee limit for services performed as a representative payee will remain $37 per month ($72 per month in the case of a beneficiary who is disabled and has an alcoholism or drug addiction condition that leaves him or her incapable of managing benefits) in 2011;

(5) The dollar limit on the administrative-cost assessment charged to attorneys representing claimants will remain $83 in 2011;

(6) The Old-Age, Survivors, and Disability Insurance (OASDI) contribution and benefit base will remain $106,800 for remuneration paid in 2011 and self-employment income earned in taxable years beginning in 2011;

(7) The monthly exempt amounts under the Social Security retirement earnings test for taxable years ending in calendar year 2011 will remain $1,180 and $3,140;

(8) The "old-law" contribution and benefit base under title II of the Act will remain $79,200 for 2011; and

(9) The monthly amount deemed to constitute substantial gainful activity for statutorily blind individuals in 2011 will remain $1,640.

The national average wage index for 2009 is $40,711.61. This index affects the following items:

(1) The dollar amounts ("bend points") used in the primary insurance amount benefit formula for workers who become eligible for benefits, or who die before becoming eligible, in 2011 will be $749 and $4,517;

(2) The bend points used in the formula for computing maximum family benefits for workers who become eligible for benefits, or who die before becoming eligible, in 2011 will be $957, $1,382, and $1,803;

(3) The amount of taxable earnings a person must have to be credited with a quarter of coverage in 2011 will be $1,120;

(4) The monthly amount deemed to constitute substantial gainful activity for non-blind disabled persons will be $1,000 in 2011;

(5) The earnings threshold establishing a month as a part of a trial work period will be $720 for 2011; and

(6) Coverage thresholds for 2011 will be $1,700 for domestic workers and $1,500 for election officials and election workers.

FOR FURTHER INFORMATION CONTACT: Susan C. Kunkel, Office of the Chief Actuary, Social Security Administration, 6401 Security Boulevard, Baltimore, MD 21235, (410)

965–3016. Information relating to this notice is available on our Internet site at *http://www.socialsecurity.gov/oact/cola/index.html.* For information on eligibility or claiming benefits, call 1–800–772–1213, or visit our Internet site, Social Security Online, at *http://www.socialsecurity.gov.*

SUPPLEMENTARY INFORMATION: In accordance with the Act, we must publish on or before November 1 the national average wage index for 2009 (section 215(a)(1)(D)), the amount of earnings required to be credited with a quarter of coverage in 2011 (section 213(d)(2)), the formula for computing a primary insurance amount for workers who first become eligible for benefits or die in 2011 (section 215(a)(1)(D)), and the formula for computing the maximum amount of benefits payable to the family of a worker who first becomes eligible for old-age benefits or dies in 2011 (section 203(a)(2)(C)).

Cost-of-Living Increases

General

There will be no cost-of-living increase for benefits under titles II and XVI of the Act.

Computation

By law, a cost-of-living increase for benefits is determined based on the percentage increase, if any, in the Consumer Price Index (CPI) for Urban Wage Earners and Clerical Workers from the last computation quarter that resulted in a cost-of-living increase to the third quarter of the current year. Computation quarters are third calendar quarters. Because the last cost-of-living increase became effective for those eligible to receive Title II benefits for December 2008, the last computation quarter is the third quarter of 2008.

Section 215(i)(1) of the Act provides that the CPI for a cost-of-living computation quarter shall be the arithmetic mean of this index for the 3 months in that quarter. In accordance with 20 CFR 404.275, we round the arithmetic mean, if necessary, to the nearest 0.001. The CPI for Urban Wage Earners and Clerical Workers for each month in the quarter ending September 30, 2008, is: for July 2008, 216.304; for August 2008, 215.247; and for September 2008, 214.935. The arithmetic mean for that calendar quarter is 215.495. The corresponding CPI for each month in the quarter ending September 30, 2010, is: for July 2010, 213.898; for August 2010, 214.205; and for September 2010, 214.306. The arithmetic mean for this calendar quarter is 214.136. Thus, because the CPI for the calendar quarter ending September 30, 2010, is not greater than the CPI for the calendar quarter ending September 30, 2008, the calendar quarter ending September 30, 2010, is not a cost-of-living computation quarter and there is no cost-of-living increase.

Program Amounts that Change Based on the Cost-of-Living Increase

Several program amounts adjust based on the cost-of-living increase. These include the maximum Federal SSI benefit amounts under title XVI, the title VIII benefit amount, the student earned income exclusion, the fee for services performed by a representative payee, and the attorney assessment fee. Because there will be no cost-of-living increase, these program amounts will not increase in 2011, but rather will remain at their 2010 levels.

Program Amounts that May Increase Based on the Change in the National Average Wage Index, But Only If There Is a Cost-of-Living Increase

Certain other program amounts are adjusted annually based on the change in the national average wage index, rather than the CPI increase, but only if there also is a cost-of-living increase for benefits (as determined under section 215(i) of the Act). Moreover, these amounts cannot decrease even if there is a decrease in the national average wage index. These amounts include the OASDI contribution and benefit base, the retirement earnings test exempt amounts, the "old-law" contribution and benefit base, and the substantial gainful activity amount for individuals who are statutorily blind. Because there is no cost-of-living increase this year, these amounts will remain at their 2010 levels for 2011.

Program Amounts that May Change Based on the Change in the National Average Wage Index, Without Regard to the Cost-of-Living Increase

Some program amounts are adjusted annually based on the change (increase or decrease) in the national average wage index whether there is a cost-of-living increase in that year or not. These include:

- The dollar amounts ("bend points") in the formulae used to compute the primary insurance amount and maximum family benefit for workers who become eligible for benefits, or die before becoming eligible, in 2011;
- The amount of taxable earnings required to earn a quarter of coverage;
- The substantial gainful activity amount for non-blind disabled individuals;
- The earnings threshold to establish a trial work period;
- The domestic employee coverage threshold; and
- The coverage threshold for election officials and election workers.

In the sections that follow, we explain the calculation of the national average wage and the corresponding changes in each of these program amounts.

National Average Wage Index for 2009

Computation

We have determined the national average wage index for calendar year 2009 based on the 2008 national average wage index of $41,334.97 announced in the **Federal Register** on October 28, 2009 (74 FR 55614), along with the percentage change in the average wage from 2008 to 2009 measured by annual wage data. We tabulate the annual wage data, including contributions to deferred compensation plans, as required by section 209(k) of the Act. The average amounts of wages calculated directly from these data were $39,652.61 and $39,054.62 for 2008 and 2009, respectively. To determine the national average wage index for 2009 at a level that is consistent with the national average wage indexing series for 1951 through 1977 (published December 29, 1978, at 43 FR 61016), we multiply the 2008 national average wage index of $41,334.97 by the percentage change in the average wage from 2008 to 2009 (based on SSA-tabulated wage data) as follows, with the result rounded to the nearest cent.

Amount

Multiplying the national average wage index for 2008 ($41,334.97) by the ratio of the average wage for 2009 ($39,054.62) to that for 2008 ($39,652.61) produces the 2009 index, $40,711.61. The national average wage index for calendar year 2009 is about 1.51 percent lower than the 2008 index.

Computing Benefits After 1978

General

The Social Security Amendments of 1977 provided a method for computing benefits that generally applies when a worker first becomes eligible for benefits after 1978. This method uses the worker's "average indexed monthly earnings" (AIME) to compute the primary insurance amount. We adjust the computation formula each year to reflect changes in general wage levels, as measured by the national average wage index.

We also adjust, or "index," a worker's earnings to reflect the change in the general wage levels that occurred during

the worker's years of employment. Such indexing ensures that a worker's future benefit level will reflect the general rise in the standard of living that will occur during his or her working lifetime. To compute the average indexed monthly earnings, we first determine the required number of years of earnings. Then we select that number of years with the highest indexed earnings, add the indexed earnings for those years, and divide the total amount by the total number of months in those years. We then round the resulting average amount down to the next lower dollar amount. The result is the AIME.

Computing the Primary Insurance Amount

The primary insurance amount is the sum of three separate percentages of portions of the AIME. In 1979 (the first year the formula was in effect), these portions were the first $180, the amount between $180 and $1,085, and the amount over $1,085. We call the dollar amounts in the formula governing the portions of the average indexed monthly earnings the "bend points" of the formula. Thus, the bend points for 1979 were $180 and $1,085.

To obtain the bend points for 2011, we multiply each of the 1979 bend-point amounts by the ratio of the national average wage index for 2009 to that average for 1977. We then round these results to the nearest dollar. Multiplying the 1979 amounts of $180 and $1,085 by the ratio of the national average wage index for 2009 ($40,711.61) to that for 1977 ($9,779.44) produces the amounts of $749.34 and $4,516.83. We round these to $749 and $4,517. Accordingly, the portions of the AIME to be used in 2011 are the first $749, the amount between $749 and $4,517, and the amount over $4,517.

Consequently, for individuals who first become eligible for old-age insurance benefits or disability insurance benefits in 2011, or who die in 2011 before becoming eligible for benefits, their primary insurance amount will be the sum of:

(a) 90 percent of the first $749 of their AIME, plus

(b) 32 percent of their AIME over $749 and through $4,517, plus

(c) 15 percent of their AIME over $4,517.

We round this amount to the next lower multiple of $0.10 if it is not already a multiple of $0.10. This formula and the rounding adjustment described above are contained in section 215(a) of the Act.

Maximum Benefits Payable to a Family

General

The 1977 amendments continued the long established policy of limiting the total monthly benefits that a worker's family may receive based on his or her primary insurance amount. Those amendments also continued the then existing relationship between maximum family benefits and primary insurance amounts but changed the method of computing the maximum amount of benefits that may be paid to a worker's family. The Social Security Disability Amendments of 1980 (Pub. L. 96–265) established a formula for computing the maximum benefits payable to the family of a disabled worker. This formula applies to the family benefits of workers who first become entitled to disability insurance benefits after June 30, 1980, and who first become eligible for these benefits after 1978. For disabled workers initially entitled to disability benefits before July 1980, or whose disability began before 1979, we compute the family maximum payable the same as the old-age and survivor family maximum.

Computing the Old-Age and Survivor Family Maximum

The formula used to compute the family maximum is similar to that used to compute the primary insurance amount. It involves computing the sum of four separate percentages of portions of the worker's primary insurance amount. In 1979, these portions were the first $230, the amount between $230 and $332, the amount between $332 and $433, and the amount over $433. We refer to such dollar amounts in the formula as the "bend points" of the family-maximum formula.

To obtain the bend points for 2011, we multiply each of the 1979 bend-point amounts by the ratio of the national average wage index for 2009 to that average for 1977. Then we round this amount to the nearest dollar. Multiplying the amounts of $230, $332, and $433 by the ratio of the national average wage index for 2009 ($40,711.61) to that for 1977 ($9,779.44) produces the amounts of $957.49, $1,382.11, and $1,802.57. We round these amounts to $957, $1,382, and $1,803. Accordingly, the portions of the primary insurance amounts to be used in 2011 are the first $957, the amount between $957 and $1,382, the amount between $1,382 and $1,803, and the amount over $1,803.

Consequently, for the family of a worker who becomes age 62 or dies in 2011 before age 62, we will compute the total amount of benefits payable to them so that it does not exceed:

(a) 150 percent of the first $957 of the worker's primary insurance amount, plus

(b) 272 percent of the worker's primary insurance amount over $957 through $1,382, plus

(c) 134 percent of the worker's primary insurance amount over $1,382 through $1,803, plus

(d) 175 percent of the worker's primary insurance amount over $1,803.

We then round this amount to the next lower multiple of $0.10 if it is not already a multiple of $0.10. This formula and the rounding adjustment described above are contained in section 203(a) of the Act.

Quarter of Coverage Amount

General

The amount of earnings required for a quarter of coverage in 2011 is $1,120. A quarter of coverage is the basic unit for determining whether a worker is insured under the Social Security program. For years before 1978, we generally credited an individual with a quarter of coverage for each quarter in which wages of $50 or more were paid, or with 4 quarters of coverage for every taxable year in which $400 or more of self-employment income was earned. Beginning in 1978, employers generally report wages on an annual basis instead of a quarterly basis. With the change to annual reporting, section 352(b) of the Social Security Amendments of 1977 amended section 213(d) of the Act to provide that a quarter of coverage would be credited for each $250 of an individual's total wages and self-employment income for calendar year 1978, up to a maximum of 4 quarters of coverage for the year.

Computation

Under the prescribed formula, the quarter of coverage amount for 2011 shall be the larger of: (1) the 1978 amount of $250 multiplied by the ratio of the national average wage index for 2009 to that for 1976; or (2) the current amount of $1,120. Section 213(d) further provides that if the resulting amount is not a multiple of $10, it shall be rounded to the nearest multiple of $10.

Quarter of Coverage Amount

Multiplying the 1978 quarter of coverage amount ($250) by the ratio of the national average wage index for 2009 ($40,711.61) to that for 1976 ($9,226.48) produces the amount of $1,103.12. We then round this amount to $1,100. Because $1,100 is less than the current amount of $1,120, the

quarter of coverage amount is $1,120 for 2011.

Substantial Gainful Activity Amount for Non-Blind Disabled Individuals

General

A finding of disability under titles II and XVI of the Act requires that a person, except for a title XVI disabled child, be unable to engage in substantial gainful activity (SGA). A person who is earning more than a certain monthly amount (net of impairment-related work expenses) is ordinarily considered to be engaging in SGA. The amount of monthly earnings considered as SGA depends on the nature of a person's disability. Section 223(d)(4)(A) of the Act specifies a higher SGA amount for statutorily blind individuals under title II while Federal regulations (20 CFR 404.1574 and 416.974) specify a lower SGA amount for non-blind individuals.

Computation

The monthly SGA amount for non-blind disabled individuals for 2011 shall be the larger of: (1) Such amount for 2000 multiplied by the ratio of the national average wage index for 2009 to that for 1998; or (2) such amount for 2010. If the resulting amount is not a multiple of $10, it shall be rounded to the nearest multiple of $10.

Amount

Multiplying the 2000 monthly SGA amount for non-blind individuals ($700) by the ratio of the national average wage index for 2009 ($40,711.61) to that for 1998 ($28,861.44) produces the amount of $987.41. We then round this amount to $990. Because $990 is less than the current amount of $1,000, the monthly SGA amount for non-blind disabled individuals is $1,000 for 2011.

Trial Work Period Earnings Threshold

General

During a trial work period, a beneficiary receiving Social Security disability benefits may test his or her ability to work and still be considered disabled. We do not consider services performed during the trial work period as showing that the disability has ended until services have been performed in at least 9 months (not necessarily consecutive) in a rolling 60-month period. In 2010, any month in which earnings exceed $720 is considered a month of services for an individual's trial work period. In 2011, this monthly amount remains at $720.

Computation

The method used to determine the new amount is set forth in our regulations at 20 CFR 404.1592(b). Monthly earnings in 2011, used to determine whether a month is part of a trial work period, is such amount for 2001 ($530) multiplied by the ratio of the national average wage index for 2009 to that for 1999, or, if larger, such amount for 2010. If the amount so calculated is not a multiple of $10, we round it to the nearest multiple of $10.

Amount

Multiplying the 2001 monthly earnings threshold ($530) by the ratio of the national average wage index for 2009 ($40,711.61) to that for 1999 ($30,469.84) produces the amount of $708.15. We then round this amount to $710. Because $710 is less than the current amount of $720, the monthly earnings threshold is $720 for 2011.

Domestic Employee Coverage Threshold

General

The minimum amount a domestic worker must earn so that such earnings are covered under Social Security or Medicare is the domestic employee coverage threshold. For 2011, this threshold is $1,700. Section 3121(x) of the Internal Revenue Code provides the formula for increasing the threshold.

Computation

Under the formula, the domestic employee coverage threshold amount for 2011 shall be equal to the 1995 amount of $1,000 multiplied by the ratio of the national average wage index for 2009 to that for 1993. If the resulting amount is not a multiple of $100, it shall be rounded to the next lower multiple of $100.

Domestic Employee Coverage Threshold Amount

Multiplying the 1995 domestic employee coverage threshold amount ($1,000) by the ratio of the national average wage index for 2009 ($40,711.61) to that for 1993 ($23,132.67) produces the amount of $1,759.92. We then round this amount to $1,700. Accordingly, the domestic employee coverage threshold amount is $1,700 for 2011.

Election Official and Election Worker Coverage Threshold

General

The minimum amount an election official and election worker must earn so that such earnings are covered under Social Security or Medicare is the election official and election worker coverage threshold. For 2011, this threshold is $1,500. Section 218(c)(8)(B) of the Act provides the formula for increasing the threshold.

Computation

Under the formula, the election official and election worker coverage threshold amount for 2011 shall be equal to the 1999 amount of $1,000 multiplied by the ratio of the national average wage index for 2009 to that for 1997. If the amount so determined is not a multiple of $100, it shall be rounded to the nearest multiple of $100.

Election Official and Election Worker Coverage Threshold Amount

Multiplying the 1999 coverage threshold amount ($1,000) by the ratio of the national average wage index for 2009 ($40,711.61) to that for 1997 ($27,426.00) produces the amount of $1,484.42. We then round this amount to $1,500. Accordingly, the election official and election worker coverage threshold amount is $1,500 for 2011.

(Catalog of Federal Domestic Assistance: Program Nos. 96.001 Social Security-Disability Insurance; 96.002 Social Security-Retirement Insurance; 96.004 Social Security-Survivors Insurance; 96.006 Supplemental Security Income)

Dated: November 19, 2010.

Michael J. Astrue,

Commissioner of Social Security.

[FR Doc. 2010–30019 Filed 11–29–10; 8:45 am]

BILLING CODE 4191–02–P

DEPARTMENT OF STATE

[Public Notice: 7252]

Culturally Significant Objects Imported for Exhibition Determinations: "Picasso: Guitars 1912–1914"

SUMMARY: Notice is hereby given of the following determinations: Pursuant to the authority vested in me by the Act of October 19, 1965 (79 Stat. 985; 22 U.S.C. 2459), Executive Order 12047 of March 27, 1978, the Foreign Affairs Reform and Restructuring Act of 1998 (112 Stat. 2681, *et seq.;* 22 U.S.C. 6501 note, *et seq.*), Delegation of Authority No. 234 of October 1, 1999, and Delegation of Authority No. 236–3 of August 28, 2000, I hereby determine that the objects to be included in the exhibition "Picasso: Guitars 1912–1914," imported from abroad for temporary exhibition within the United States, are of cultural significance. The objects are imported pursuant to loan agreements with the foreign owners or custodians. I also determine that the exhibition or display of the exhibit objects at the Museum of Modern Art, New York, NY, from on or about February 13, 2011, until on or

about June 6, 2011, and at possible additional exhibitions or venues yet to be determined, is in the national interest. Public Notice of these Determinations is ordered to be published in the **Federal Register**.

FOR FURTHER INFORMATION CONTACT: For further information, including a list of the exhibit objects, contact Carol B. Epstein, Attorney-Adviser, Office of the Legal Adviser, U.S. Department of State (telephone: 202/632–6473). The address is U.S. Department of State, SA–5, L/PD, Fifth Floor, Washington, DC 20522–0505.

Dated: November 22, 2010.

Ann Stock,

Assistant Secretary, Bureau of Educational and Cultural Affairs, Department of State.

[FR Doc. 2010–30121 Filed 11–29–10; 8:45 am]

BILLING CODE 4710–05–P

DEPARTMENT OF STATE

[Public Notice: 7250]

In the Matter of the Review of the Designation of Islamic Movement of Uzbekistan (IMU and Other Aliases) as a Foreign Terrorist Organization Pursuant to Section 219 of the Immigration and Nationality Act, as Amended

Based upon a review of the Administrative Record assembled in this matter pursuant to Section 219(a)(4)(C) of the Immigration and Nationality Act, as amended (8 U.S.C. 1189(a)(4)(C)) ("INA"), and in consultation with the Attorney General and the Secretary of the Treasury, I conclude that the circumstances that were the basis for the 2004 re-designation of the aforementioned organization as a foreign terrorist organization have not changed in such a manner as to warrant revocation of the designation and that the national security of the United States does not warrant a revocation of the designation.

Therefore, I hereby determine that the designation of the aforementioned organization as a foreign terrorist organization, pursuant to Section 219 of the INA (8 U.S.C. 1189), shall be maintained.

This determination shall be published in the **Federal Register**.

Dated: November 15, 2010.

James B. Steinberg,

Deputy Secretary of State.

[FR Doc. 2010–30123 Filed 11–29–10; 8:45 am]

BILLING CODE 4710–10–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Proposed Modification of the Philadelphia, PA Class B Airspace Area; Public Meetings

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of meetings.

SUMMARY: This notice announces six fact-finding informal airspace meetings to solicit information from airspace users and others, concerning a proposal to revise the Class B airspace area at Philadelphia, PA. The purpose of these meetings is to provide interested parties an opportunity to present views, recommendations, and comments on the proposal. All comments received during these meetings will be considered prior to any issuance of a notice of proposed rulemaking.

TIMES AND DATES: The informal airspace meetings will be held on Tuesday, February 15, 2011; Wednesday, February 16, 2011; Thursday, February 17, 2011; Tuesday, February 22, 2011; Wednesday, February 23, 2011; and Thursday, February 24, 2011. FAA presentations will begin at 4 p.m. and again at 7 p.m. on each meeting date. Comments must be received on or before March 26, 2011.

ADDRESSES: (1) The meeting on Tuesday, February 15, 2011, will be held at New Castle Airport, 151 North Dupont Highway, New Castle, DE 19720; (2) The meeting on Wednesday, February 16, 2011, will be held at New Garden Airport, 1235 Newark Road, Toughkenamon, PA 19374; (3) The meeting on Thursday, February 17, 2011, will be held at Wings Field Terminal Building, 1501 Narcissa Road, Blue Bell, PA 19422; (4) The meeting on Tuesday, February 22, 2011, will also be held at Wings Field Terminal Building, 1501 Narcissa Road, Blue Bell, PA 19422; (5) The meeting on Wednesday, February 23, 2011, will be held at Flying W Airport, 60 Fostertown Road, Medford, NJ 08055; and (6) The meeting on Thursday, February 24, 2011, will be held at Freefall Adventures Skydive School, 300 Dahlia Avenue, Williamstown, NJ 08094.

Comments: Send comments on the proposal to: Mark D. Ward, Manager, Operations Support Group, Eastern Service Area, Air Traffic Organization, Federal Aviation Administration, P.O. Box 20636, Atlanta, GA 30320.

FOR FURTHER INFORMATION CONTACT: Gail Swider, Support Manager, Philadelphia ATCT/TRACON, 15 Hog Island Road, Philadelphia, PA 19153; telephone: (215) 492–4100.

SUPPLEMENTARY INFORMATION:

Meeting Procedures

(a) Doors open 30 minutes prior to the beginning of each meeting. The meetings will be informal in nature and will be conducted by one or more representatives of the FAA Eastern Service Center. A representative from the FAA will present an informal briefing on the planned modification to the Class B airspace area at Philadelphia, PA. Following the presentation, there will be time for questions and presentations by attendees, although a time limit may be imposed. Only comments concerning the plan to modify the Class B airspace area at Philadelphia, PA, will be accepted.

(b) The meetings will be open to all persons on a space-available basis. There will be no admission fee or other charge to attend and participate.

(c) Any person wishing to make a presentation to the FAA panel will be asked to sign in and estimate the amount of time needed for such presentation. This will permit the panel to allocate an appropriate amount of time for each presenter. These meetings will not be adjourned until everyone on the list has had an opportunity to address the panel.

(d) Position papers or other handout material relating to the substance of these meetings will be accepted. Participants wishing to submit handout material should present an original and two copies to the presiding officer. There should be additional copies of each handout available for other attendees.

(e) These meetings will not be formally recorded. However, a summary of comments made at the meeting will be filed in the docket.

Agenda for the Meetings

—Sign-in

—Presentation of Meeting Procedures

—FAA presentation on the proposed Class B airspace area modifications

—Solicitation of public comments

—Closing Comments.

Issued in Washington, DC, on November 24, 2010.

Edith V. Parish,

Manager, Airspace and Rules Group.

[FR Doc. 2010–30085 Filed 11–29–10; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

Rescinding the Notice of Intent for an Environmental Impact Statement (EIS): Harrison and Stone Counties, MS

AGENCY: Federal Highway Administration, DOT.

ACTION: Rescind Notice of Intent to prepare an EIS.

SUMMARY: This notice rescinds the Notice of Intent for preparing an Environmental Impact Statement (EIS) for a proposed highway to provide a connection between U.S. Highway 49 near the town of Star to Interstate 20 near the Interchange with State Route 475 in the City of Pearl, Rankin County, Mississippi. The original Notice of Intent for this EIS process was published in the **Federal Register** on May 22, 2009.

FOR FURTHER INFORMATION CONTACT: Claiborne Barnwell, Project Development Team Leader, Federal Highway Administration, Mississippi Division, 100 West Capitol Street, Suite 1026, Jackson, Mississippi 39269, Telephone: (601) 965–4217.

SUPPLEMENTARY INFORMATION:

Background

The Federal Highway Administration (FHWA) in cooperation with the Mississippi Department of Transportation (MDOT) initiated an Environmental Impact Statement (EIS) with a Notice of Intent May 22, 2009, to provide a connector road, to be built to interstate standards, between U.S. Highway 49 and Interstate 20.

Due to funding constraints this Notice of Intent is rescinded.

Andrew H. Hughes,

Division Administrator, Mississippi, Federal Highway Administration, Jackson, Mississippi.

[FR Doc. 2010–30022 Filed 11–29–10; 8:45 am]

BILLING CODE M

DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

[FHWA Docket No. FHWA–2010–0159–]

Manual on Uniform Traffic Control Devices (MUTCD) Compliance Dates

AGENCY: Federal Highway Administration (FHWA), DOT.

ACTION: Notice; Request for comments.

SUMMARY: This notice requests comments on compliance dates for highway agencies to upgrade their existing non-compliant traffic control devices to comply with certain requirements established in the Manual on Uniform Traffic Control Devices (MUTCD). This notice asks for responses to a series of questions about compliance dates, their benefits and economic impacts, and other related issues.

DATES: Comments must be received on or before January 14, 2011.

ADDRESSES: Mail or hand deliver comments to the U.S. Department of Transportation, Dockets Management Facility, Room W12–140, 1200 New Jersey Avenue, SE., Washington, DC 20590, or fax comments to (202) 493–2251. Alternatively, comments may be submitted to the Federal eRulemaking portal at *http://www.regulations.gov.* All comments must include the docket number that appears in the heading of this document. All comments received will be available for examination and copying at the above address from 9 a.m. to 5 p.m., e.t., Monday through Friday, except Federal holidays. Those desiring notification of receipt of comments must include a self-addressed, stamped postcard or you may print the acknowledgment page that appears after submitting comments electronically. Anyone is able to search the electronic form of all comments in any one of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, or labor union). Anyone may review DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (Volume 65, Number 70, Pages 19477–78), or you may visit *http://dms.dot.gov.*

FOR FURTHER INFORMATION CONTACT: For questions about the program discussed herein, contact Mr. Hari Kalla, MUTCD Team Leader, FHWA Office of Operations, (202) 366–5915, or via e-mail at *hari.kalla@dot.gov.* For legal questions, please contact Mr. Raymond Cuprill, Senior Attorney Advisor, FHWA Office of the Chief Counsel, (202) 366–1392, or via e-mail at *raymond.cuprill@dot.gov.* Business hours for the FHWA are from 8 a.m. to 4:30 p.m., e.t., Monday through Friday, except Federal holidays.

SUPPLEMENTARY INFORMATION:

Electronic Access and Filing

You may submit or retrieve comments online through the Federal eRulemaking portal at: *http://www.regulations.gov.* The Web site is available 24 hours each day, 365 days each year. Electronic submission and retrieval help and guidelines are available under the help section of the Web site.

An electronic copy of this document may also be downloaded from Office of the Federal Register's home page at: *http://www.archives.gov/federal_register* and the Government Printing Office's Web page at: *http://www.gpoaccess.gov.*

Background

The MUTCD is incorporated by reference within Federal regulations at 23 CFR Part 655, approved by FHWA, and recognized as the national standard for traffic control devices used on all public roads. When new provisions are adopted in a new edition or revision of the MUTCD, any new or reconstructed traffic control devices being installed after adoption are generally required to be in compliance with the new provisions. Existing devices in the field that do not meet the new MUTCD provisions are expected to be upgraded by highway agencies over time to meet the new provisions via a systematic upgrading process, but there are no specific dates for required completion of the upgrades. The Code of Federal Regulations, at 23 CFR 655.603(d)(1), authorizes FHWA to establish target compliance dates for compliance of particular existing devices. The FHWA establishes such compliance dates via the Federal rulemaking process.

The Final Rule for the 2009 edition of the MUTCD [1] established 12 new specific compliance dates in Table I–2 for upgrading existing devices to comply with certain new provisions adopted in that edition. Table I–2 in the 2009 MUTCD also included 46 other compliance dates that had not been reached by 2009 that were established in previous Final Rules in 2000,[2] 2003,[3] and 2007 [4] for new provisions adopted in those Final Rules. The FHWA is aware of concerns on the part of some State and local highway agencies about the potential impacts of MUTCD compliance dates in the current economic downturn, which has significantly reduced the resources available to such agencies.

Purpose of This Notice

The FHWA is interested in examining the issues of the safety benefits provided by traffic control device uniformity and the economic hardships to State and local governments that might result from specific compliance dates for upgrading some non-compliant existing devices.

[1] 74 FR 66732, December 16, 2009.

[2] 65 FR 78923, December 18, 2000.

[3] 68 FR 65496, November 20, 2003.

[4] 72 FR 72574, December 21, 2007.

The purpose of this notice is to present a general discussion of issues related to MUTCD compliance dates, to present a discussion of existing compliance dates for seven specific 2009 MUTCD provisions, and to request comments and input on those issues and dates. This notice also includes a series of specific questions for which the FHWA requests input on each.

While there are questions presented on specific aspects of MUTCD compliance dates, comments and input may be offered on any part of this notice.

The FHWA is seeking comments from all interested parties to help FHWA in further examining these issues and evaluating potential future alternative courses of action, including additional rulemaking.

Discussion of General Compliance Date Issues

The FHWA has established MUTCD compliance dates for upgrading existing non-compliant devices based on what it believes to be a reasonable balance of the safety benefits afforded by uniformity of traffic control devices and the economic costs to agencies to achieve compliance. Highway agencies are allowed to use systematic upgrading programs (without specific compliance dates) to upgrade their existing devices in the field to meet the vast majority of all new MUTCD provisions. For example, the 2009 MUTCD requires that the lettering on street name signs shall be composed of combination of lower-case letters with initial upper case letters. However, there is no specific compliance date for replacement of existing Street Name signs that use all capital lettering. Existing Street Name signs using all capital letters can remain in place until they need to be replaced due to end of service life or some other reason. As a result, agencies do not incur any additional cost to meet this MUTCD requirement. In addition, FHWA has established specific compliance dates predominantly based on the useful service life of devices. This approach enables highway agencies to defer upgrading non-compliant devices until the device wears out, is damaged or destroyed, or is replaced due to other events such as highway reconstruction, thus minimizing economic impacts.

In the 2009 MUTCD, specific compliance dates were established for only 12 of the hundreds of new provisions that were adopted with that new edition. In those 12 cases, FHWA determined that the safety benefits that the traveling public would derive from those new provisions were so critical that compliance of existing devices in the field potentially prior to the end of their service lives was necessary. Traffic control device upgrades are eligible for use of Federal-aid highway funds, thus mitigating the impacts on State and local highway agencies.

The FHWA understands that there are many competing demands on State and local government resources, particularly to highway and public works agencies, that State and local governments must balance with highway safety and traffic control device uniformity in allocating their limited resources. The FHWA also believes that traffic control device uniformity is important to the safety of not only of motor vehicles, but also of pedestrians, bicyclists, and other road users, and as such this uniformity provides important benefits to society. The MUTCD was originally developed in 1930s because of the consensus among State and local governments, organizations representing motorists, and many safety-related organizations, that traffic control device uniformity was essential to reducing crashes and the deaths, injuries, and property damage that results from crashes. The 1966 Highway Safety Act [5] further recognized the safety benefits of traffic control device uniformity by legislating the change in status of the MUTCD from a recommended practice with voluntary compliance to a national standard with mandatory compliance.

Further, FHWA believes that the establishment of specific compliance dates for limited numbers of new MUTCD requirements is effective in achieving uniformity for those critical items. Requirements with specific compliance dates receive much greater attention and upgrading action by highway agencies because of the potential for tort liability and the potential loss of Federal-aid funds.

Discussion of Specific Compliance Dates

The FHWA has identified three compliance dates established in the December 2007 Final Rule on maintaining minimum sign retroreflectivity and four of the new compliance dates established in the Final Rule for the 2009 edition of the MUTCD that might potentially present the greatest challenges to overcome. A discussion of each follows.

Maintaining Minimum Sign Retroreflectivity (Section 2A.08)

On December 21, 2007, the Final Rule for revision number 2 of the 2003 edition of the MUTCD was issued regarding maintaining minimum levels of sign retroreflectivity. This rulemaking was in response to a statutory requirement.[6] As a part of this Final Rule, three specific compliance dates were established regarding the new requirements: (1) January 22, 2012 (4 years)—implementation and continued use of an assessment or management method that is designed to maintain traffic sign retroreflectivity at or above the established minimum levels; (2) January 22, 2015 (7 years)—replacement of regulatory, warning, and post-mounted guide (except street name) signs that are identified using the assessment or management method as failing to meet the established minimum levels; and (3) January 22, 2018 (10 years)—replacement of street name signs and overhead guide signs that are identified using the assessment or management method as failing to meet the established minimum levels.

The new minimum sign retroreflectivity requirements were intended to assure adequate nighttime visibility of traffic signs, especially for older drivers, but with significant safety benefits for all drivers, as clearly documented by research.[7] Further, the 7-year and 10-year compliance periods were set based on expected service life of sign sheeting materials.

One-Way Signs (Section 2B.40)

On December 16, 2009, the Final Rule for the 2009 edition of the MUTCD was issued and a compliance date of December 31, 2019, (10 years) was established for upgrading existing field locations to comply with a new requirement for the number and location of One-Way regulatory signs. The new requirement is that One-Way signs shall be installed on the near-right and far-left corners of each intersection with the directional roadways of a divided highway having a median width of 30 feet or more. This was a recommendation (Guidance) in the 2003 MUTCD that was strengthened to a requirement (Standard) in the 2009 MUTCD.

Some highway agencies already have a policy, per the 2003 guidance, to install near-right and far-left One-Way signs at each directional roadway intersection of their divided highways with medians 30 feet or wider.

[5] Public Law 89–564, 80 Stat. 731.

[6] Section 406 of the Department of Transportation and Related Agencies Appropriations Act, 1993 (Pub. L. 102–388; October 6, 1992).

[7] D. Ripley. Quantifying the Safety Benefits of Traffic Control Devices—Benefit-Cost Analysis of Traffic Sign Upgrades. Accepted for publication in the proceedings of the 2005 Mid-Continent Research Symposium, Ames, Iowa, August 2005. This paper can be found at *http://tcd.tamu.edu/Documents/MinRetro/MinRetro.htm.*

However, agencies that did not comply with the 2003 guidance at all or only at some of the applicable intersections now must change their policy for use of One-Way signs at newly constructed intersections, and, by the end of 2019, install any additional One-Way signs needed at their existing locations to meet the Standard. Even though 10 years is allowed for this work to be done, this might constitute a burden for some agencies with significant mileage of divided highways with medians 30 feet or wider.

The strengthening of this provision to a Standard was based on safety research as detailed in the Older Driver Handbook.[8] Further, the 10-year compliance date for existing locations was established in consideration of the demonstrated safety issues associated with wrong-way travel on divided highways and because FHWA anticipates that installation of the required additional signs at existing locations will provide significant safety benefits to road users. The FHWA believes that State and local highway agencies and owners of private roads open to public travel can schedule the installation of the additional required signs in conjunction with their programs for maintaining and replacing other signs at existing locations along divided highways that are worn out or damaged, thus minimizing any impacts.

Horizontal Alignment Warning Signs (Sections 2C.06 through 2C.14)

The 2009 MUTCD established new requirements that engineering practices shall be used to determine the appropriate advisory speed on horizontal curves and requiring a hierarchal approach to determine the use of various horizontal alignment warning signs, including Turn or Curve signs, Advisory Speed plaques, Chevrons and Large Arrow signs, and Exit Speed/Ramp Speed signs. For these signs, the Table 2C–5 matrix of "Required, Recommended, or Optional" must be used to determine use of each type of sign, based on the difference between the speed limit on the approach and the advisory speed of the curve. The new requirement applies to arterials and collectors with an Average Annual Daily Traffic volume of over 1,000 vehicles per day. A compliance date of December 31, 2019 (10 years), was established for upgrading signing at existing field locations to comply with the new horizontal alignment warning sign requirements.

Even though 10 years is allowed for this work to be done, this might constitute a burden for some agencies with a network of higher volume arterial and collector roads having large numbers of horizontal curves.

The new requirement for use of engineering practices to determine advisory speeds for curves and to use Table 2C–5 to determine the required, recommended, and optional use of horizontal alignment warning signs and plaques was determined to be needed because fatalities at horizontal curves account for 25 percent of all highway fatalities, even though horizontal curves are only a small portion of the nation's highway mileage, and because the past application of engineering judgment for determination of advisory speeds and horizontal curve signing, without specific uniform criteria, has not sufficiently improved the safety performance of horizontal curves. Also, the 10-year compliance date was established because of the demonstrated safety issues associated with run-off-the-road crashes at horizontal curves and because FHWA anticipates that a uniform method of determining advisory speeds and installation of the required additional signs at existing locations will provide significant safety benefits to road users. The FHWA believes that State and local highway agencies and owners of private roads open to public travel can schedule the installation of the additional required signs in conjunction with their programs for maintaining and replacing other signs at existing locations that are worn out or damaged, thus minimizing any financial impacts.

Yellow Change Intervals and Red Clearance Intervals (Section 4D.26)

The 2009 MUTCD established a new requirement that durations of yellow change intervals and red clearance intervals for traffic signals shall be determined using engineering practices, such as the kinematic formulas published by the Institute of Transportation Engineers that take into account approach speeds, deceleration rates of stopping vehicles, intersection width, and roadway grades. Previously, the MUTCD did not require or recommend any particular methods for determining the durations of these critical safety intervals in the traffic signal sequence. A compliance date of December 31, 2014 (5 years), or when timing adjustments are made to the individual intersection and/or corridor, whichever occurs first, was established for highway agencies to use engineering practices to determine times for the yellow change intervals and red clearance interval at their existing signalized locations and to revise the timing of those intervals based on the determinations.

Many highway agencies have been using engineering practices to determine yellow change interval and red clearance interval durations. However, there are some agencies that have been using jurisdiction-wide constant durations, "rules of thumb," or assigning durations to these intervals without applying any engineering factors. Such highway agencies might be burdened by the need to evaluate all their signalized intersections and adjust the durations of the yellow change intervals and red clearance intervals to comply with the new requirement within the 5-year compliance period.

As documented in the FHWA report "Signalized Intersections: Informational Guide,"[9] a variety of studies from 1985 through 2002 found significant safety benefits from using accepted engineering practices to determine the durations of yellow change and red clearance intervals. Subsequent safety studies[10] have further documented significant major reductions in crashes when jurisdictions have revised the durations of the yellow change and red clearance intervals using accepted engineering practices. The 5-year compliance date was established because of the demonstrated safety benefits, as discussed above, of proper engineering-based timing of these critical signal intervals, and because traffic signals and signal control equipment have a very long service life (30 to 50 years is not uncommon) and very long intervals between signal timing adjustments are typical at many traffic signal locations in many jurisdictions. The FHWA believes that relying on systematic upgrading provisions, based on service life, to achieve compliance with this critical timing need would take an inordinately long time, to the detriment of road user safety. The FHWA believes that State and local highway agencies and owners

[8] "Guidelines and Recommendations to Accommodate Older Drivers and Pedestrians," FHWA Report no. FHWA–RD–01–051, May 2001, can be viewed at the following Internet Web site: *http://www.tfhrc.gov/humanfac/01105/cover.htm.* Recommendations I.E(4), I.K(2), and I.K(3).

[9] "Signalized Intersections: Informational Guide," FHWA publication number FHWA–HRT–04–091, August 2004, pages 209–211, can be viewed at the following Internet Web site: *http://www.tfhrc.gov/safety/pubs/04091/.*

[10] NCHRP Research Results Digest 299, November 2005, can be viewed at the following Internet Web site: *http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rrd_299.pdf.* This digest includes data from the study "Changes in Crash Risk Following Retiming of the Traffic Signal Change Intervals," by R.A. Retting, J.F. Chapline, and A.F. Williams, as published in Accident Analysis and Prevention, Volume 34, number 2, pages 215–220, available from Pergamon Press, Oxford, NY.

of private roads open to public travel can minimize any impact of this signal timing requirement by adopting a policy that determines durations of yellow change and red clearance intervals that is based on engineering practices and then by applying that policy whenever an existing individual signal location or system of interconnected locations is being checked or adjusted for any reason, such as investigation of citizen complaints or routine maintenance.

Pedestrian Intervals and Signal Phases (Section 4E.06)

The 2009 MUTCD established a new requirement for pedestrian signals that the pedestrian change interval (flashing upraised orange hand) shall not extend into the red clearance interval and shall be followed by a buffer interval of at least 3 seconds. Previously, it was allowable to continue the flashing orange hand display into and through the vehicular red clearance interval, and thus there was no requirement for any pedestrian safety "buffer time" between the end of the flashing orange hand display and the start of green for conflicting traffic on the street being crossed by pedestrians. A compliance date of December 31, 2014 (5 years), or when timing adjustments are made to the individual intersection and/or corridor, whichever occurs first, was established for this new requirement.

Most highway agencies have operated their pedestrian signals so that the flashing upraised hand terminates no later than the start of the yellow change interval for parallel vehicular traffic. With this display sequence, the yellow time and any red clearance time serves as the buffer interval and would comply with the new requirement. However, there are some highway agencies that have made it a practice at some or all of their signals to extend the flashing orange hand to the end of the yellow change interval or even all the way to the end of the red clearance interval. Most such pedestrian signal displays do not provide the required minimum 3 seconds after the end of the flashing orange hand as a margin of safety that allows a pedestrian who underestimates the time needed to cross a roadway, with or without a countdown display, to better avoid a conflict with vehicles. Highway agencies that have existing pedestrian signals operated in this manner might be burdened by the need to adjust the control equipment and/or durations of timing intervals to comply with the new requirement within the 5-year compliance period.

The FHWA established the 5-year compliance date because of the demonstrated safety issues associated with pedestrian crossings at traffic signals, the need for consistent display of signal indications for pedestrians, and the pedestrian confusion that would likely occur as a result of a long-term mixing of a variety of pedestrian signal displays associated with the pedestrian clearance interval. Traffic signals and signal control equipment have a very long service life (30 to 50 years is not uncommon) and very long intervals between signal retiming are typical at many traffic signal locations in many jurisdictions. The FHWA believes that relying on systematic upgrading, based on service life, to achieve compliance with this critical timing need would take an inordinately long time, to the detriment of pedestrian safety. The FHWA believes that State and local highway agencies and owners of private roads open to public travel can minimize any impact of this signal timing requirement by adopting a policy for timing and display of pedestrian change intervals in relation to vehicular intervals in compliance with Section 4E.06 and then by applying that policy whenever an existing individual signal location or system of interconnected locations is being checked or adjusted for any reason, such as investigation of citizen complaints or routine maintenance.

Questions

A series of seven specific questions regarding MUTCD compliance dates are listed below, for which the FHWA requests input on each, to help further examine this issue.

The seven questions are as follows:

1. What, if any, difficulties does your organization anticipate in meeting the seven MUTCD compliance dates discussed above for upgrading existing non-compliant devices in the field?

2. Are there one or more of these seven compliance dates that are more problematic than the others for your organization? If so, which ones, and why?

3. If some or all of these seven compliance dates were extended, how long do you estimate it would take to complete the necessary traffic control device upgrades?

4. What safety or other impacts would result from extending some or all of these seven compliance dates?

5. Are there other MUTCD compliance dates not described in this notice that are problematic for your organization? If yes, which ones, and why?

6. What considerations should be applied to establish new compliance dates in the MUTCD?

7. What other comments or input do you wish to provide to FHWA regarding MUTCD compliance dates for upgrading existing traffic control devices?

Authority: 23 U.S.C. 101(a), 104, 109(d), 114(a), 217, 315, and 402(a); 23 CFR 1.32; and, 49 CFR 1.48(b).

Issued on: November 18, 2010.

Shailen Bhatt,

Acting Administrator.

[FR Doc. 2010–29587 Filed 11–29–10; 8:45 am]

BILLING CODE 4910–22–P

DEPARTMENT OF TRANSPORTATION

Federal Railroad Administration

Notice of Finding of No Significant Impact for the Washington State Portion of the Pacific Northwest Rail Corridor Upgrades Tier-1 Environmental Assessment

AGENCY: Federal Railroad Administration (FRA), United States Department of Transportation (DOT).

ACTION: Notice of availability.

SUMMARY: In accordance with the National Environmental Policy Act of 1969 (NEPA) and the FRA's Procedures for Considering Environmental Impacts (FRA Environmental Procedures) (64 FR 28545 (May 26, 1999)), the FRA and the Washington State Department of Transportation (WSDOT) prepared a Tier-1 Environmental Assessment (Tier-1 EA) that evaluates the impacts of a corridor improvements program to the Washington State portion of the Pacific Northwest Rail Corridor (PNWRC Program). This notice advises the public that FRA finds that the corridor improvement program will not have a significant impact on the quality of the human or natural environment and has issued a Finding of No Significant Impact (FONSI) supporting that determination. Copies of both the Tier-1 EA and FONSI are available on FRA's Web site at *http://www.fra.dot.gov/rpd/freight/3011.shtml.*

FOR FURTHER INFORMATION CONTACT: For further information regarding either the Tier-1 EA or FONSI please contact Melissa DuMond, Environmental Protection Specialist, Federal Railroad Administration, 1200 New Jersey Ave., SE., Stop 20, Washington, DC 20590, telephone: (202) 493–6366.

SUPPLEMENTARY INFORMATION: The purpose of the PNWRC Program in Washington State is to improve intercity passenger rail service by reducing travel times, achieving greater schedule reliability, and creating capacity for additional trip frequencies in order to accommodate growing intercity travel

demand. To achieve these goals WSDOT applied for Federal funding through the High Speed Intercity Passenger Rail Program (HSIPR Program) administered by the FRA and funded by the American Recovery and Reinvestment Act (Recovery Act). WSDOT's application under the Recovery Act was split into three Service Blocks, and identified incremental service benefits including increased service levels, improved on-time performance and schedule reliability, and reduced travel times. The FRA intends to provide funding under the HSIPR Program for projects contained in two of the three service blocks.

In order to comply with the requirements of the HSIPR Program Guidance (Interim Guidance) that described the eligibility requirements and procedures for obtaining funding under the HSIPR Program (74 FR 29901 (June 23, 2009)), WSDOT prepared a Tier-1 or "service" NEPA document that included the analysis of two alternatives; the "No Build" and the "Corridor Service Expansion Alternative." The Tier-1 EA was completed in September 2009 and was made available for comment between October 2, 2009 and October 23, 2009 on the WSDOT Web site. Thirteen agencies submitted written comments. No individual written comments were received.

Based on the analysis in the Tier-1 EA, FRA released a draft FONSI for public comment on July 8, 2010 for a period of 30 calendar days (75 FR 39325 (July 8, 2010)). FRA received six comments on the draft FONSI, including comments from one federal agency, two state agencies, and three local governments. In compliance with NEPA and the FRA's Environmental Procedures, FRA has addressed all comments on the FONSI and has determined that the PNWRC corridor improvements will not have a significant impact on the quality of the human or natural environment. Prior to release of construction funding for individual projects, WSDOT will successfully complete applicable mitigation measures detailed in the FONSI and complete appropriate project-level NEPA evaluations, documentation, and required determinations for the individual project.

Issued in Washington, DC, on November 19, 2010.

Joseph C. Szabo,

Administrator.

[FR Doc. 2010–30021 Filed 11–29–10; 8:45 am]

BILLING CODE 4910–06–P

DEPARTMENT OF TRANSPORTATION

Federal Railroad Administration

Notice of Intent To Grant Buy America Waiver to Northern New England Passenger Rail Authority To Purchase 3,340 AREMA Specified Carbon Steel Standard 1⅛ Nominal Diameter Nuts

AGENCY: Federal Railroad Administration (FRA), United States Department of Transportation (DOT).

ACTION: Notice of intent to grant Buy America waiver.

SUMMARY: FRA is issuing this notice to advise the public that it intends to grant the Northern New England Passenger Rail Authority's (NNEPRA) waiver request from FRA's Buy America requirement, 49 U.S.C. 24405(a), for the purchase and use of 3,340 AREMA specified carbon steel standard 1⅛ nominal diameter nuts. FRA intends to grant the waiver because there are no domestic commercially available track nuts that meet the needed specifications and custom made fabricated track nuts that cannot be delivered for 10–16 weeks are not "reasonably available" under 49 U.S.C. 24405(a)(2)(B), especially given NNEPRA has mobilized for the track construction and Maine has a short construction season. In addition, NNEPRA used a competitive bidding process to procure the track nuts and no bidders came forward at that time who could comply with Buy America. Finally, FRA published public notice of the NNEPRA waiver request in the **Federal Register** on August 2, 2010. This notice also failed to identify a reasonably available domestic source. 49 U.S.C. 24405(a)(4) requires that the Secretary provide public notice of a determination that it is necessary to waive the Buy America requirement and provide a maximum fifteen day opportunity for public comment before the waiver becomes final.

DATES: Written comments on FRA's determination to grant NNEPRA's Buy America waiver request should be provided to the FRA on or before December 15, 2010.

ADDRESSES: Please submit your comments by one of the following means, identifying your submissions by docket number FRA–2010–0122. All electronic submissions must be made to the U.S. Government electronic site at *http://www.regulations.gov.* Commenters should follow the instructions below for mailed and hand-delivered comments.

(1) *Web Site: http://www.regulations.gov.* Follow the instructions for submitting comments on the U.S. Government electronic docket site;

(2) *Fax:* (202) 493–2251;

(3) *Mail:* U.S. Department of Transportation, 1200 New Jersey Avenue, SE., Docket Operations, M–30, Room W12–140, Washington, DC 20590–0001; or

(4) *Hand Delivery:* Room W12–140 on the first floor of the West Building, 1200 New Jersey Avenue, SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

Instructions: All submissions must make reference to the "Federal Railroad Administration" and include docket number FRA–2010–0122. Due to security procedures in effect since October 2001, mail received through the U.S. Postal Service may be subject to delays. Parties making submissions responsive to this notice should consider using an express mail firm to ensure the prompt filing of any submissions not filed electronically or by hand. Note that all submissions received, including any personal information therein, will be posted without change or alteration to *http://www.regulations.gov.* For more information, you may review DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (65 FR 19477), or visit *http://www.regulations.gov.*

FOR FURTHER INFORMATION CONTACT: For questions about this notice, please contact Ms. Linda Martin, Attorney-Advisor, FRA Office of Chief Counsel, (202) 493–6062 or via e-mail at *Linda.Martin@dot.gov.*

SUPPLEMENTARY INFORMATION: *See* waiver letter below.

Ms. Marina Douglass,
Manager of Budget and Administration,
Northern New England Passenger Rail Authority,
75 West Commercial Street, Suite 104,
Portland, ME 04101–4631,

Re: Request for Waiver of Buy America Requirement,

Dear Ms. Douglass:

This letter is in response to your July 14, 2010, request that the Northern New England Passenger Rail Authority (NNEPRA) be granted a waiver from the Federal Railroad Administration's (FRA) Buy America provision, at 49 U.S.C. 24405(a), to permit NNEPRA to purchase 3,340 foreign-made AREMA specified carbon steel standard 1⅛ nominal diameter track nuts. Section 24405(a) authorizes the Secretary of Transportation to obligate certain grant funds only if the steel, iron, and manufactured goods used in the project are produced in the United States. The

Secretary, or his delagatee, may waive the Buy America requirement provided that he or she finds that: (A) applying it would be inconsistent with the public interest; (B) the steel, iron, and goods manufactured in the United States are not produced in sufficient and reasonably available amount or are not of a satisfactory quality; (C) rolling stock or power train equipment cannot be bought or delivered to the United States within a reasonable time; or (D) including domestic material will increase the cost of the overall project by more than 25 percent. 49 U.S.C. 24405(a)(2)(A)–(D). The NNEPRA asserts that the specific required track nuts are not produced in the United States in sufficient and reasonably available amounts and that, therefore, a waiver is warranted under 49 U.S.C. 24405(a)(2)(B). For the following reasons, I am granting NNEPRA's request.

In January 2010, NNEPRA was awarded $35 million in America Recovery and Reinvestment Act (ARRA) funds to extend Amtrak's Downeaster passenger service from its existing route of Boston, Massachusetts to Portland, Maine further north to station stops in Freeport and Brunswick, Maine. The track bolts and nuts needed to be delivered to the project in time for the planned start of continuous welded rail installation the week of August 16, 2010. Consequently, delivery within 30 days of the notice of award was a requirement in the Invitation to Bid. The low bid for the nuts was $0.63 each with a total cost of $2,104.20, which includes shipping. The low bidder was able to meet the required delivery schedule. During the procurement process for these track bolts, all of the bid package holders asserted that while the track bolts were domestically produced, the standard square nuts no longer were and would have to be obtained from a foreign manufacturer.

In late June 2010, NNEPRA informally notified FRA staff that it could find no domestic source of 3,340 AREMA specified carbon steel standard 1⅛ nominal diameter track nuts, which were needed for the project. At that time, FRA asked NNEPRA to expand the search for a domestic source, and suggested they contact the Railway Supply Institute (RSI) and/or other suppliers of track equipment. The NNEPRA contacted many of the major railroad track material suppliers, including Harmer Steel, LB Foster, A&K Railroad Materials, Unitrac Railroad Materials, Atlantic Track & Turnout, Vossloh, Progress Rail, and Railroad Tools & Solutions. They all confirmed that they could not supply domestically produced AREMA standard square nuts for track bolts. The NNEPRA also attempted to determine if it would be possible to have the nuts custom-manufactured in the United States. The NNEPRA contacted Rockford Bolts, a major domestic producer of AREMA standard track bolts, and were told they could not custom fabricate the standard square nuts. The NNEPRA also contacted Lewis Bolt & Nut, a major U.S. bolt manufacturer, and they stated they would not custom fabricate the standard square nuts and did not know of any other U.S. manufacturer who would. The FRA also independently contacted RSI. The RSI knew of no domestic source of the track nuts. At that time, FRA staff told NNEPRA that its only option was to file a formal waiver request.

If FRA determines that it is necessary to grant a waiver, it is required to (before the date on which the finding takes effect) "(A) publish in the **Federal Register** a detailed written justification as to why the waiver is needed; and (B) provide notice of such finding and an opportunity for public comment on such finding for a reasonable period of time not to exceed 15 days." 49 U.S.C. 24405(a)(4). Though not required to publish waiver requests before a decision whether to grant or deny has been made, FRA published notice of NNEPRA's waiver request in the **Federal Register** on August 2, 2010 in order to invite public comment on whether there were or were not domestic sources of the required track nuts.

The FRA received five responses to its August 2, 2010 Public Notice, which are summarized here in no particular order.

- Allison Symmonds, representative for the Alliance for American Manufacturing requested that the waiver be denied, commenting that Dyson Corporation and Chicago Nut & Bolt could provide the specified track nuts.
- John A. Tolman, National Legislative Representative of the Brotherhood of Locomotive Engineers and Trainmen (BLET) and James A. Stern, Jr., National Legislative Director of the United Transportation Union (UTU) submitted a joint comment. The BLET and UTU reported that the tool and hardware supply company Grainger could supply the specified track nuts made in the United States. They requested denial of the waiver, or a design change if the design of the track bolt required foreign made nuts. The BLET and UTU expressed a desire to reserve Buy America exemptions for legitimate reasons and categorized the subject waiver as "trivial" and a "nuisance."
- W. Dan Pickett, President of the Brotherhood of Railroad Signalmen (BRS), opposed the waiver. The BRS also commented that the 10-day comment period was inadequate to submit detailed comments, and broadly asserted that more than one million domestically produced track bolts and nuts meeting the stated specifications are in service or supplier inventory and expressed confidence that numerous domestic producers can offer the required nuts. The BRS did not indicate any specific domestic producer.
- Rick Inclima, Director of Safety for the Brotherhood of Maintenance of Way Employees Division (BMWED) of the Teamsters Rail Conference opposed the waiver as well as the 10-day comment period as inadequate. The BMWED asserted that more than one million domestically produced track bolts and nuts meeting the stated specifications are in service or supplier inventory and expressed confidence that numerous domestic producers can offer the required nuts. The BMWED did not indicate any domestic producer.
- An anonymous commenter speculated that the quantity of nuts required should be sufficient for any American shop to become able to produce the order.

Because two of the responses indicated that there may be domestic sources of the track nuts, FRA requested that NNEPRA contact the identified sources and confirm whether in fact they could provide the track nuts. The NNEPRA contacted these sources and found as follows:

1. *Grainger Industrial Supply*

The NNEPRA confirmed that Grainger could not provide domestically produced AREMA standard square head track nuts.

2. *Chicago Track Nut and Bolt*

The NNEPRA confirmed that Chicago Track Nut & Bolt could in 10 to 12 weeks post-contract award custom fabricate standard square track nuts meeting the AREMA specifications for a cost of $59,518.80. This cost did not include delivery.

3. *Dyson Corp.*

The NNEPRA confirmed that Dyson Corp. could in 12 to 16 weeks post-contract award custom fabricate standard square track nuts meeting the AREMA specifications for a total cost of $16,432.80. This cost did not include delivery.

The NNEPRA concluded that while the identified domestic custom fabricated track nuts could be secured in 10 to 16 weeks at a cost of approximately $14,000 more than the lowest foreign bidder this did not mean

that domestic track nuts are "reasonably available" and the waiver should still be granted.

CONCLUSION:

For the following reason, FRA is granting NNEPRA's request. The FRA agrees with NNEPRA in that custom made fabricated track nuts that cannot be delivered for 10–16 weeks are not "reasonably available" under 49 U.S.C. 24405(a)(2)(B), especially given that NNEPRA has mobilized for construction, prompt project implementation is consistent with ARRA's economic recovery goals, and Maine has a short construction season. In addition, NNEPRA used a competitive bidding process to procure the track nuts. Neither Chicago Track Nut and Bolt nor Dyson Corp. came forward at that time, but instead NNEPRA received bids only from suppliers offering foreign-made track nuts. This waiver is granted only because of the specific facts of this project; any future requests for a waiver regarding this product will not be granted without a specific showing that domestic track nuts for that particular project also are not reasonably available at that time. This decision does not become final until fifteen (15) days after its publication in the **Federal Register.**

Sincerely,
Karen Rae
Deputy Administrator

Note: The Deputy Administrator is making this decision because Administrator Joseph C. Szabo is recused from making it. Mr. Szabo is a former United Transportation Union (UTU) employee. The UTU commented in opposition to granting the waiver request.

Issued in Washington, DC, on November 23, 2010.

Mark E. Yachmetz,

Associate Administrator for Railroad Development, Federal Railroad Administration.

[FR Doc. 2010–30178 Filed 11–29–10; 8:45 am]

BILLING CODE 4910–06–P

DEPARTMENT OF TRANSPORTATION

Federal Transit Administration

State of Good Repair Bus and Bus Facilities Discretionary Program Funds

AGENCY: Federal Transit Administration (FTA), DOT.

ACTION: State of Good Repair Bus and Bus Facilities program announcement of project selections.

SUMMARY: The U.S. Department of Transportation's (DOT) Federal Transit Administration (FTA) announces the selection of projects funded with Section 5309 Bus and Bus Facilities program funds in support of the State of Good Repair (SGR) Initiative, which was announced in the State of Good Repair Initiative Notice of Funding Availability on May 4, 2010. The SGR Initiative makes funds available to public transit providers to finance capital projects to replace, rehabilitate, and purchase buses and related equipment and to construct bus-related facilities, including programs of bus and bus-related projects for assistance to subrecipients that are public agencies, private companies engaged in public transportation, or private non-profit organizations. Additionally, the SGR Initiative makes funds available for Transit Asset Management systems, which is a systematic process of operating, maintaining, improving, and expanding physical assets effectively throughout their life cycles.

FOR FURTHER INFORMATION CONTACT: Successful and unsuccessful applicants should contact the appropriate FTA Regional office (Appendix) for specific information regarding applying for the funds or proposal specific questions. For general program information on the Bus and Bus Facilities program, contact Kimberly Sledge, Office of Program Management, at (202) 366–2053, *e-mail: kimberly.sledge@dot.gov*, or Henrika Buchanan-Smith, Office of Program Management, at (202) 366–2053, *e-mail: henrika.buchanan-smith@dot.gov.*

SUPPLEMENTARY INFORMATION: A total of $776,474,305 was available for FTA's SGR Initiative. A total of 422 applicants requested $4.06 billion, indicating significant demand for funds. Project proposals were evaluated based on the criteria detailed in the May 4, 2010 Notice of Funding Availability. The projects selected and shown in Table 1 will provide funds to help maintain the nation's public transportation bus fleet, infrastructure, and equipment in a state of good repair.

Grantees selected for competitive discretionary funding under the SGR Initiative should work with their FTA regional office (Appendix) to finalize the application in FTA's Transportation Electronic Award Management system, (TEAM) so that funds can be obligated expeditiously. Funds must be used for projects detailed in the proposal and for the purposes specified in the project descriptions in the table. A discretionary project identification number has been assigned to each project for tracking purposes and must be used in the TEAM application. Selected projects have pre-award authority as of October 4, 2010. Post-award reporting requirements include submission of the Federal Financial Report (FFR) and Milestone Report in TEAM as appropriate (*see* FTA.C.5010.1D).

The grantee must comply with all applicable Federal statutes, regulations, executive orders, FTA circulars, and other Federal administrative requirements in carrying out the project supported by the FTA grant. Funds allocated in this announcement must be obligated in a grant by September 30, 2013.

Issued in Washington, DC, November 23, 2010.

Peter Rogoff,

Administrator.

APPENDIX

[FTA Regional and Metropolitan Offices]

Mary E. Mello, Regional Administrator, Region 1—Boston, Kendall Square, 55 Broadway, Suite 920, Cambridge, MA 02142–1093, Tel. 617–494–2055.	Robert C. Patrick, Regional Administrator, Region 6—Ft. Worth, 819 Taylor Street, Room 8A36, Ft. Worth, TX 76102, Tel. 817–978–0550.
States served: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont.	States served: Arkansas, Louisiana, Oklahoma, New Mexico, and Texas.
Brigid Hynes-Cherin, Regional Administrator, Region 2—New York, One Bowling Green, Room 429, New York, NY 10004–1415, Tel. 212–668–2170.	Mokhtee Ahmad, Regional Administrator, Region 7—Kansas City, MO, 901 Locust Street, Room 404, Kansas City, MO 64106, Tel. 816–329–3920.
States served: New Jersey, New York ..... New York Metropolitan Office, Region 2—New York, One Bowling Green, Room 428, New York, NY 10004–1415, Tel. 212–668–2202.	States served: Iowa, Kansas, Missouri, and Nebraska.

APPENDIX—Continued

[FTA Regional and Metropolitan Offices]

Letitia Thompson, Regional Administrator, Region 3—Philadelphia, 1760 Market Street, Suite 500, Philadelphia, PA 19103–4124, Tel. 215–656–7100. States served: Delaware, Maryland, Pennsylvania, Virginia, West Virginia, and District of Columbia. Philadelphia Metropolitan Office, Region 3—Philadelphia, 1760 Market Street, Suite 500, Philadelphia, PA 19103–4124, Tel. 215–656–7070. Washington, DC., Metropolitan Office, 1990 K Street, NW., Room 510, Washington, DC 20006, Tel. 202–219–3562.	Terry Rosapep, Regional Administrator, Region 8—Denver, 12300 West Dakota Ave., Suite 310, Lakewood, CO 80228–2583, Tel. 720–963–3300. States served: Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming.
Yvette Taylor, Regional Administrator, Region 4—Atlanta, 230 Peachtreet Street, NW., Suite 800, Atlanta, GA 30303, Tel. 404–865–5600. States served: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, Puerto Rico, South Carolina, Tennessee, and Virgin Islands.	Leslie T. Rogers, Regional Administrator, Region 9—San Francisco, 201 Mission Street, Room 1650, San Francisco, CA 94105–1926, Tel. 415–744–3133. States served: American Samoa, Arizona, California, Guam, Hawaii, Nevada, and the Northern Mariana Islands. Los Angeles Metropolitan Office, Region 9—Los Angeles, 888 S. Figueroa Street, Suite 1850, Los Angeles, CA 90017–1850, Tel. 213–202–3952.
Marisol Simon, Regional Administrator, Region 5—Chicago, 200 West Adams Street, Suite 320, Chicago, IL 60606, Tel. 312–353–2789. States served: Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin. Chicago Metropolitan Office, Region 5—Chicago, 200 West Adams Street, Suite 320, Chicago, IL 60606, Tel. 312–353–2789.	Rick Krochalis, Regional Administrator, Region 10—Seattle, Jackson Federal Building, 915 Second Avenue, Suite 3142, Seattle, WA 98174–1002, Tel. 206–220–7954. States served: Alaska, Idaho, Oregon, and Washington.

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Table I

STATE OF GOOD REPAIR PROJECT SELECTIONS

State	Project ID	Recipient	Project Description	Allocation
AK	D2010-BUSP-001	Alaska Department of Transportation and Public Facilities (Capital Transit)	Maintenance Facility and Equipment (Replacement of Mobile Vehicle Hoist and Stationary Vehicle Wash Facility Equipment)	$400,000
AL	D2010-BUSP-002	City of Huntsville (Alabama A and M University)	Rehabilitate and Renovate Bus Shelters, Maintenance facility, and Sidewalk	$620,000
AZ	D2010-BUSP-003	City of Phoenix	Vehicle Replacement (Diesel Electric Hybrid)	$2,917,700
AZ	D2010-BUSP-004	City of Tucson	Vehicle Replacement for (Sun Tran)	$5,000,000
CA	D2010-BUSP-005	Alameda-Contra Costa Transit District	Transit Asset Management	$5,422,400
CA	D2010-BUSP-006	Anaheim Transportation Network	Replace Ticket Vending Machines ($240,300); Vehicle Replacement ($1,866,266); Transit Asset Management ($17,458)	$2,124,024
CA	D2010-BUSP-007	California Department of Transportation	Mendocino Transit Facility Replacement	$5,000,000
CA	D2010-BUSP-008 ($8,982,169) and D2010-BUSP-07001 ($26,017,831)	City and County of San Francisco	Islais Creek Motor Coach Operations and Maintenance Facility	$35,000,000
CA	D2010-BUSP-009	City of Modesto	Bus Maintenance and Storage Facility	$3,481,456
CA	D2010-BUSP-010	City of Petaluma	Petaluma Maintenance Facility	$600,000
CA	D2010-BUSP-011	County of Sonoma - Sonoma County Transit	Bus Yard & Parking Lot Rehabilitation	$460,000
CA	D2010-BUSP-012	Foothill Transit	Repower Transit Buses	$1,204,456
CA	D2010-BUSP-013	Golden Gate Bridge, Highway & Transportation District	Bus Stop revitalization in Marin County	$1,600,000
CA	D2010-BUSP-014	Long Beach Public Transportation Company	Transit Asset Management	$1,124,480
CA	D2010-BUSP-015	Los Angeles County Metropolitan Transportation Authority	Construction of Division 13 Bus Operations and Maintenance Facility	$47,750,000

State	Project ID	Recipient	Project Description	Allocation
CA	D2010-BUSP-016	Napa County Transportation and Planning Agency	Vehicle Replacement	$1,936,000
CA	D2010-BUSP-017	North County Transit District	Storage Tank Removal and Replacement	$332,000
CA	D2010-BUSP-018	San Diego Metropolitan Transit System	Vehicle Replacement (CNG)	$3,000,000
CA	D2010-BUSP-019	San Francisco Metropolitan Transit Authority	Transit Asset Management	$8,800,000
CA	D2010-BUSP-020	Santa Cruz Metropolitan Transit District	Vehicle Replacement (CNG)	$4,830,600
CA	D2010-BUSP-021	Yolo County Transportation District	Replacement or Rehabilitation of Equipment at Woodland Facility	$222,400
CO	D2010-BUSP-022	City of Fort Collins	Alternate Fuel Vehicle Replacement	$1,200,000
CO	D2010-BUSP-023	City of Loveland	Vehicle Replacement and Retrofit of Hydraulic Hybrid Technology	$103,360
CO	D2010-BUSP-024	Colorado Department of Transportation	Facilities and Equipment for Eagle County ($103,000); Roaring Fork Transportation Authority ($6.3 million); Town of Avalon ($7,500,000); and Boulder Colorado ($157,920)	$14,060,920
CO	D2010-BUSP-025	Regional Transportation District	Maintenance Projects for the Boulder and Platte Facilities	$3,654,000
CT	D2010-BUSP-026	Greater Bridgeport Transit Authority	Maintenance Facility Roof Repair and Replacement	$1,167,945
DC	D2010-BUSP-027	Washington Metropolitan Transit Authority	Transit Asset Management	$2,400,000
DE	D2010-BUSP-028	Delaware Transit Corporation	Five Points Maintenance/Park and Ride Facility	$5,000,000
FL	D2010-BUSP-029	Broward County	Transit Asset Management	$1,000,000
FL	D2010-BUSP-030	City of Gainesville - Regional Transit System	Phase I Maintenance Facility	$10,666,846
FL	D2010-BUSP-031	Jacksonville Transportation Authority	Repairs and Refurbishments to Skyway Bus Hubs	$2,384,244

State	Project ID	Recipient	Project Description	Allocation
FL	D2010-BUSP-032	Manatee County Government	Transit Administration/Fleet Maintenance Facility	$15,948,237
FL	D2010-BUSP-033	St. Lucie County Board of County Commissioners	Vehicle Replacement (St. Lucie)	$4,550,000
GA	D2010-BUSP-034	Metropolitan Atlanta Rapid Transit Authority	Facilities ($18.32 million); Development of an asset rating and investment prioritization criteria, and update and completion of a system wide condition assessment study ($1.36 million)	$19,680,000
HI	D2010-BUSP-035	Hawaii Department of Transportation	Rehabilitation of public transportation facility ($4 million); Vehicle Replacement for Hawaii County ($1million); and Vehicle Replacement for Kauai County ($925,000)	$5,925,000
IA	D2010-BUSP-036	Ames Transit Agency - CyRide (City of Ames)	Vehicle Replacement ($3,528,000) and Scheduling Software ($160,000)	$3,688,000
IA	D2010-BUSP-037	City of Cedar Rapids	Vehicle Replacement	$1,468,000
IA	D2010-BUSP-038	City of Dubuque, Iowa	Vehicle Replacement	$2,303,306
IA	D2010-BUSP-039	Iowa Department of Transportation	Vehicle Replacement	$5,000,000
ID	D2010-BUSP-040	Idaho DOT	Transit Asset Management	$30,000
ID	D2010-BUSP-041	Valley Regional Transit	Vehicle Replacement	$597,600
IL	D2010-BUSP-042	Chicago Transit Authority	Renovations to 77th Street Garage and South Shops ($32 million); Transit Asset Management ($5.4 million)	$37,400,000
IL	D2010-BUSP-043	Greater Peoria Mass Transit District	Vehicle Replacement	$4,500,000
IL	D2010-BUSP-044	Illinois Department of Transportation	Statewide Facility Projects	$10,000,000
IL	D2010-BUSP-045	Madison County Mass Transit District	Vehicle Replacement	$4,000,000
IL	D2010-BUSP-046	Pace, Suburban Bus Division of the Regional Transportation Authority	Vehicle Replacement and Retrofit	$5,000,000

State	Project ID	Recipient	Project Description	Allocation
IN	D2010-BUSP-047	Fort Wayne Public Transportation Corporation/Citilink	Vehicle Replacement	$2,000,000
IN	D2010-BUSP-048	Indianapolis Public Transportation Corporation	Building rehabilitation ($4,126,800) and Vehicle Replacements and Rebuilds ($2,399,616)	$6,526,416
KY	D2010-BUSP-049	Kentucky Transportation Cabinet	Louisville WHEELS Transportation Inc ($40,000); Daniel Boone Community Action Agency ($21,080); Pennyrile Allied Community Services ($494,500); Community Action of Southern KY ($486,875); Federated Transportation Services Bluegrass ($1,285,000); Middle KY Community Action Partnership ($1,562,069); Transit Authority of Central KY ($1,748,800); and Paducah Transit Authority Replacement Vehicles ($263,524)	$5,901,848
KY	D2010-BUSP-050	Transit Authority of Lexington Fayette Urban County (LexTran)	Construction and Rehabilitation of Administrative/Maintenance Facility	$8,780,000
KY	D2010-BUSP-051	Transit Authority of River City	Fare Collection System Replacement	$2,543,892
LA	D2010-BUSP-052	Jefferson Parish	Vehicle Replacement	$1,187,956
LA	D2010-BUSP-053	New Orleans Regional Transit Authority	Renovate and Upgrade the Historic Napoleon Building	$7,466,400
MA	D2010-BUSP-054	Lowell Regional Transit Authority	Roof Replacement on Bus Maintenance & Storage Facility	$1,725,000
MA	D2010-BUSP-055	Montachusett Regional Transit Authority	Facility Rehabilitation (HVAC replacement and repaving) ($980,000) and Vehicle Replacement ($520,000)	$1,500,000
MA	D2010-BUSP-056	Pioneer Valley Transit Authority	Vehicle Replacement (Diesel Electric Hybrid)	$6,200,000
MA	D2010-BUSP-057	Worcester Regional Transit Authority	Maintenance and Operations Facility	$39,000,000
MD	D2010-BUSP-058	Maryland Department of Transportation	Bus Washer System Replacement ($1,723,050) and Bus Shop Construction ($12 million)	$13,723,050

State	Project ID	Recipient	Project Description	Allocation
MI	D2010-BUSP-059	Ann Arbor Transportation Authority	Blake Transit Center Reconstruction	$1,013,000
MI	D2010-BUSP-060	Blue Water Area Transportation Commission	Bus Washer Replacement ($260,000) and Bus Rebuild ($864,000)	$1,124,000
MI	D2010-BUSP-061	Mass Transportation Authority - Flint	Vehicle Replacement (CNG)	$4,000,000
MI	D2010-BUSP-062	Michigan Department of Transportation	Vehicle Replacement	$3,939,694
MI	D2010-BUSP-063	Saginaw Transit Authority Regional Services	Automated Farebox Replacement	$600,000
MN	D2010-BUSP-064	Duluth Transit Authority	Twin Ports Multimodal Transportation Terminal	$16,000,000
MN	D2010-BUSP-065	Metropolitan Council / Metro Transit	Bus Paint Booth Replacement	$1,600,000
MO	D2010-BUSP-066	Bi-State Development Agency	Vehicle Replacement	$3,000,000
MO	D2010-BUSP-067	City of Columbia	Vehicle Replacement	$2,000,000
MO	D2010-BUSP-068	City Utilities of Springfield, Missouri	Transit/Fleet Maintenance Boonville Campus Expansion	$7,690,800
MO	D2010-BUSP-069	Kansas City Area Transportation Authority	Replacement of Bus Washer System and Fueling Station Upgrade	$748,000
MT	D2010-BUSP-070	Missoula Urban Transportation District	Renovate and Repair Downtown Transfer Center (Mountain Line)	$590,400
NC	D2010-BUSP-071	Cape Fear Public Transportation Authority	Wave Transit Operations & Maintenance Facility	$6,000,000
NC	D2010-BUSP-072	Charlotte Area Transit System	Transit Asset Management	$400,000
NC	D2010-BUSP-073	City of Asheville	Vehicle Replacement	$1,388,500
NC	D2010-BUSP-074	City of Charlotte	Phase I Facility Upgrade for the Tryon and North Davidson Bus Garages	$1,549,600
ND	D2010-BUSP-075	City of Bismarck	Transit Bus Storage Garage Construction	$2,000,000
NE	D2010-BUSP-076	Transit Authority of the City of Omaha	Upgrade Maintenance/Administrative Facility	$9,063,380

State	Project ID	Recipient	Project Description	Allocation
NJ	D2010-BUSP-077	County of Cape May	Vehicle Wash Facility	$995,200
NJ	D2010-BUSP-078	New Jersey Transit	Vehicle Replacement (CNG)	$22,000,000
NM	D2010-BUSP-079	ABQ Ride - City of Albuquerque	Vehicle Replacement	$3,000,000
NM	D2010-BUSP-080	City of Santa Fe	Sheridan Transit Hub Renovation	$240,000
NM	D2010-BUSP-081	New Mexico Department of Transportation	Rural Area Vehicle Replacements	$4,000,000
NV	D2010-BUSP-082	Regional Transportation Commission of Southern Nevada	Vehicle Replacement (Diesel)	$8,000,000
NY	D2010-BUSP-083	Capital District Transportation Authority	Albany Facility Roof Replacement/Solar Panel Installation	$3,200,000
NY	D2010-BUSP-084	Chemung County	Rehabilitate Maintenance Facility and Fare Collection Equipment; purchase asset management software ($500,000) and Vehicle Replacement ($600,000)	$1,100,000
NY	D2010-BUSP-085	Dutchess County	Replace In-Ground Tanks and Transit Center Roof	$3,600,000
NY	D2010-BUSP-086	Metropolitan Transportation Authority	Bus Radios and Control Center Project ($27,793,222 million) and CNG Vehicle Replacements ($33,862,400)	$61,655,622
NY	D2010-BUSP-087	Niagara Frontier Transportation Authority	Vehicle Replacement (Hybrid)	$7,000,000
NY	D2010-BUSP-088	Rochester Genesee Regional Transportation Authority	Transit Campus and Facility Improvements	$13,004,000
OH	D2010-BUSP-089	Greater Cleveland Regional Transit Authority	Facilities Upgrades and Maintenance Equipment	$4,247,232
OH	D2010-BUSP-090	METRO Regional Transit Authority	Vehicle Replacement	$3,000,000
OH	D2010-BUSP-091	Ohio Department of Transportation	Facility Rehabilitation for 20 Different Transit Agencies and Various Equipment ($3,454,771) and Vehicle Replacement ($10 million)	$13,454,771

State	Project ID	Recipient	Project Description	Allocation
OK	D2010-BUSP-092	Oklahoma Department of Transportation	Purchase of Equipment and Facility renovations for Pelivan Transit, J.A.M.M. Transit, First Capital Trolley, KI BOIS Area Transit, and Red River Transportation ($1,456,694) and Vehicle Replacement (1.8 million)	$3,256,694
OR	D2010-BUSP-093	City of Corvallis	Transit Radio System Replacement	$64,000
OR	D2010-BUSP-094	Lane Transit District	Vehicle Replacement (Hybrid Electric)	$5,000,000
OR	D2010-BUSP-095	Oregon Department of Transportation	Vehicle Replacement for Rural Areas	$3,000,000
OR	D2010-BUSP-096	Tri-County Metropolitan Transportation District of Oregon	Vehicle Replacement	$6,000,000
PA	D2010-BUSP-097	Cambria County Transit Authority	Construction of Administration, Operations, Maintenance Facility	$10,000,000
PA	D2010-BUSP-098	Erie Metropolitan Transit Authority	Transit Facility Construction	$7,213,218
PA	D2010-BUSP-099	Pennsylvania Department of Transportation	Statewide Facilities and Equipment ($5,104,512) and Statewide Bus Purchases ($429,272)	$5,533,784
PA	D2010-BUSP-100	Port Authority of Allegheny County	Vehicle Replacement (Clean Diesel)	$22,715,025
PA	D2010-BUSP-101	River Valley Transit	Vehicle Replacement	$1,000,000
PA	D2010-BUSP-102	Southeastern Pennsylvania Transportation Authority	Infrastructure Rehabilitation of Parkside Bus Loop ($1.76 million) and Asset Management ($6.4 million)	$8,160,000
SC	D2010-BUSP-103	Charleston Area Regional Transportation Authority	North Charleston Regional Intermodal Transportation Facility	$6,020,126
SC	D2010-BUSP-104	Waccamaw Regional Transportation Authority	Electronic Farebox Equipment	$144,000
SD	D2010-BUSP-105	South Dakota Department of Transportation	Statewide Radio Replacements	$600,000

State	Project ID	Recipient	Project Description	Allocation
TN	D2010-BUSP-106	Chattanooga Area Regional Transportation Authority (CARTA)	Transit Asset Management	$250,000
TN	D2010-BUSP-107	Memphis Area Transit Authority	Vehicle Replacement	$7,000,000
TN	D2010-BUSP-108	Nashville Metropolitan Transit Authority	Transit Asset Management	$200,000
TX	D2010-BUSP-109	Capital Metropolitan Transportation Authority	Vehicle Replacement	$2,000,000
TX	D2010-BUSP-110	City of Wichita Falls, Texas	Vehicle Replacement	$592,000
TX	D2010-BUSP-111	Dallas Area Rapid Transit (DART) Authority	Vehicle Replacement	$5,000,000
TX	D2010-BUSP-112	Metropolitan Transit Authority of Harris County, Texas	Roof Replacement at Kashmere and Hiram Clarke Facilities	$2,910,401
TX	D2010-BUSP-113	Texas Department of Transportation	Vehicle Replacement	$5,000,000
TX	D2010-BUSP-114	VIA Metropolitan Transit	Rehabilitation of Facilities	$3,117,087
TX	D2010-BUSP-115	VIA Metropolitan Transit	Vehicle Rehabilitation	$4,000,000
UT	D2010-BUSP-116	Utah Transit Authority	Central Operations and Maintenance Facility ($4.448 million) and Vehicle Replacement ($4 million)	$8,448,000
VA	D2010-BUSP-117	Transportation District Commission of Hampton Roads	Southside Facilities Project	$8,480,000
VT	D2010-BUSP-118	Chittenden County Transportation Authority	Vehicle Replacement	$2,475,305
VT	D2010-BUSP-119	Vermont Agency of Transportation	Vehicle Replacement	$6,392,000
WA	D2010-BUSP-120	Central Puget Sound Regional Transit Authority	Vehicle Replacement ($3 million) and Transit Asset Management ($1.5 million)	$4,500,000
WA	D2010-BUSP-121	Clark County Public Transportation Benefit Area	Maintenance Efficiency Project	$4,530,000
WA	D2010-BUSP-122	Intercity Transit	Vehicle Replacement	$2,000,000

State	Project ID	Recipient	Project Description	Allocation
WA	D2010-BUSP-123	Kalispel tribe of Indians	Transit Asset Management	$15,876
WA	D2010-BUSP-124	King County Department of Transportation	Downtown Seattle Transit Tunnel Station Escalator Refurbishment	$5,380,000
WA	D2010-BUSP-125	Kitsap transit	Transit Asset Management	$56,000
WA	D2010-BUSP-126	Pierce County Public Transportation Benefit Area Corporation	Vehicle Replacement	$2,000,000
WA	D2010-BUSP-127	Snohomish County Transportation Benefit Area	Community Transit Radio Tower Site Expansion Project ($2.784 million) and Vehicle Community Transit Replacement ($4 million)	$6,784,000
WA	D2010-BUSP-128	Spokane Transit Authority	Roofing Replacements ($1,836,054) and Transit Asset Management ($1.88 million)	$3,716,054
WA	D2010-BUSP-129	Stillaguamish Tribe of Indians	Vehicle Replacement	$157,000
WI	D2010-BUSP-130	Milwaukee County	Facility Rehabilitation Projects for the Milwaukee County Transit System ($1.276 million) and Vehicle Replacement ($7 million)	$8,276,000
WV	D2010-BUSP-131	West Virginia Division of Public Transit	Bluefield Area Transit (BAT) Operations Facility Rehabilitation	$3,176,000
			TOTAL	**$776,474,305**

[FR Doc. 2010–30020 Filed 11–29–10; 8:45 am]

BILLING CODE C

DEPARTMENT OF TRANSPORTATION

Maritime Administration

Reports, Forms and Recordkeeping Requirements; Agency Information Collection Activity Under OMB Review

AGENCY: Maritime Administration, DOT.

ACTION: Notice and request for comments.

SUMMARY: In compliance with the Paperwork Reduction Act of 1995, this notice announces that the Information Collection abstracted below will be submitted to the Office of Management and Budget (OMB) for review and approval. The nature of the information collection is described as well as its expected burden. The **Federal Register** Notice with a 60-day comment period soliciting comments on the following collection of information was published on August 26, 2010. No comments were received.

DATES: Comments must be submitted on or before December 30, 2010.

FOR FURTHER INFORMATION CONTACT: Joe Strassburg, Maritime Administration, 1200 New Jersey Avenue, SE., Washington, DC 20590. Telephone: (202) 366–4156; or e-mail: *joe.strassburg@dot.gov.* Copies of this collection also can be obtained from that office.

SUPPLEMENTARY INFORMATION: Maritime Administration (MARAD)

Title of Collection: War Risk Insurance, Applications and Related Information.

OMB Control Number: 2133–0011.

Type of Request: Extension of currently approved information collection.

Affected Public: Vessel owners or charterers interested in participating in MARAD's war risk insurance program.

Form Numbers: MA–355; MA–528; MA–742; MA–828, and MA–942.

Abstract: As authorized by Section 1202, Title XII, Merchant Marine Act, 1936, as amended, the Secretary of the U.S. Department of Transportation may provide war risk insurance adequate for the needs of the waterborne commerce of the United States if such insurance cannot be obtained on reasonable terms from qualified insurance companies operating in the United States. This collection is required for the program.

Expiration Date of Approval: Three years from date of approval by the Office of Management and Budget.

Annual Estimated Burden Hours: 256 hours.

ADDRESSES: Send comments to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, NW., Washington, DC 20503, Attention: MARAD Desk Officer.

Comments are invited on: Whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility; the accuracy of the agency's estimate of the burden of the proposed information collection; 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, including the use of automated collection techniques or

other forms of information technology. A comment to OMB is best assured of having its full effect, if OMB receives it within 30 days of publication.

By Order of the Maritime Administrator.

Dated: November 22, 2010.

Murray Bloom,

Acting Secretary, Maritime Administration.

[FR Doc. 2010–30016 Filed 11–29–10; 8:45 am]

BILLING CODE 4910–81–P

DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

[Docket No. NHTSA–2010–0161; Notice 1]

Receipt of Petition for Decision That Nonconforming 2010 Harley Davidson FL Series Motorcycles Are Eligible for Importation

AGENCY: National Highway Traffic Safety Administration, DOT.

ACTION: Notice of receipt of petition for decision that nonconforming 2010 Harley Davidson FL Series Motorcycles are eligible for importation.

SUMMARY: This document announces receipt by the National Highway Traffic Safety Administration (NHTSA) of a petition for a decision that 2010 Harley Davidson FL Series Motorcycles that were not originally manufactured to comply with all applicable Federal Motor Vehicle Safety Standards (FMVSS) are eligible for importation into the United States because (1) they are substantially similar to vehicles that were originally manufactured for sale in the United States and that were certified by their manufacturer as complying with the safety standards, and (2) they are capable of being readily altered to conform to the standards.

DATES: The closing date for comments on the petition is December 30, 2010.

ADDRESSES: Comments should refer to the docket and notice numbers above and be submitted by any of the following methods:

- *Federal eRulemaking Portal:* Go to *http://www.regulations.gov.* Follow the online instructions for submitting comments.
- *Mail:* Docket Management Facility: U.S. Department of Transportation, 1200 New Jersey Avenue, SE., West Building Ground Floor, Room W12–140, Washington, DC 20590–0001
- *Hand Delivery or Courier:* West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue, SE., between 9 a.m. and 5 p.m. ET, Monday through Friday, except Federal holidays.
- *Fax:* 202–493–2251.

Instructions: Comments must be written in the English language, and be no greater than 15 pages in length, although there is no limit to the length of necessary attachments to the comments. If comments are submitted in hard copy form, please ensure that two copies are provided. If you wish to receive confirmation that your comments were received, please enclose a stamped, self-addressed postcard with the comments. Note that all comments received will be posted without change to *http://www.regulations.gov,* including any personal information provided. Please see the Privacy Act heading below.

Privacy Act: Anyone is able to search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (65 FR 19477–78).

How to Read Comments submitted to the Docket: You may read the comments received by Docket Management at the address and times given above. You may also view the documents from the Internet at *http://www.regulations.gov.* Follow the online instructions for accessing the dockets. The docket ID number and title of this notice are shown at the heading of this document notice. Please note that even after the comment closing date, we will continue to file relevant information in the Docket as it becomes available. Further, some people may submit late comments. Accordingly, we recommend that you periodically search the Docket for new material.

FOR FURTHER INFORMATION CONTACT: Coleman Sachs, Office of Vehicle Safety Compliance, NHTSA (202–366–3151).

SUPPLEMENTARY INFORMATION:

Background

Under 49 U.S.C. 30141(a)(1)(A), a motor vehicle that was not originally manufactured to conform to all applicable FMVSS shall be refused admission into the United States unless NHTSA has decided that the motor vehicle is substantially similar to a motor vehicle originally manufactured for sale in the United States, certified under 49 U.S.C. 30115, and of the same model year as the model of the motor vehicle to be compared, and is capable of being readily altered to conform to all applicable FMVSS.

Petitions for eligibility decisions may be submitted by either manufacturers or importers who have registered with NHTSA pursuant to 49 CFR part 592. As specified in 49 CFR 593.7, NHTSA publishes notice in the **Federal Register** of each petition that it receives, and affords interested persons an opportunity to comment on the petition. At the close of the comment period, NHTSA decides, on the basis of the petition and any comments that it has received, whether the vehicle is eligible for importation. The agency then publishes this decision in the **Federal Register**.

Masa Auto Wholesalers of Chandler, Arizona (Masa) (Registered Importer 94–018) has petitioned NHTSA to decide whether non-U.S. certified 2010 Harley Davidson FL series motorcycles are eligible for importation into the United States. The vehicles that Masa believes are substantially similar are 2010 Harley Davidson FL series motorcycles that were manufactured for sale in the United States and certified by their manufacturer as conforming to all applicable FMVSS.

The petitioner claims that it carefully compared non-U.S. certified 2010 Harley Davidson FL series motorcycles to their U.S. certified counterparts, and found the vehicles to be substantially similar with respect to compliance with most FMVSS.

Masa submitted information with its petition intended to demonstrate that non-U.S. certified 2010 Harley Davidson FL series motorcycles, as originally manufactured, conform to many FMVSS in the same manner as their U.S. certified counterparts, or are capable of being readily altered to conform to those standards. Specifically, the petitioner claims that non-U.S. certified 2010 Harley Davidson FL series motorcycles are identical to their U.S. certified counterparts with respect to compliance with Standard Nos. 106 *Brake Hoses,* 111 *Rearview Mirrors,* 116 *Brake Fluid,* 119 *New Pneumatic Tires for Vehicles other than Passenger Cars,* and 122 *Motorcycle Brake Systems.*

The petitioner further contends that the vehicles are capable of being readily altered to meet the following standards, in the manner indicated below:

Standard No. 108 *Lamps, Reflective Devices and Associated Equipment:* Installation of the following U.S.-certified components on vehicles not already so equipped: (a) Headlamp; (b) front and rear side-mounted reflex reflectors; (c) rear-mounted reflex reflector; (d) rear turn signal lamps; (e) stoplamp; (f) taillamp; and (g) license plate lamp.

Standard No. 120 *Tire Selection and Rims for Vehicles other than Passenger*

Cars: Installation of a tire information placard.

Standard No. 123 *Motorcycle Controls and Displays:* Installation of a U.S.-model speedometer/odometer unit to meet the requirements of this standard.

Standard No. 205 *Glazing Materials:* Inspection of all vehicles, and removal of noncompliant glazing or replacement of the glazing with U.S.-certified components on vehicles that are not already so equipped.

All comments received before the close of business on the closing date indicated above will be considered, and will be available for examination in the docket at the above addresses both before and after that date. To the extent possible, comments filed after the closing date will also be considered. Notice of final action on the petition will be published in the **Federal Register** pursuant to the authority indicated below.

Authority: 49 U.S.C. 30141(a)(1)(A) and (b)(1); 49 CFR 593.8; delegations of authority at 49 CFR 1.50 and 501.8.

Issued on: November 23, 2010.

Claude H. Harris,

Acting Associate Administrator for Enforcement.

[FR Doc. 2010–30012 Filed 11–29–10; 8:45 am]

BILLING CODE 4910–59–P

DEPARTMENT OF TRANSPORTATION

Surface Transportation Board

Release of Waybill Data

The Surface Transportation Board has received a request from McCarthy, Sweeney & Harkaway, P.C. on behalf of the State of Montana (WB10–069(1)), for permission to use certain data from the Board's 2006 through 2009 (when available) Carload Waybill Sample. This request was made pursuant to 49 CFR 1244.9(b)(4) because it is related to a proceeding before the Board, *State of Montana* v. *BNSF Railway Company,* NOR 42124. Because some of the waybill information requested is from entities not party to this proceeding (*i.e.,* Union Pacific Railroad Company and Canadian Pacific Railway Company), the Board is providing notice and an opportunity to comment on the request. (The Board's regulations do not specifically require **Federal Register** notice for this category of request.) A copy of the request may be obtained from the Office of Economics. See the contact listed below.

The Board will follow its procedures set forth in 49 CFR 1244.9(d) for handling this waybill sample request. The waybill sample contains confidential railroad and shipper data; therefore, if any party objects to this request, it should file the objections with the Director of the Board's Office of Economics within 14 calendar days of the publication of this notice. The rules for release of waybill data are codified at 49 CFR 1244.9.

Contact: Scott Decker, (202) 245–0330.

Jeffrey Herzig,

Clearance Clerk.

[FR Doc. 2010–30074 Filed 11–29–10; 8:45 am]

BILLING CODE 4915–01–P

DEPARTMENT OF THE TREASURY

Office of Financial Research; Statement on Legal Entity Identification for Financial Contracts

AGENCY: Office of Financial Research, Treasury.

ACTION: Statement of policy with request for comment.

SUMMARY: The Dodd-Frank Wall Street Reform and Consumer Protection Act (the "DFA"), Public Law 111–203, establishes the Office of Financial Research (the "Office") and provides it with the authority to collect data to support the Financial Stability Oversight Council (the "Council") and to set standards for reporting such data. To support the Council in identifying connections among market participants and monitoring systemic risk, the Office intends to standardize how parties to financial contracts are identified in the data it collects on behalf of the Council. The Office is issuing a statement of policy regarding its preference to adopt through rulemaking a universal standard for identifying parties to financial contracts that is established and implemented by private industry and other relevant stakeholders through a consensus process. The statement of policy provides guidance on how the Office will evaluate whether a standard is adequate for adoption, including its attributes and method of implementation. The Office seeks comment on this statement of policy, including but not limited to the desired characteristics for a Legal Entity Identifier ("LEI") and the institutional arrangements for issuing and maintaining identifiers and associated reference data.

DATES: Comments must be received by January 31, 2011.

ADDRESSES: Interested persons are invited to submit comments regarding this Statement according to the instructions for "Electronic Submission of Comments" below. All submissions must refer to the document title. The Office encourages the early submission of comments.

Electronic Submission of Comments. Interested persons must submit comments electronically through the Federal eRulemaking Portal at *http://www.regulations.gov.* Electronic submission of comments allows the commenter maximum time to prepare and submit a comment, ensures timely receipt, and enables the Office to make them available to the public. Comments submitted electronically through the *http://www.regulations.gov* Web site can be viewed by other commenters and interested members of the public. Commenters should follow the instructions provided on that site to submit comments electronically.

To receive consideration as public comments, comments must be submitted through the method specified above. All submissions must refer to the title of the Statement.

Public Inspection of Public Comments. All properly submitted comments will be available for inspection and downloading at *http://www.regulations.gov.*

Additional Instructions. In general, comments received, including attachments and other supporting materials, are part of the public record and are made available to the public. Do not submit any information in your comment or supporting materials that you consider confidential or inappropriate for public disclosure.

FOR FURTHER INFORMATION CONTACT: For further information regarding this Statement contact the Office of Domestic Finance, Treasury, at (202) 622–1766. All responses to this Statement should be submitted via *http://www.regulations.gov* to ensure consideration.

SUPPLEMENTARY INFORMATION:

I. Background

A. The Office of Financial Research

Section 152 of the DFA established the Office within the Department of the Treasury. Among other things, section 153(a) of the DFA authorizes the Office to collect data to support the Council's duties, to provide such data to the Council and member agencies, and to standardize the types and formats of such data. Section 153(a) also provides that the Office should assist member agencies in determining the types and formats of data authorized by the DFA to be collected by member agencies. Section 154(b)(2)(A) requires the Office to prepare and publish a financial company reference database, a financial

instrument reference database, and formats and standards for data reported to the Office. Section 151(6)(B) provides that those data include information that identifies counterparties.

B. The Need for a Universal Standard for Identifying Parties to Financial Contracts

Precise and accurate identification of legal entities engaged in financial transactions is important to private markets and government regulation. In the private sector, data identifying counterparties support communication between systems, facilitate transaction processing, and allow for accurate aggregation of positions vis-à-vis individual or classes of counterparties, which is necessary for effective risk management and calculation of margin. Sales, compliance, and due diligence functions also rely on unique identification of counterparties. In the public sphere, correctly identifying parties to financial contracts is critical to assessing the connections among financial firms and to monitoring systemic risk.

There is currently no universal system for identifying the legal entities that participate in financial markets. In the absence of such a system, private firms and regulators have created a variety of identifiers. This creates inefficiencies for firms and presents obstacles to regulators and policymakers.

At private firms, because there is no industry-wide legal entity identification standard, tracking counterparties and calculating exposures across multiple data systems is complicated, expensive, and can result in costly errors. For example, maintaining internal identifier databases and reconciling entity identification with counterparties is expensive for both large firms and small firms. Complete automation of back-office activities remains elusive, in part because of the lack of a universal identifier for legal entities. In the worst case scenario, transactions are broken or fail to settle because counterparties have not been properly identified.

The lack of a universal identification standard also poses problems for regulators and policymakers. For example, precise identification of financial firms is necessary to evaluate whether a firm poses a systemic risk, which involves the assessments of the relationships among firms operating across a range of markets. Indeed, the problems that firms face in aggregating exposure are magnified in measuring risk across the system. In addition, securities regulators must often identify parents and affiliates of broker-dealers manually and by name. Multiple and generally different identifiers for participants in securities trading make it difficult to create a consolidated order audit trail.

The financial crisis has focused both industry and regulators on this issue. The DFA created the Office, in part, to support the Council and its member agencies in addressing such data standardization issues. Sections 153 and 154 of the DFA require the Office to standardize the types and formats of data reported to and collected by the Office on behalf of the Council, and to prepare and publish formats and standards for that data. Section 151(6)(B) provides that those data include information that identifies counterparties.

In addition, section 154(b)(2) of the DFA requires the Office to prepare and publish a financial company reference database. Reference data for a legal entity could include its name, country of incorporation or principal place of business, and legal relationship to other entities. Identification of the legal entity is a fundamental ingredient in creating a reference database of financial companies.

Finally, the DFA requires the CFTC and SEC to put in place requirements for reporting swaps and security-based swaps, respectively, to data repositories by July 15, 2011. Public Law 111–203, Sec. 727–728. These agencies are working to develop standards for this reporting, including requirements for these data repositories to have unique and consistent identifiers for counterparties and reference entities.[1] The Office is coordinating with the CFTC and the SEC in these data standardization efforts.

II. Statement of Policy

In support of the Council's duties to identify and assess risks and potential threats to the stability of the U.S. financial system, the Office, in consultation with the Chairperson of the Council, intends to establish requirements for reporting data on financial contracts to the Office that include a standardized way of identifying counterparties. In establishing such rules the Office would prefer to adopt a universal standard developed and implemented by the financial industry and other relevant stakeholders through a consensus process. In addition, the Office believes that participation of international standard setting bodies would be beneficial in developing a standard that can be used widely.

If a LEI is established to the satisfaction the Office by July 15, 2011, the Office, in consultation with the Chairperson of the Council, plans to issue a regulation mandating the use of such a standard for data reported to the Office.

In making this determination the Office will consider the following aspects of LEI systems:

- The characteristics of the LEI, including the process of developing and maintaining standards for the LEI;
- The institutional arrangements for issuing LEIs to specific legal entities; and
- The institutional arrangements for developing, maintaining, and publishing related reference data.

A. Characteristics of the LEI, Including the Process of Developing and Maintaining Standards for the LEI

A LEI acceptable for use with data reported to the Office should:

(1) Be based on a standard developed and maintained via an international "voluntary consensus standards body," as defined in Office of Management and Budget ("OMB") Circular No. A–119 Revised, such as the International Organization for Standardization ("ISO");

(2) Be unique for each legally distinct entity, where each legal entity is assigned only one LEI which cannot be reassigned;

(3) Persist over the life of an entity regardless of corporate actions or other business or structural changes;

(4) Include minimal information about the entity in the identifier itself; [2]

(5) Accommodate growth in the number of legal entities that need to be identified in the full range of reporting systems and to potential industry and regulatory innovations;

(6) Be available for all eligible markets participants, including but not limited to all financial intermediaries, all companies that issue stock or debt listed on an exchange, all companies that trade stock or debt, infrastructure providers, all entities subject to financial regulation, and firms affiliated with such entities;

(7) Not be contractually restricted in use;

(8) Where possible, be compatible with existing systems, work across various platforms, and not conflict with

[1] *See*: *http://www.cftc.gov/ucm/groups/public/@otherif/documents/ifdocs/federalregister112210.pdf;* and *http://sec.gov/rules/proposed/2010/34-63446.pdf.*

[2] The identifier itself should not incorporate substantial information about the entity, such as name or principal place of business. Although such reference data may be useful, they are subject to change. Defining an identifier to include such information could threaten its persistence.

other numbering or identification schemes;

(9) Be readily accessible using secure and open standards;

(10) Be reliable and secure against corruption or misuse; and

(11) Be capable of becoming the single international standard for unique identification of legal entities in the financial sector.

B. Institutional Arrangements for Issuing LEIs

A LEI acceptable for use with data reported to the Office should be issued by an entity with expertise in implementing standards for the financial sector.

The entity should be organized and operated as a not-for-profit body and have a formally documented governance structure with balanced representation for relevant stakeholders. It should be subject to supervision and regulation. The entity should also have a strong ethics policy, addressing in part potential conflicts of interest.

Issuance of LEIs must be timely and non-discriminatory. The process of issuing new LEIs must not materially hinder the normal course of an entity's business.

All of the entity's processes must be adequately governed and auditable. Access to the master identifier list and the issuance process for new identifiers must be made available at all times.

The security and reliability of all IT systems involved in identifier issuance and database maintenance and publication must meet or exceed industry standards for a real-time, high-availability market service.

Identifiers must be available to the public without fees for storage, access, cross-referencing, or redistribution. However, consistent with OMB Circular No. A–119 Revised, the cost of issuing identifiers and maintaining their reliability may be recovered through other fees, as long as they are reasonable and they are not imposed on end-users.

C. Institutional Arrangements for Developing, Maintaining, and Publishing LEI Reference Data

A LEI acceptable for use with data reported to the Office should have a closely associated process for developing, maintaining and publishing related reference data for each LEI issued.

The scope of the reference data provided for each LEI issued should be sufficient to verify that users have correctly identified an entity and should include at a minimum the following information for each identifier:

(1) Name;

(2) Location;

(3) Electronic address; and

(4) Legal status.

The entity responsible for producing and publishing the LEI reference data should have expertise in this area. It must be operated on a not-for-profit basis and have a formally documented governance structure with balanced representation for relevant stakeholders. It should also be subject to supervision and regulation.

The entity must have a robust quality assurance process. Updates to the LEI reference data should be accomplished with minimal lag time and market participants and regulators should be able to challenge entries and request amendments. The quality assurance process should seek to ensure that duplicate identification numbers are not erroneously assigned. The quality assurance process should also include checks for existing entities including name searches, address searches, and combinations of text strings and other characteristics.

The entity's processes should be adequately governed and auditable. The security and reliability of all IT systems involved in developing, maintaining, and publishing LEI reference data should meet or exceed industry standards for a real-time, high availability market service. Reference data must be available to the public without fees for storage, access, cross-referencing, or redistribution. However, consistent with OMB Circular No. A–119 Revised, the cost of developing, maintaining, and publishing LEI reference data may be recovered through other fees, as long as they are reasonable and they are not imposed on those who use the reference data.

In addition, if a robust universal LEI is designated by the Office, under the principles outlined above for the purpose of reporting data to the Office, it is the expectation of the Office that such a LEI system, including the relevant reference data, would be the foundation for the financial company reference database that the Office would publish under the DFA section 154(b)(2)(A)(i).

D. Next Steps

In the event that a universal LEI is established to the satisfaction of the Office by July 15, 2011, the Office, in consultation with the Chairperson of the Council, plans to issue a regulation mandating the use of such a standard for data reported to the Office. Further, the Office will publish in the **Federal Register**, no later than 60 days prior to the earlier of the implementation dates established by the CFTC and SEC for their new reporting requirements,[3] the name of the identification system approved by the Office, the name and contact information of the entity through which counterparties can obtain LEIs provided through the approved identification system, and information concerning the procedure and requirements for obtaining such a LEI.

The Office invites comments on all aspects of this statement of policy, including but not limited to the desired characteristics for LEI and the institutional arrangements for issuing and maintaining identifiers and associated reference data.

Dated: November 23, 2010.

Lewis Alexander,

Counselor to the Secretary.

[FR Doc. 2010–30018 Filed 11–29–10; 8:45 am]

BILLING CODE 4810–25–P

DEPARTMENT OF THE TREASURY

Bureau of the Public Debt

Proposed Collection: Comment Request

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 Bureau of the Public Debt within the Department of the Treasury is soliciting comments concerning the U.S. Treasury Auction Submitter Agreement.

DATES: Written comments should be received on or before February 1, 2011, to be assured of consideration.

ADDRESSES: Direct all written comments to Bureau of the Public Debt, Robert Schumacher, 200 Third Street, A4–A, Parkersburg, WV 26106–5312, or *Robert.Schumacher@bpd.treas.gov.*

FOR FURTHER INFORMATION CONTACT: Requests for additional information or copies of the form and instructions should be directed to Robert Schumacher, Bureau of the Public Debt, 200 Third Street, A4–A, Parkersburg, WV 26106–5312, (304) 480–8150.

[3] *See*: *http://www.cftc.gov/stellent/groups/public/@otherif/documents/ifdocs/federalregister112210.pdf;* and *http://sec.gov/rules/proposed/2010/34-63446.pdf.*

SUPPLEMENTARY INFORMATION:

Title: U.S. Treasury Auctions Submitter Agreement.

OMB Number: 1535–0137.

Form Number: PD F 5441.

Abstract: The information is requested from entities wishing to participate in U.S. Treasury Securities Auctions via TAAPSLink.

Current Actions: None.

Type of Review: Extension.

Affected Public: Depository Institutions, Brokers/Dealers, Assessment Management Companies, Pension Funds, and other Institutional Investors.

Estimated Number of Respondents: 1,000.

Estimated Time Per Respondent: 5 minutes.

Estimated Total Annual Burden Hours: 80.

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.

Dated: November 22, 2010.

Robert Schumacher,

Manager, Information Management Branch.

[FR Doc. 2010–30056 Filed 11–29–10; 8:45 am]

BILLING CODE 4810–39–P



Federal Register

Tuesday,

November 30, 2010

Part II

Environmental Protection Agency

40 CFR Parts 85, 86, 1036, et al.

Department of Transportation

National Highway Traffic Safety Administration

49 CFR Parts 523, 534, and 535

Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles; Proposed Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 85, 86, 1036, 1037, 1065, 1066, and 1068

DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

49 CFR Parts 523, 534, and 535

[EPA–HQ–OAR–2010–0162; NHTSA–2010–0079; FRL–9219–4]

RIN 2060–AP61; RIN 2127–AK74

Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles

AGENCIES: Environmental Protection Agency (EPA) and National Highway Traffic Safety Administration (NHTSA), Department of Transportation (DOT).

ACTION: Proposed rules.

SUMMARY: EPA and NHTSA, on behalf of the Department of Transportation, are each proposing rules to establish a comprehensive Heavy-Duty National Program that will reduce greenhouse gas emissions and increase fuel efficiency for on-road heavy-duty vehicles, responding to the President's directive on May 21, 2010, to take coordinated steps to produce a new generation of clean vehicles. NHTSA's proposed fuel consumption standards and EPA's proposed carbon dioxide (CO_2) emissions standards would be tailored to each of three regulatory categories of heavy-duty vehicles: Combination Tractors; Heavy-Duty Pickup Trucks and Vans; and Vocational Vehicles, as well as gasoline and diesel heavy-duty engines. EPA's proposed hydrofluorocarbon emissions standards would apply to air conditioning systems in tractors, pickup trucks, and vans, and EPA's proposed nitrous oxide (N_2O) and methane (CH_4) emissions standards would apply to all heavy-duty engines, pickup trucks, and vans. EPA is also requesting comment on possible alternative CO_2-equivalent approaches for model year 2012–14 light-duty vehicles.

EPA's proposed greenhouse gas emission standards under the Clean Air Act would begin with model year 2014. NHTSA's proposed fuel consumption standards under the Energy Independence and Security Act of 2007 would be voluntary in model years 2014 and 2015, becoming mandatory with model year 2016 for most regulatory categories. Commercial trailers would not be regulated in this phase of the Heavy-Duty National Program, although there is a discussion of the possibility of future action for trailers.

DATES: *Comments:* Comments on all aspects of this proposal must be received on or before January 31, 2011. Under the Paperwork Reduction Act, comments on the information collection provisions must be received by the Office of Management and Budget on or before December 30, 2010. *See* the **SUPPLEMENTARY INFORMATION** section on "Public Participation" for more information about written comments.

Public Hearings: NHTSA and EPA will jointly hold two public hearings on the following dates: November 15, 2010 in Chicago, IL; and November 18, 2010 in Cambridge, MA, as announced at 75 FR 67059, November 1, 2010. The hearing in Chicago will start at 11 a.m. local time and continue until 5 p.m. or until everyone has had a chance to speak. The hearing in Cambridge will begin at 10 a.m. and continue until 5 p.m. or until everyone has had a chance to speak. *See* "How Do I Participate in the Public Hearings?" below at B. (7) under the **SUPPLEMENTARY INFORMATION** section on "Public Participation" for more information about the public hearings.

ADDRESSES: Submit your comments, identified by Docket ID No. NHTSA–2010–0079 and/or EPA–HQ–OAR–2010–0162, by one of the following methods:

- *http://www.regulations.gov:* Follow the on-line instructions for submitting comments.
- *E-mail: a-and-r-docket@epa.gov.*
- *Fax: NHTSA:* (202) 493–2251; *EPA:* (202) 566–9744.
- *Mail:*

NHTSA: Docket Management Facility, M–30, U.S. Department of Transportation, West Building, Ground Floor, Rm. W12–140, 1200 New Jersey Avenue, SE., Washington, DC 20590.

EPA: Air Docket, Environmental Protection Agency, EPA Docket Center, Mailcode: 6102T, 1200 Pennsylvania Ave., NW., Washington, DC 20460. In addition, please mail a copy of your comments on the information collection provisions to the Office of Information and Regulatory Affairs, Office of Management and Budget (OMB), Attn: Desk Officer for EPA, 725 17th St., NW., Washington, DC 20503.

- *Hand Delivery:*

NHTSA: West Building, Ground Floor, Rm. W12–140, 1200 New Jersey Avenue, SE., Washington, DC 20590, between 9 a.m. and 5 p.m. Eastern Time, Monday through Friday, except Federal Holidays.

EPA: EPA Docket Center, (Air Docket), U.S. Environmental Protection Agency, EPA West Building, 1301 Constitution Ave., NW., Room: 3334, Mail Code 2822T, Washington, DC. Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments to Docket ID No. NHTSA–2010–0079 and/or EPA–HQ–OAR–2010–0162. *See* the **SUPPLEMENTARY INFORMATION** section on "Public Participation" for additional instructions on submitting written comments.

Docket: All documents in the docket are listed in the *http://www.regulations.gov* index. Although listed in the index, some information is not publicly available, e.g., confidential business information or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy in EPA's docket, but may be available electronically in NHTSA's docket at regulations.gov. Publicly available docket materials are available either electronically in *http://www.regulations.gov* or in hard copy at the following locations:

NHTSA: Docket Management Facility, M–30, U.S. Department of Transportation, West Building, Ground Floor, Rm. W12–140, 1200 New Jersey Avenue, SE., Washington, DC 20590. The Docket Management Facility is open between 9 a.m. and 5 p.m. Eastern Time, Monday through Friday, except Federal holidays.

EPA: EPA Docket Center, EPA/DC, EPA West, Room 3334, 1301 Constitution Ave., NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Air Docket is (202) 566–1742.

FOR FURTHER INFORMATION CONTACT: *NHTSA:* Rebecca Yoon, Office of Chief Counsel, National Highway Traffic Safety Administration, 1200 New Jersey Avenue, SE., Washington, DC 20590. Telephone: (202) 366–2992. *EPA:* Lauren Steele, Office of Transportation and Air Quality, Assessment and Standards Division (ASD), Environmental Protection Agency, 2000 Traverwood Drive, Ann Arbor, MI 48105; telephone number: (734) 214–4788; fax number: (734) 214–4816; e-mail address: *steele.lauren@epa.gov,* or Assessment and Standards Division Hotline; telephone number; (734) 214–4636; e-mail *asdinfo@epa.gov.*

SUPPLEMENTARY INFORMATION:

Does this action apply to me?

This action would affect companies that manufacture, sell, or import into the United States new heavy-duty engines and new Class 2b through 8 trucks, including combination tractors, school and transit buses, vocational vehicles such as utility service trucks, as well as ¾-ton and 1-ton pickup trucks and vans.[1] The heavy-duty category incorporates all motor vehicles with a gross vehicle weight rating of 8,500 pounds or greater, and the engines that power them, except for medium-duty passenger vehicles already covered by the greenhouse gas standards and corporate average fuel economy standards issued for light-duty model year 2012–2016 vehicles. This action also includes a discussion of the possible future regulation of commercial trailers and is requesting comment on possible alternative CO_2-equivalent approaches for model year 2012–14 light-duty vehicles. Potentially affected categories and entities include the following:

Category	NAICS Code[a]	Examples of Potentially Affected Entities
Industry	336111	Motor Vehicle Manufacturers, Engine and Truck Manufacturers
	336112	
	336120	
Industry	541514	Commercial Importers of Vehicles and Vehicle Components
	811112	
	811198	
Industry	336111	Alternative Fuel Vehicle Converters
	336112	
	422720	
	454312	
	541514	
	541690	
	811198	
Industry	336212	Truck Trailer Manufacturers[b]

Note:
[a] North American Industry Classification System (NAICS)
[b] This category is included for purposes of advance notice of possible future rulemaking action

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this proposal. This table lists the types of entities that the agencies are now aware could potentially be regulated by this action. Other types of entities not listed in the table could also be regulated. To determine whether your activities may be regulated by this action, you should carefully examine the applicability criteria in 40 CFR parts 1036 and 1037, 49 CFR parts 523, 534, and 535, and the referenced regulations. You may direct questions regarding the applicability of this action to the persons listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

B. Public Participation

NHTSA and EPA request comment on all aspects of these joint proposed rules. This section describes how you can participate in this process.

(1) How do I prepare and submit comments?

In this joint proposal, there are many aspects of the program common to both EPA and NHTSA. For the convenience of all parties, comments submitted to the EPA docket (whether hard copy or electronic) will be considered comments submitted to the NHTSA docket, and vice versa. An exception is that comments submitted to the NHTSA docket on the Draft Environmental Impact Statement will not be considered submitted to the EPA docket. Therefore, the public only needs to submit comments to either one of the two agency dockets. Comments that are submitted for consideration by one agency should be identified as such, and comments that are submitted for consideration by both agencies should be identified as such. Absent such identification, each agency will exercise its best judgment to determine whether a comment is submitted on its proposal.

Further instructions for submitting comments to either the EPA or NHTSA docket are described below.

[1] For purposes of NHTSA's fuel consumption regulations, non-commercial recreational vehicles will not be covered, even if they would otherwise fall under these categories. *See* 49 U.S.C. 32901(a)(7).

NHTSA: Your comments must be written and in English. To ensure that your comments are correctly filed in the Docket, please include the Docket I.D No. NHTSA–2010–0079 in your comments. By regulation, your comments must not be more than 15 pages long (49 CFR 553.21). NHTSA established this limit to encourage you to write your primary comments in a concise fashion. However, you may attach necessary additional documents to your comments. There is no limit on the lenght of the attachments. If you are submitting comments electronically as a PDF (Adobe) file, we ask that the documents submitted be scanned using the Optical Character Recognition (OCR) process, thus allowing the agencies to search and copy certain portions of your submissions.[2] Please note that pursuant to the Data Quality Act, in order for the substantive data to be relied upon and used by the agencies, it must meet the information quality standards set forth in the OMB and Department of Transportation (DOT) Data Quality Act quidelines. Accordingly, we encourage you to consult the guidelines in preparing your comments. OMB's guidelines may be accessed at *http://www.whitehouse.gov/omb/fedreg/reproducible.html*. DOT's guidelines may be access at *http://regs.dot.gov*.

EPA: Direct your comments to Docket ID No EPA–HQ–OAR–2010–0162. EPA's policy is that all comments received will be included in the public docket without change and may be made available online at *http://www.regulations.gov,* including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through *http://www.regulations.gov* or e-mail. The *http://www.regulations.gov* Web site is an "anonymous access" system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA without going through *http://www.regulations.gov* your e-mail address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD–ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional information about EPA's public docket visit the EPA Docket Center homepage at *http://www.epa.gov/epahome/dockets.htm.*

(2) Tips for Preparing Your Comments

When submitting comments, remember to:

- Identify the rulemaking by docket number and other identifying information (subject heading, **Federal Register** date and page number).
- Follow directions—The agencies may ask you to respond to specific questions or organize comments by referencing a part or section number from the Code of Federal Regulations.
- Explain why you agree or disagree, suggest alternatives, and substitute language for your requested changes.
- Describe any assumptions and provide any technical information and/or data that you used.
- If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced.
- Provide specific examples to illustrate your concerns, and suggest alternatives.
- Explain your views as clearly as possible, avoiding the use of profanity or personal threats.
- Make sure to submit your comments by the comment period deadline identified in the **DATES** section above.

(3) How can I be sure that my comments were received?

NHTSA: If you submit your comments by mail and wish Docket Management to notify you upon its receipt of your comments, enclose a self-addressed, stamped postcard in the envelope containing your comments. Upon receiving your comments, Docket Management will return the postcard by mail.

(4) How do I submit confidential business information?

Any CBI submitted to one of the agencies will also be available to the other agency.[3] However, as with all public comments, any CBI information only needs to be submitted to either one of the agencies' dockets and it will be available to the other. Following are specific instructions for submitting CBI to either agency.

NHTSA: If you wish to submit any information under a claim of confidentiality, you should submit three copies of your complete submission, including the information you claim to be CBI, to the Chief Counsel, NHTSA, at the address given above under **FOR FURTHER INFORMATION CONTACT**. When you send a comment containing CBI, you should include a cover letter setting forth the information specified in our CBI regulation. In addition, you should submit a copy from which you have deleted the claimed CBI to the Docket by one of the methods set forth above.

EPA: Do not submit CBI to EPA through *http://www.regulations.gov* or e-mail. Clearly mark the part or all of the information that you claim to be CBI. For CBI 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.

(5) Will the agencies consider late comments?

NHTSA and EPA will consider all comments received before the close of business on the comment closing date indicated above under **DATES**. To the extent practicable, we will also consider comments received after that date. If interested persons believe that any new information the agency places in the docket affects their comments, they may submit comments after the closing date concerning how the agency should consider that information for the final rules. However, the agencies' ability to consider any such late comments in this rulemaking will be limited due to the time frame for issuing the final rules.

If a comment is received too late for us to practicably consider in developing the final rules, we will consider that comment as an informal suggestion for future rulemaking action.

[2] Optical character recognition (OCR) is the process of converting an image of text, such as a scanned paper document or electronic fax file, into computer-editable text.

[3] This statement constitutes notice to commenters pursuant to 40 CFR 2.209(c) that EPA will share confidential business information received with NHTSA unless commenters expressly specify that they wish to submit their CBI only to EPA and not to both agencies.

How can I read the comments submitted by other people?

You may read the materials placed in the dockets for this document (e.g., the comments submitted in response to this document by other interested persons) at any time by going to *http://www.regulations.gov.* Follow the online instructions for accessing the dockets. You may also read the materials at the NHTSA Docket Management Facility or the EPA Docket Center by going to the street addresses given above under **ADDRESSES.**

How do I participate in the public hearings?

EPA and NHTSA will jointly host two public hearings. The November 15 hearing will be held at the Millennium Knickerbocker Hotel Chicago, 163 East Walton Place (at N. Michigan Ave.), Chicago, Illinois 60611. The November 18, 2010 hearing will be held at the Hyatt Regency Cambridge, 575 Memorial Drive, Cambridge, Massachusetts 02139–4896. If you would like to present oral testimony at a public hearing, we ask that you notify both the NHTSA and EPA contact persons listed under **FOR FURTHER INFORMATION CONTACT** at least ten days before the hearing. Once the agencies learn how many people have registered to speak at the public hearings, we will allocate an appropriate amount of time to each participant, allowing time for necessary breaks. For planning purposes, each speaker should anticipate speaking for approximately ten minutes, although we may need to shorten that time if there is a large turnout. We request that you bring three copies of your statement or other material for the agencies' panels. To accommodate as many speakers as possible, we prefer that speakers not use technological aids (e.g., audio-visuals, computer slideshows). In addition, we will reserve a block of time for anyone else in the audience who wants to give testimony.

Each hearing will be held at a site accessible to individuals with disabilities. Individuals who require accommodations such as sign language interpreters should contact the persons listed under **FOR FURTHER INFORMATION CONTACT** section above no later than ten days before the date of the hearing.

EPA and NHTSA will conduct the hearings informally, and technical rules of evidence will not apply. We will arrange for a written transcript of each hearing and keep the official records of the hearings open for 30 days to allow you to submit supplementary information. You may make arrangements for copies of a transcript directly with the court reporter.

C. Additional Information About This Rulemaking

EPA's Advance Notice of Proposed Rulemaking for regulating greenhouse gases under the CAA (see 73 FR 44353, July 30, 2008) included a discussion of possible rulemaking paths for the heavy-duty transportation sector. This notice of proposed rulemaking relies in part on information that was obtained from that notice, which can be found in Public Docket EPA–HQ–OAR–2008–0318. That docket is incorporated into the docket for this action, EPA–HQ–OAR–2010–0162.

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I. Overview

A. Introduction

EPA and NHTSA ("the agencies") are announcing a first-ever program to reduce greenhouse gas (GHG) emissions and improve fuel efficiency in the heavy-duty highway vehicle sector. This broad sector—ranging from large pickups to sleeper-cab tractors—together represent the second largest contributor to oil consumption and GHG emissions, after light-duty passenger cars and trucks.

In a recent memorandum to the Administrators of EPA and NHTSA (and the Secretaries of Transportation and

Energy), the President stated that "America has the opportunity to lead the world in the development of a new generation of clean cars and trucks through innovative technologies and manufacturing that will spur economic growth and create high-quality domestic jobs, enhance our energy security, and improve our environment."[4] Earlier this year, EPA and NHTSA established for the first time a national program to sharply reduce GHG emissions and fuel consumption from passenger cars and light trucks. Now, each agency is proposing rules that together would create a strong and comprehensive Heavy-Duty National Program ("HD National Program") designed to address the urgent and closely intertwined challenges of dependence on oil, energy security, and global climate change. At the same time, the proposed program would enhance American competitiveness and job creation, benefit consumers and businesses by reducing costs for transporting goods, and spur growth in the clean energy sector.

A number of major HD truck and engine manufacturers representing the vast majority of this industry, and the California Air Resources Board (California ARB), sent letters to EPA and NHTSA supporting a HD National Program based on a common set of principles. In the letters, the stakeholders commit to working with the agencies and with other stakeholders toward a program consistent with common principles, including:

- Increased use of existing technologies to achieve significant GHG emissions and fuel consumption reductions;
- A program that starts in 2014 and is fully phased in by 2018;
- A program that works towards harmonization of methods for determining a vehicle's GHG and fuel efficiency, recognizing the global nature of the issues and the industry;
- Standards that recognize the commercial needs of the trucking industry; and
- Incentives leading to the early introduction of advanced technologies.

The proposed HD National Program builds on many years of heavy-duty engine and vehicle technology development to achieve what the agencies believe would be the greatest degree of GHG emission and fuel consumption reduction appropriate, feasible, and cost-effective for the model years in question. Still, by proposing to take aggressive steps that are reasonably possible now, based on the technological opportunities and pathways that present themselves during these model years, the agencies and industry will also continue learning about emerging opportunities for this complex sector to further reduce GHG emissions and fuel consumption. For example, NHTSA and EPA have stopped short of proposing fuel consumption and GHG emissions standards for trucks based on use of hybrid powertrain technology. Similarly, we expect that the agencies will participate in efforts to improve our ability to accurately characterize the actual in-use fuel consumption and emissions of this complex sector. As such opportunities emerge in the coming years, we expect that we will propose a second phase of provisions in the future to reinforce these developments and maximize the achieved reductions in GHG emissions and fuel consumption reduction for the mid- and longer-term time frame.

In the May 21 memorandum, the President requested the Administrators of EPA and NHTSA to "immediately begin work on a joint rulemaking under the Clean Air Act (CAA) and the Energy Independence and Security Act of 2007 (EISA) to establish fuel efficiency and greenhouse gas emissions standards for commercial medium- and heavy-duty vehicles beginning with the 2014 model year (MY), with the aim of issuing a final rule by July 30, 2011." This proposed rulemaking is consistent with this Presidential Memorandum, with each agency proposing rules under its respective authority that together comprise a coordinated and comprehensive HD National Program.

Heavy-duty vehicles move much of the nation's freight and carry out numerous other tasks, including utility work, concrete delivery, fire response, refuse collection, and many more. Heavy-duty vehicles are primarily powered by diesel engines, although about 37 percent of these vehicles are powered by gasoline engines. Heavy-duty trucks[5] have always been an important part of the goods movement infrastructure in this country and have experienced significant growth over the last decade related to increased imports and exports of finished goods and increased shipping of finished goods to homes through Internet purchases.

The heavy-duty sector is extremely diverse in several respects, including types of manufacturing companies involved, the range of sizes of trucks and engines they produce, the types of work the trucks are designed to perform, and the regulatory history of different subcategories of vehicles and engines. The current heavy-duty fleet encompasses vehicles from the "18-wheeler" combination tractors one sees on the highway to school and transit buses, to vocational vehicles such as utility service trucks, as well as the largest pickup trucks and vans.

For purposes of this preamble, the term "heavy-duty" or "HD" is used to apply to all highway vehicles and engines that are not within the range of light-duty vehicles, light-duty trucks, and medium-duty passenger vehicles (MDPV) covered by the GHG and Corporate Average Fuel Economy (CAFE) standards issued for MY 2012–2016.[6] It also does not include motorcycles. Thus, in this notice, unless specified otherwise, the heavy-duty category incorporates all vehicles with a gross vehicle weight rating above 8,500 pounds, and the engines that power them, except for MDPVs.[7] We note that the Energy Independence and Security Act of 2007 requires NHTSA to set standards for "commercial medium- and heavy-duty on-highway vehicles and work trucks."[8] NHTSA interprets this to include all segments of the heavy-duty category described above, except for recreational vehicles, such as motor homes, since recreational vehicles are not commercial.

Setting GHG emissions standards for the heavy-duty sector will help to address climate change, which is widely viewed as a significant long-term threat to the global environment. As summarized in the Technical Support Document for EPA's Endangerment and Cause or Contribute Findings under Section 202(a) of the Clean Air Act, anthropogenic emissions of GHGs are very likely (a 90 to 99 percent probability) the cause of most of the

[4] Improving Energy Security, American Competitiveness and Job Creation, and Environmental Protection Through a Transformation of Our Nation's Fleet of Cars And Trucks," Issued May 21, 2010, published at 75 FR 29399, May 26, 2010.

[5] In this rulemaking, EPA and NHTSA use the term "truck" in a general way, referring to all categories of regulated heavy-duty highway vehicles (including buses). As such, the term is generally interchangeable with "heavy-duty vehicle."

[6] Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards; Final Rule 75 FR 25323,(May 7, 2010).

[7] The CAA defines heavy-duty as a truck, bus or other motor vehicle with a gross vehicle weight rating exceeding 6,000 pounds (CAA section 202(b)(3)). The term HD as used in this action refers to a subset of these vehicles and engines.

[8] 49 U.S.C. 32902(k)(2). "Commercial medium- and heavy-duty on-highway vehicles" are defined as on-highway vehicles with a gross vehicle weight rating of 10,000 pounds or more, while "work trucks" are defined as vehicles rated between 8,500 and 10,000 pounds gross vehicle weight that are not MDPVs. *See* 49 U.S.C. 32901(a)(7) and (a)(19).

observed global warming over the last 50 years.[9] The primary GHGs of concern are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Mobile sources emitted 31 percent of all U.S. GHGs in 2007 (transportation sources, which do not include certain off-highway sources, account for 28 percent) and have been the fastest-growing source of U.S. GHGs since 1990.[10] Mobile sources addressed in the recent endangerment and contribution findings under CAA section 202(a)—light-duty vehicles, heavy-duty trucks, buses, and motorcycles—accounted for 23 percent of all U.S. GHG emissions in 2007.[11] Heavy-duty vehicles emit CO_2, CH_4, N_2O, and HFCs and are responsible for nearly 19 percent of all mobile source GHGs (nearly 6% of all U.S. GHGs) and about 25 percent of section 202(a) mobile source GHGs. For heavy-duty vehicles in 2007, CO_2 emissions represented more than 99 percent of all GHG emissions (including HFCs).[12]

Setting fuel consumption standards for the heavy-duty sector, pursuant to NHTSA's EISA authority, will also improve our energy security by reducing our dependence on foreign oil, which has been a national objective since the first oil price shocks in the 1970s. Net petroleum imports now account for approximately 60 percent of U.S. petroleum consumption. World crude oil production is highly concentrated, exacerbating the risks of supply disruptions and price shocks. Tight global oil markets led to prices over $100 per barrel in 2008, with gasoline reaching as high as $4 per gallon in many parts of the United States, causing financial hardship for many families and businesses. The export of U.S. assets for oil imports continues to be an important component of the historically unprecedented U.S. trade deficits. Transportation accounts for about 72 percent of U.S. petroleum consumption. Heavy-duty vehicles account for about 17 percent of transportation oil use, which means that they alone account for about 12 percent of all U.S. oil consumption.[13]

In developing this joint proposal, the agencies have worked with a large and diverse group of stakeholders representing truck and engine manufacturers, trucking fleets, environmental organizations, and States including the State of California.[14] While our discussions covered a wide range of issues and viewpoints, one widespread recommendation was that the two agencies should develop a common Federal program with consistent standards of performance regarding fuel consumption and GHG emissions. The HD National Program we are proposing in this notice is consistent with that goal. Further it is our expectation based on our ongoing work with the State of California that the California ARB will be able to adopt regulations equivalent in practice to those of this HD National Program, just as it has done for past EPA regulation of heavy-duty trucks and engines. NHTSA and EPA are committed to continuing to work with California ARB throughout this rulemaking process to help ensure our final rules can lead to that outcome.

In light of the industry's diversity, and consistent with the recommendations of the National Academy of Sciences (NAS) as discussed further below, the agencies are proposing a HD National Program that recognizes the different sizes and work requirements of this wide range of heavy-duty vehicles and their engines. NHTSA's proposed fuel consumption standards and EPA's proposed GHG standards would apply to manufacturers of the following types of heavy-duty vehicles and their engines; the proposed provisions for each of these are described in more detail below in this section:

- Heavy-Duty Pickup Trucks and Vans.
- Combination Tractors.
- Vocational Vehicles.

As in the recent light-duty vehicle rule establishing CAFE and GHG standards for MYs 2012–2016 light-duty vehicles, EPA's and NHTSA's proposed standards for the heavy-duty sector are largely harmonized with one another due to the close and direct relationship between improving the fuel efficiency of these vehicles and reducing their CO_2 tailpipe emissions. For all vehicles that consume carbon-based fuels, the amount of CO_2 emissions is essentially constant per gallon for a given type of fuel that is consumed. The more efficient a heavy-duty truck is in completing its work, the lower its environmental impact will be, because the less fuel consumed to move cargo a given distance, the less CO_2 emitted into the air. The technologies available for improving fuel efficiency, and therefore for reducing both CO_2 emissions and fuel consumption, are one and the same.[15] Because of this close technical relationship, NHTSA and EPA have been able to rely on jointly-developed assumptions, analyses, and analytical conclusions to support the standards and other provisions that NHTSA and EPA are proposing under our separate legal authorities.

The timelines for the implementation of the proposed NHTSA and EPA standards are also closely coordinated. EPA's proposed GHG emission standards would begin in model year 2014. In order to provide for the four full model years of regulatory lead time required by EISA, as discussed in Section I.B.(5) below, NHTSA's proposed fuel consumption standards would be voluntary in model years 2014 and 2015, becoming mandatory in model year 2016, except for diesel engine standards which would be voluntary in model years 2014, 2015 and 2016, becoming mandatory in model year 2017. Both agencies are also allowing early compliance in model year 2013. A detailed discussion of how the proposed standards are consistent with each agency's respective statutory requirements and authorities is found later in this notice.

Neither EPA nor NHTSA is proposing standards at this time for GHG emissions or fuel consumption, respectively, for heavy-duty commercial trailers or for vehicles or engines manufactured by small businesses. However, the agencies are considering proposing such standards in a future rulemaking, and request comment on such an action later in this preamble.

B. Building Blocks of the Heavy-Duty National Program

The standards that are being proposed in this notice represent the first time

[9] U.S. EPA. (2009). "Technical Support Document for Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act" Washington, DC, available at Docket: EPA–HQ–OAR–2009–0171–11645, and at *http://epa.gov/climatechange/endangerment.html*.

[10] U.S. Environmental Protection Agency. 2009. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2007. EPA 430–R–09–004. Available at *http://epa.gov/climatechange/emissions/downloads09/GHG2007entire_report-508.pdf* .

[11] *See* Endangerment TSD, Note 9, above, at pp. 180–194.

[12] U.S. Environmental Protection Agency. 2009. Inventory of U.S. Greenhouse Gas Emissions and Sinks: *See* Note 10, above.

[13] In 2009 Source: EIA Annual Energy Outlook 2010 released May 11, 2010.

[14] Pursuant to DOT Order 2100.2, NHTSA will place a memorandum recording those meetings that it attended and documents submitted by stakeholders which formed a basis for this proposal and which can be made publicly available in its docket for this rulemaking. DOT Order 2100.2 is available at *http://www.reg-group.com/library/DOT2100-2.PDF*.

[15] However, as discussed below, in addition to addressing CO_2, the EPA's proposed standards also include provisions to address other GHGs (nitrous oxide, methane, and air conditioning refrigerant emissions), as required by the Endangerment Finding under the CAA. *See* Section II.

that NHTSA and EPA would regulate the heavy-duty sector for fuel consumption and GHG emissions, respectively. The proposed HD National Program is rooted in EPA's prior regulatory history, the SmartWay® Transport Partnership program, and extensive technical and engineering analyses done at the Federal level. This section summarizes some of the most important of these precursors and foundations for this HD National Program.

(1) EPA's Traditional Heavy-Duty Regulatory Program

Since the 1980s, EPA has acted several times to address tailpipe emissions of criteria pollutants and air toxics from heavy-duty vehicles and engines. During the last 18 years, these programs have primarily addressed emissions of particulate matter (PM) and the primary ozone precursors, hydrocarbons (HC) and oxides of nitrogen (NO_X). These programs have successfully achieved significant and cost-effective reductions in emissions and associated health and welfare benefits to the nation. They have been structured in ways that account for the varying circumstances of the engine and truck industries. As required by the CAA, the emission standards implemented by these programs include standards that apply at the time that the vehicle or engine is sold as well as standards that apply in actual use. As a result of these programs, new vehicles meeting current emission standards will emit 98% less NO_X and 99% less PM than new trucks 20 years ago. The resulting emission reductions provide significant public health and welfare benefits. The most recent EPA regulations which were fully phased-in in 2010 are projected to provide greater than $70 billion in health and welfare benefits annually in 2030 alone (66 FR 5002, January 18, 2001).

EPA's overall program goal has always been to achieve emissions reductions from the complete vehicles that operate on our highways. The agency has often accomplished this goal for many heavy-duty truck categories through the regulation of heavy-duty engine emissions. A key part of this success has been the development over many years of a well-established, representative, and robust set of engine test procedures that industry and EPA now routinely use to measure emissions and determine compliance with emission standards. These test procedures in turn serve the overall compliance program that EPA implements to help ensure that emissions reductions are being achieved. By isolating the engine from the many variables involved when the engine is installed and operated in a HD vehicle, EPA has been able to accurately address the contribution of the engine alone to overall emissions. The agencies discuss below how the proposed program incorporates the existing engine-based approach used for criteria emissions regulations, as well as new vehicle-based approaches.

(2) NHTSA's Responsibilities To Regulate Heavy-Duty Fuel Efficiency Under EISA

With the passage of the EISA in December 2007, Congress laid out a framework developing the first fuel efficiency regulations for HD vehicles. As codified at 49 U.S.C. 32902(k), EISA requires NHTSA to develop a regulatory system for the fuel economy of commercial medium-duty and heavy-duty on-highway vehicles and work trucks in three steps: A study by NAS, a study by NHTSA, and a rulemaking to develop the regulations themselves.[16]

Specifically, section 102 of EISA, codified at 49 U.S.C. 32902(k)(2), states that not later than two years after completion of the NHTSA study, DOT (by delegation, NHTSA), in consultation with the Department of Energy (DOE) and EPA, shall develop a regulation to implement a "commercial medium-duty and heavy-duty on-highway vehicle and work truck fuel efficiency improvement program designed to achieve the maximum feasible improvement." NHTSA interprets the timing requirements as permitting a regulation to be developed earlier, rather than as requiring the agency to wait a specified period of time.

Congress specified that as part of the "HD fuel efficiency improvement program designed to achieve the maximum feasible improvement," NHTSA must adopt and implement:

- Appropriate test methods;
- Measurement metrics;
- Fuel economy standards; [17] and
- Compliance and enforcement protocols.

Congress emphasized that the test methods, measurement metrics, standards, and compliance and enforcement protocols must all be *appropriate, cost-effective,* and *technologically feasible* for commercial medium-duty and heavy-duty on-highway vehicles and work trucks. NHTSA notes that these criteria are different from the "four factors" of 49 U.S.C. 32902(f) [18] that have long governed NHTSA's setting of fuel economy standards for passenger cars and light trucks, although many of the same factors are considered under each of these provisions.

Congress also stated that NHTSA may set separate standards for different classes of HD vehicles, which the agency interprets broadly to allow regulation of HD engines in addition to HD vehicles, and provided requirements new to 49 U.S.C. 32902 in terms of timing of regulations, stating that the standards adopted as a result of the agency's rulemaking shall provide not less than four full model years of regulatory lead time, and three full model years of regulatory stability.

(3) National Academy of Sciences Report on Heavy-Duty Technology

As mandated by Congress in EISA, the National Research Council (NRC) under NAS recently issued a report to NHTSA and to Congress evaluating medium-duty and heavy-duty truck fuel efficiency improvement opportunities, titled "Technologies and Approaches to Reducing the Fuel Consumption of Medium- and Heavy-Duty Vehicles." [19] This study covers the same universe of heavy-duty vehicles that is the focus of this proposed rulemaking—all highway vehicles that are not light-duty, MDPVs, or motorcycles. The agencies have carefully evaluated the research supporting this report and its recommendations and have incorporated them to the extent practicable in the development of this rulemaking. NHTSA's and EPA's detailed assessments of each of the relevant recommendations of the NAS

[16] The NAS study is described below, and the NHTSA study accompanies this NPRM.

[17] In the context of 49 U.S.C. 32902(k), NHTSA interprets "fuel economy standards" as referring not specifically to miles per gallon, as in the light-duty vehicle context, but instead more broadly to account as accurately as possible for MD/HD fuel *efficiency.* While it is a metric that NHTSA considered for setting MD/HD fuel efficiency standards, the agency recognizes that miles per gallon may not be an appropriate metric given the work that MD/HD vehicles are manufactured to do. NHTSA is thus proposing alternative metrics as discussed further below.

[18] 49 U.S.C. 32902(f) states that "When deciding maximum feasible average fuel economy under this section, [NHTSA] shall consider technological feasibility, economic practicability, the effect of other motor vehicle standards of the Government on fuel economy, and the need of the United States to conserve energy."

[19] Committee to Assess Fuel Economy Technologies for Medium- and Heavy-Duty Vehicles; National Research Council; Transportation Research Board (2010). "Technologies and Approaches to Reducing the Fuel Consumption of Medium- and Heavy-Duty Vehicles," (hereafter, "NAS Report"). Washington, DC, The National Academies Press. Available electronically from the National Academies Press Web site at *http://www.nap.edu/catalog.php?record_id=12845* (last accessed September 10, 2010).

report are discussed in Section X of this preamble and in the NHTSA HD study accompanying this notice of proposed rulemaking (NPRM).

(4) The Recent NHTSA and EPA Light-Duty National GHG Program

On April 1, 2010, EPA and NHTSA finalized the first-ever National Program for light-duty cars and trucks, which set GHG emissions and fuel economy standards for model years 2012–2016. The agencies have used the light-duty National Program as a model for this proposed HD National Program in many respects. This is most apparent in the case of heavy-duty pickups and vans, which are very similar to the light-duty trucks addressed in the light-duty National Program both technologically as well as in terms of how they are manufactured (*i.e.,* the same company often makes both the vehicle and the engine). For these vehicles, there are close parallels to the light-duty program in how the agencies have developed our respective proposed standards and compliance structures, although in this proposal each agency proposes standards based on attributes other than vehicle footprint, as discussed below.

Due to the diversity of the remaining HD vehicles, there are fewer parallels with the structure of the light-duty program. However, the agencies have maintained the same collaboration and coordination that characterized the development of the light-duty program. Most notably, as with the light-duty program, manufacturers will be able to design and build to meet a closely coordinated Federal program, and avoid unnecessarily duplicative testing and compliance burdens.

(5) EPA's SmartWay Program

EPA's voluntary SmartWay Transport Partnership program encourages shipping and trucking companies to take actions that reduce fuel consumption and CO_2 by working with the shipping community and the freight sector to identify low carbon strategies and technologies, and by providing technical information, financial incentives, and partner recognition to accelerate the adoption of these strategies. Through the SmartWay program, EPA has worked closely with truck manufacturers and truck fleets to develop test procedures to evaluate vehicle and component performance in reducing fuel consumption and has conducted testing and has established test programs to verify technologies that can achieve these reductions. Over the last six years, EPA has developed hands-on experience testing the largest heavy-duty trucks and evaluating improvements in tire and vehicle aerodynamic performance. In 2010, according to vehicle manufacturers, approximately five percent of new combination heavy-duty trucks will meet the SmartWay performance criteria demonstrating that they represent the pinnacle of current heavy-duty truck reductions in fuel consumption.

In developing this HD National Program, the agencies have drawn from the SmartWay experience, as discussed in detail both in Sections II and III below (*e.g.,* developing test procedures to evaluate trucks and truck components) but also in the draft RIA (estimating performance levels from the application of the best available technologies identified in the SmartWay program). These technologies provide part of the basis for the GHG emission and fuel consumption standards proposed in this rulemaking for certain types of new heavy-duty Class 7 and 8 combination tractors.

In addition to identifying technologies, the SmartWay program includes operational approaches that truck fleet owners as well as individual drivers and their freight customers can incorporate, that the NHTSA and EPA believe will complement the proposed standards. These include such approaches as improved logistics and driver training, as discussed in the draft RIA. This approach is consistent with the one of the three alternative approaches that the NAS recommended be considered. The three approaches were raising fuel taxes, liberalizing truck size and weight restrictions, and encouraging incentives to disseminate information to inform truck drivers about the relationship between driving behavior and fuel savings. Taxes and truck size and weight limits are mandated by public law; as such, these options are outside EPA's and NHTSA's authority to implement. However, complementary operational measures like driver training, which SmartWay does promote, can complement the proposed standards and also provide benefits for the existing truck fleet, furthering the public policy objectives of addressing energy security and climate change.

(6.) Canada's Department of the Environment

The Government of Canada's Department of the Environment (Environment Canada) assisted EPA's development of this proposed rulemaking, by conducting emissions testing of heavy-duty vehicles at Environment Canada test facilities to gather data on a range of possible test cycles.

We expect the technical collaboration with Environment Canada to continue as we address issues raised by stakeholders in response to this NPRM, and as we continue to develop details of certain testing and compliance verification procedures. We may also be able to begin to develop a knowledge base enabling improvement upon this regulatory framework for model years beyond 2018 (for example, improvements to the means of demonstrating compliance). We also expect to continue our collaboration with Environment Canada on compliance issues.

C. Summary of the Proposed EPA and NHTSA HD National Program

When EPA first addressed emissions from heavy-duty trucks in the 1980s, it established standards for engines, based on the amount of work performed (grams of pollutant per unit of work, expressed as grams per brake horsepower-hour or g/bhp-hr).[20] This approach recognized the fact that engine characteristics are the dominant determinant of the types of emissions generated, and engine-based technologies (including exhaust aftertreatment systems) need to be the focus for addressing those emissions. Vehicle-based technologies, in contrast, have less influence on overall truck emissions of the pollutants that EPA has regulated in the past. The engine testing approach also recognized the relatively small number of distinct heavy-duty engine designs, as compared to the extremely wide range of truck designs. EPA concluded at that time that any incremental gain in conventional emission control that could be achieved through regulation of the complete vehicle would be small in comparison to the cost of addressing the many variants of complete trucks that make up the heavy-duty sector—smaller and larger vocational vehicles for dozens of purposes, various designs of combination tractors, and many others.

Addressing GHG emissions and fuel consumption from heavy-duty trucks, however, requires a different approach. Reducing GHG emissions and fuel consumption requires increasing the

[20] The term "brake power" refers to engine torque and power as measured at the interface between the engine's output shaft and the dynamometer. This contrasts with "indicated power", which is a calculated value based on the pressure dynamics in the combustion chamber, not including internal losses that occur due to friction and pumping work. Since the measurement procedure inherently measures brake torque and power, the proposed regulations refer simply to g/hp-hr. This is consistent with our other emission control programs, which generally include standards in g/kW-hr.

inherent efficiency of the engine as well as making changes to the vehicles to reduce the amount of work that the engine needs to do per mile traveled. This thus requires a focus on the entire vehicle. For example, in addition to the basic emissions and fuel consumption levels of the engine, the aerodynamics of the vehicle can have a major impact on the amount of work that must be performed to transport freight at common highway speeds. The 2010 NAS Report recognized this need and recommended a complete-vehicle approach to regulation. As described elsewhere in this preamble, the proposed standards that make up the HD National Program aim to address the complete vehicle, to the extent practicable and appropriate under the agencies' respective statutory authorities, through complementary engine and vehicle standards, in order to reduce the complexity of the regulatory system and achieve the greatest gains as soon as possible.

(1) Brief Overview of the Heavy-Duty Truck Industry

The heavy-duty truck sector spans a wide range of vehicles with often unique form and function. A primary indicator of the extreme diversity among heavy-duty trucks is the range of load-carrying capability across the industry. The heavy-duty truck sector is often subdivided by vehicle weight classifications, as defined by the vehicle's gross vehicle weight rating (GVWR), which is a measure of the combined curb (empty) weight and cargo carrying capacity of the truck.[21] Table I–1 below outlines the vehicle weight classifications commonly used for many years for a variety of purposes by businesses and by several Federal agencies, including the Department of Transportation, the Environmental Protection Agency, the Department of Commerce, and the Internal Revenue Service.

Table I-1: Vehicle Weight Classification

Class	2b	3	4	5	6	7	8
GVWR (lb)	8,501 - 10,000	10,001- 14,000	14,001- 16,000	16,001- 19,500	19,501 -26,000	26,001- 33,000	> 33,001

In the framework of these vehicle weight classifications, the heavy-duty truck sector refers to Class 2b through Class 8 vehicles and the engines that power those vehicles.[22] Unlike light-duty vehicles, which are primarily used for transporting passengers for personal travel, heavy-duty vehicles fill much more diverse operator needs. Heavy-duty pickup trucks and vans (Classes 2b and 3) are used chiefly as work truck and vans, and as shuttle vans, as well as for personal transportation, with an average annual mileage in the range of 15,000 miles. The rest of the heavy-duty sector is used for carrying cargo and/or performing specialized tasks. Commercial "vocational" vehicles, which may span Classes 2b through 8, vary widely in size, including smaller and larger van trucks, utility "bucket" trucks, tank trucks, refuse trucks, urban and over-the-road buses, fire trucks, flat-bed trucks, and dump trucks, among others. The annual mileage of these trucks is as varied as their uses, but for the most part tends to fall in between heavy-duty pickups/vans and the large combination tractors, typically from 15,000 to 150,000 miles per year, although some travel more and some less. Class 7 and 8 combination tractor-trailers—some equipped with sleeper cabs and some not—are primarily used for freight transportation. They are sold as tractors and sometimes run without a trailer in between loads, but most of the time they run with one or more trailers that can carry up to 50,000 pounds or more of payload, consuming significant quantities of fuel and producing significant amounts of GHG emissions. The combination tractor-trailers used in combination applications can travel more than 150,000 miles per year.

EPA and NHTSA have designed our respective proposed standards in careful consideration of the diversity and complexity of the heavy-duty truck industry, as discussed next.

(2) Summary of Proposed EPA GHG Emission Standards and NHTSA Fuel Consumption Standards

As described above, NHTSA and EPA recognize the importance of addressing the entire vehicle in reducing fuel consumption and GHG emissions. At the same time, the agencies understand that the complexity of the industry means that we will need to use different approaches to achieve this goal, depending on the characteristics of each general type of truck. We are therefore proposing to divide the industry into three discrete regulatory categories for purposes of setting our respective standards—combination tractors, heavy-duty pickups and vans, and vocational vehicles—based on the relative degree of homogeneity among trucks within each category. For each regulatory category, the agencies are proposing related but distinct program approaches reflecting the specific challenges that we see for manufacturers in these segments. In the following paragraphs, we discuss EPA's proposed GHG emission standards and NHTSA's proposed fuel consumption standards for the three regulatory categories of heavy-duty vehicles and their engines.

The agencies are proposing test metrics that express fuel consumption and GHG emissions relative to the most important measures of heavy-duty truck utility for each segment, consistent with the recommendation of the 2010 NAS Report that metrics should reflect and account for the work performed by various types of HD vehicles. This approach differs from NHTSA's light-duty program that uses fuel economy as the basis. The NAS committee discussed the difference between fuel economy (a measure of how far a vehicle will go on a gallon of fuel) and fuel consumption (the inverse measure, of how much fuel is consumed in driving a given distance) as potential metrics for MD/HD regulations. The committee concluded that fuel economy would not be a good metric for judging the fuel efficiency of a heavy-duty vehicle, and stated that NHTSA should alternatively consider fuel consumption as the basis for its standards. As a result, for heavy-duty

[21] GVWR describes the maximum load that can be carried by a vehicle, including the weight of the vehicle itself. Heavy-duty vehicles also have a gross combined weight rating (GCWR), which describes the maximum load that the vehicle can haul, including the weight of a loaded trailer and the vehicle itself.

[22] Class 2b vehicles designed as passenger vehicles (Medium Duty Passenger Vehicles, MDPVs) are covered by the light-duty GHG and fuel economy standards and not addressed in this rulemaking.

pickup trucks and vans, EPA and NHTSA are proposing standards on a per-mile basis (g/mile for the EPA standards, gallons/100 miles for the NHTSA standards), as explained in Section I.C.(2)(b) below. For heavy-duty trucks, both combination and vocational, the agencies are proposing standards expressed in terms of the key measure of freight movement, tons of payload miles or, more simply, ton-miles. Hence, for EPA the proposed standards are in the form of the mass of emissions from carrying a ton of cargo over a distance of one mile (g/ton-mi)). Similarly, the proposed NHTSA standards are in terms of gallons of fuel consumed over a set distance (one thousand miles), or gal/1,000 ton-mile. Finally, for engines, EPA is proposing standards in the form of grams of emissions per unit of work (g/bhp-hr), the same metric used for the heavy-duty highway engine standards for criteria pollutants today. Similarly, NHTSA is proposing standards for heavy-duty engines in the form of gallons of fuel consumption per 100 units of work (gal/100 bhp-hr).

Section II below discusses the proposed EPA and NHTSA standards in greater detail.

(a) Class 7 and 8 Combination Tractors

Class 7 and 8 combination tractors and their engines contribute the largest portion of the total GHG emissions and fuel consumption of the heavy-duty sector, approximately 65 percent, due to their large payloads, their high annual miles traveled, and their major role in national freight transport.[23] These vehicles consist of a cab and engine (tractor or combination tractor) and a detachable trailer. In general, reducing GHG emissions and fuel consumption for these vehicles would involve improvements such as aerodynamics and tires and reduction in idle operation, as well as engine-based efficiency improvements.

In general, the heavy-duty combination tractor industry consists of tractor manufacturers (which manufacture the tractor and purchase and install the engine) and trailer manufacturers. These manufacturers are usually separate from each other. We are not aware of any manufacturer that typically assembles both the finished truck and the trailer and introduces the combination into commerce for sale to a buyer. The owners of trucks and trailers are often distinct as well. A typical truck buyer will purchase only the tractor. The trailers are usually purchased and owned by fleets and shippers. This occurs in part because trucking fleets on average maintain 3 trailers per tractor and in some cases as many as 6 or more trailers per tractor. There are also large differences in the kinds of manufacturers involved with producing tractors and trailers. For HD highway tractors and their engines, a relatively limited number of manufacturers produce the vast majority of these products. The trailer manufacturing industry is quite different, and includes a large number of companies, many of which are relatively small in size and production volume. Setting standards for the products involved—tractors and trailers—requires recognition of the large differences between these manufacturing industries, which can then warrant consideration of different regulatory approaches.

Based on these industry characteristics, EPA and NHTSA believe that the most straightforward regulatory approach for combination tractors and trailers is to establish standards for tractors separately from trailers. As discussed below in Section IX, the agencies are proposing standards for the tractors and their engines in this rulemaking, but are not proposing standards for trailers in this rulemaking. The agencies are requesting comment on potential standards for trailers, but will address standards for trailers in a separate rulemaking.

As with the other regulatory categories of heavy-duty vehicles, EPA and NHTSA have concluded that achieving reductions in GHG emissions and fuel consumption from combination tractors requires addressing both the cab and the engine, and EPA and NHTSA each are proposing standards that reflect this conclusion. The importance of the cab is that its design determines the amount of power that the engine must produce in moving the truck down the road. As illustrated in Figure I–1, the loads that require additional power from the engine include air resistance (aerodynamics), tire rolling resistance, and parasitic losses (including accessory loads and friction in the drivetrain). The importance of the engine design is that it determines the basic GHG emissions and fuel consumption performance of the engine for the variety of demands placed on the engine, regardless of the characteristics of the cab in which it is installed. The agencies intend for the proposed standards to result in the application of improved technologies for lower GHG emissions and fuel consumption for both the cab and the engine.

[23] The vast majority of combination tractor-trailers are used in highway applications, and these vehicles are the focus of this proposed program. A small fraction of combination tractors are used in off-road applications and are treated differently, as described in Section II.

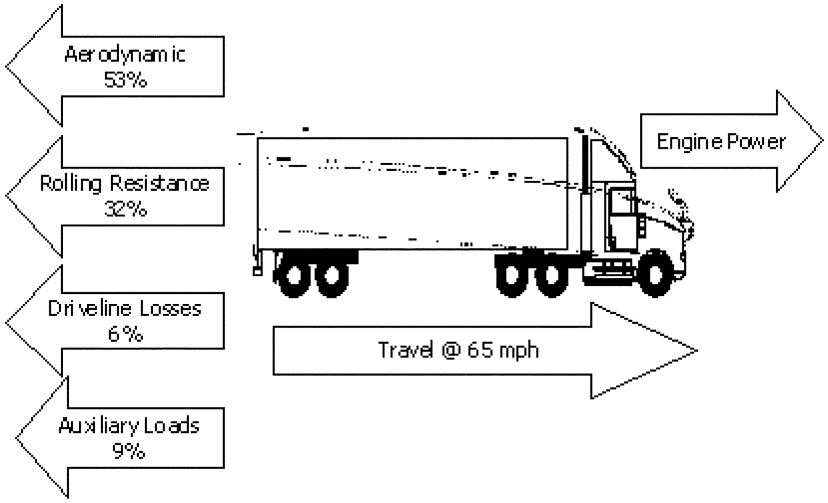


Figure I-1: Combination Tractor and Trailer Loads[24]

Accordingly, for Class 7 and 8 combination tractors, the agencies are each proposing two sets of standards. For vehicle-related emissions and fuel consumption, the agencies are proposing that tractor manufacturers meet respective vehicle-based standards. Compliance with the vehicle standard would typically be determined based on a customized vehicle simulation model, called the Greenhouse gas Emissions Model (GEM), which is consistent with the NAS Report recommendations to require compliance testing for combination tractors using vehicle simulation rather than chassis dynamometer testing. This compliance model was developed by EPA specifically for this proposal. It is an accurate and cost-effective alternative to measuring emissions and fuel consumption while operating the vehicle on a chassis dynamometer. Instead of using a chassis dynamometer as an indirect way to evaluate real-world operation and performance, various characteristics of the vehicle are measured and these measurements are used as inputs to the model. These characteristics relate to key technologies appropriate for this subcategory of truck—including aerodynamic features, weight reductions, tire rolling resistance, the presence of idle-reducing technology, and vehicle speed limiters. The model would also assume the use of a representative typical engine, rather than a vehicle-specific engine, because engines are regulated separately and include an averaging, banking, and trading program separate from the vehicle program. The model and appropriate inputs would be used to quantify the overall performance of the vehicle in terms of CO_2 emissions and fuel consumption. The model's development and design, as well as the sources for inputs and the evaluation of the model's accuracy, are discussed in detail in Section II below and in Chapter 4 of the draft RIA.

EPA and NHTSA also considered developing respective alternative standards based on the direct testing of the emissions and fuel consumption of the entire vehicle for this category of vehicles, as measured using a chassis test procedure. This would be similar to the proposed approach for standards for HD pickups and vans discussed below. The agencies believe that such an approach warrants continued consideration. However, the agencies are not prepared to propose chassis-test-based standards at this time, primarily because of the very small number of chassis-test facilities that currently exist, but rather are proposing only the tractor standards and the engine-based standards discussed above. The agencies seek comment on the potential benefits and trade-offs of chassis-test-based standards for combination tractors.

(1) Proposed Standards for Class 7 and 8 Combination Tractors

The vehicle standards that EPA and NHTSA are proposing for Class 7 and 8 combination tractor manufacturers are based on several key attributes related to GHG emissions and fuel consumption that we believe reasonably represent the many differences in utility among these vehicles. The proposed standards differ depending on GVWR (*i.e.,* whether the truck is Class 7 or Class 8), the height of the roof of the cab, and whether it is a "day cab" or a "sleeper cab." These later two attributes are important because the height of the roof, designed to correspond to the height of the trailer, significantly affects air resistance, and a sleeper cab generally corresponds to the opportunity for extended duration idle emission and fuel consumption improvements.

Thus, the agencies have created nine subcategories within the Class 7 and 8 combination tractor category based on the differences in expected emissions and fuel consumption associated with the key attributes of GVWR, cab type, and roof height. Table I–2 presents the agencies' respective proposed standards for combination tractor manufacturers for the 2017 model year for illustration.

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[24] Adapted from, Figure 4.1. Class 8 Truck Energy Audit, Technology Roadmap for the 21st Century Truck Program: A Government-Industry Research Partnership, 21CT–001, December 2000.

Table I-2: Heavy-duty Combination Tractor EPA Emissions Standards (g CO_2/ton-mile) and NHTSA Fuel Consumption Standards (gal/1,000 ton-mile)

2017 Model Year CO_2 Grams per Ton-Mile			
	Day Cab		Sleeper Cab
	Class 7	Class 8	Class 8
Low Roof	103	78	64
Mid Roof	103	78	69
High Roof	116	86	71
2017 Model Year Gallons of Fuel per 1,000 Ton-Mile			
	Day Cab		Sleeper Cab
	Class 7	Class 8	Class 8
Low Roof	10.1	7.7	6.3
Mid Roof	10.1	7.7	6.8
High Roof	11.4	8.5	7.0

In addition, the agencies are proposing separate performance standards for the engines manufactured for use in these trucks. EPA's proposed engine-based CO_2 standards and NHTSA's proposed engine-based fuel consumption standards would vary based on the expected weight class and usage of the truck into which the engine would be installed. EPA is also proposing engine-based N_2O and CH_4 standards for manufacturers of the engines used in combination tractors. EPA is proposing separate engine-based standards for these GHGs because the agency believes that N_2O and CH_4 emissions are technologically related solely to the engine, fuel, and emissions aftertreatment systems, and the agency is not aware of any influence of vehicle-based technologies on these emissions. However, NHTSA is not incorporating standards related to these GHGs due to their lack of influence on fuel consumption. EPA expects that manufacturers of current engine technologies would be able to comply with the proposed "cap" standards with little or no technological improvements; the value of the standards would be to prevent significant increases in these emissions as alternative technologies are developed and introduced in the future. Compliance with the proposed EPA engine-based CO_2 standards and the proposed NHTSA fuel consumption standards, as well as the proposed EPA N_2O and CH_4 standards, would be determined using the appropriate EPA engine test procedure, as discussed in Section II below.

As with the other categories of heavy-duty vehicles, EPA and NHTSA are proposing respective standards that would apply to Class 7 and 8 trucks at the time of production (as in Table I–2, above). In addition, EPA is proposing separate standards that would apply for a specified period of time in use. All of the proposed standards for these trucks, as well as details about the proposed provisions for certification and implementation of these standards, are discussed in more detail in Sections II, III, IV, and V below and in the draft RIA.

(ii) EPA Proposed Air Conditioning Leakage Standard for Class 7 and 8 Combination Tractors

In addition to the proposed EPA tractor- and engine-based standards for CO_2 and engine-based standards for N_2O, and CH_4 emissions, EPA is also proposing a separate standard to reduce leakage of HFC refrigerant from cabin air conditioning systems from combination tractors, to apply to the tractor manufacturer. This standard would be independent of the CO_2 tractor standard, as discussed below. Because the current refrigerant used widely in all these systems has a very high global warming potential, EPA is concerned about leakage of refrigerant over time.[25]

Because the interior volume to be cooled for most of these truck cabins is similar to that of light-duty trucks, the size and design of current truck A/C systems is also very similar. The proposed compliance approach for Class 7 and 8 tractors is therefore similar to that in the light-duty rule in that these proposed standards are design-based. Manufacturers would choose technologies from a menu of leak-reducing technologies sufficient to comply with the standard, as opposed to using a test to measure performance.

However, the proposed heavy-duty A/C provisions differ in two important ways from those established in the light-duty rule. First, the light-duty provisions were established as voluntary ways to generate credits towards the CO_2 g/mi standard, and EPA took into account the expected use of such credits in establishing the CO_2 emissions standards. In this rule, EPA is proposing that manufacturers actually meet a standard—as opposed to having the opportunity to earn a credit—for A/C refrigerant leakage. Thus, for this rule, refrigerant leakage is not accounted for in the development of the proposed CO_2 standards. We are taking this approach here recognizing that while the benefits of leakage control are almost identical between light-duty and heavy-duty vehicles on a per vehicle basis, these benefits on a per mile basis expressed as a percentage of overall GHG emissions are much smaller for heavy-duty vehicles due to their much higher CO_2 emissions rates and higher annual mileage when compared to light-duty vehicles. Hence a credit-based approach as done for light-duty vehicles would provide less motivation for manufacturers to install low leakage systems even though such systems represent a highly cost effective means to control GHG emissions. The second difference relates the expression of the leakage rate. The light-duty A/C leakage standard is expressed in terms of grams per year. For this heavy-duty rule, however, because of the wide variety of system designs and arrangements, a one-size-fits-all gram per year standard would likely be much less relevant, so EPA believes it is more appropriate to propose a standard in terms of percent of total refrigerant leakage per year. This requires the total refrigerant capacity of

[25] The global warming potential for HFC–134a refrigerant of 1430 used in this proposal is consistent with the Intergovernmental Panel on Climate Change Fourth Assessment Report.

the A/C system to be taken into account in determining compliance. EPA believes that this proposed approach—a standard instead of a credit, and basing the standard on percent leakage over time—is more appropriate for heavy-duty tractors than the light-duty vehicle approach and that it will achieve the desired reductions in refrigerant leakage. Compliance with the standard would be determined through a showing by the tractor manufacturer that its A/C system incorporated a combination of low-leak technologies sufficient to meet the percent leakage of the standard. This proposed "menu" of technologies is very similar to that established in the light-duty GHG rule.[25]

Finally, EPA is not proposing an A/C system efficiency standard in this heavy-duty rulemaking, although an efficiency credit was a part of the light-duty rule. The much larger emissions of CO_2 from a heavy-duty tractor as compared to those from a light-duty vehicle mean that the relative amount of CO_2 that could be reduced through A/C efficiency improvements is very small. We request comment on this decision and whether EPA should reflect A/C system efficiency in the final program either as a credit or a stand-alone standard based on the same technologies and performance levels as the light-duty program.

A more detailed discussion of A/C related issues is found in Section II of this preamble.

(b) Heavy-Duty Pickup Trucks and Vans (Class 2b and 3)

Heavy-duty vehicles with GVWR between 8,501 and 10,000 lb are classified in the industry as Class 2b motor vehicles per the Federal Motor Carrier Safety Administration definition. As discussed above, Class 2b includes MDPVs that are regulated by the agencies under the light-duty vehicle program, and the agencies are not considering additional requirements for MDPVs in this rulemaking. Heavy-duty vehicles with GVWR between 10,001 and 14,000 lb are classified as Class 3 motor vehicles. Class 2b and Class 3 heavy-duty vehicles (referred to in this proposal as "HD pickups and vans") together emit about 20 percent of today's GHG emissions from the heavy-duty vehicle sector.

About 90 percent of HD pickups and vans are ¾-ton and 1-ton pick-up trucks, 12- and 15-passenger vans, and large work vans that are sold by vehicle manufacturers as complete vehicles, with no secondary manufacturer making substantial modifications prior to registration and use. These vehicle manufacturers are companies with major light-duty markets in the United States, primarily Ford, General Motors, and Chrysler. Furthermore, the technologies available to reduce fuel consumption and GHG emissions from this segment are similar to the technologies used on light-duty pickup trucks, including both engine efficiency improvements (for gasoline and diesel engines) and vehicle efficiency improvements.

For these reasons, EPA believes it is appropriate to propose GHG standards for HD pickups and vans based on the whole vehicle, including the engine, expressed as grams per mile, consistent with the way these vehicles are regulated by EPA today for criteria pollutants. NHTSA believes it is appropriate to propose corresponding gallons per 100 mile fuel consumption standards that are likewise based on the whole vehicle. This complete vehicle approach being proposed by both agencies for HD pickups and vans is consistent with the recommendations of the NAS Committee in their 2010 Report. EPA and NHTSA also believe that the structure and many of the detailed provisions of the recently finalized light-duty GHG and fuel economy program, which also involves vehicle-based standards, are appropriate for the HD pickup and van GHG and fuel consumption standards as well, and this is reflected in the standards each agency is proposing, as detailed in Section II.C. These proposed commonalities include a new vehicle fleet average standard for each manufacturer in each model year and the determination of these fleet average standards based on production volume-weighted targets for each model, with the targets varying based on a defined vehicle attribute. Vehicle testing would be conducted on chassis dynamometers using the drive cycles from the EPA Federal Test Procedure (Light-duty FTP or "city" test) and Highway Fuel Economy Test (HFET or "highway" test).[27]

For the light-duty GHG and fuel economy standards, the agencies factored in vehicle size by basing the emissions and fuel economy targets on vehicle footprint (the wheelbase times the average track width).[28] For those standards, passenger cars and light trucks with larger footprints are assigned higher GHG and lower fuel economy target levels in acknowledgement of their inherent tendency to consume more fuel and emit more GHGs per mile. For HD pickups and vans, the agencies believe that setting standards based on vehicle attributes is appropriate, but feel that a weight-based metric provides a better attribute than the footprint attribute utilized in the light-duty vehicle rulemaking. Weight-based measures such as payload and towing capability are key among the parameters that characterize differences in the design of these vehicles, as well as differences in how the vehicles will be utilized. Buyers consider these utility-based attributes when purchasing a heavy-duty pick-up or van. EPA and NHTSA are therefore proposing standards for HD pickups and vans based on a "work factor" that combines their payload and towing capabilities, with an added adjustment for 4-wheel drive vehicles.

The agencies are proposing that each manufacturer's fleet average standard would be based on production volume-weighting of target standards for each vehicle that in turn are based on the vehicle's work factor. These target standards would be taken from a set of curves (mathematical functions), presented in Section II.C. EPA is also proposing that the CO_2 standards be phased in gradually starting in the 2014 model year, at 15–20–40–60–100 percent in model years 2014–2015–2016–2017–2018, respectively. The phase-in would take the form of a set of target standard curves, with increasing stringency in each model year, as detailed in Section II.C. The EPA standards proposed for 2018 (including a separate standard to control air conditioning system leakage) represent an average per-vehicle reduction in GHGs of 17 percent for diesel vehicles and 12 percent for gasoline vehicles, compared to a common baseline, as described in Sections II.C and III.B of this preamble. Section II.C also discusses the rationale behind the proposal of separate targets for diesel and gasoline vehicle standards. EPA is also proposing a manufacturer's alternative implementation schedule for

[25] At this time, EPA is considering approval of an alternative refrigerant, HFO–1234yf, which has a very low GWP. The proposed A/C leakage standard is designed to account for use of an alternative, low-GWP refrigerant. If in the future this refrigerant is approved and if it becomes widespread as a substitute for HFC–134a in mobile A/C systems, EPA may propose to revise or eliminate the leakage standard.

[27] The Light-duty FTP is a vehicle driving cycle that was originally developed for certifying light-duty vehicles and subsequently applied to HD chassis testing for criteria pollutants. This contrasts with the Heavy-duty FTP, which refers to the transient engine test cycles used for certifying heavy-duty engines (with separate cycles specified for diesel and spark-ignition engines).

[28] EISA requires CAFE standards for passenger cars and light trucks to be attribute-based; *see* 49 U.S.C. 32902(b)(3)(A).

model years 2016–2018 that parallels and is equivalent to NHTSA's first alternative described below.

NHTSA is proposing to allow manufacturers to select one of two fuel consumption standards alternatives for model years 2016 and later. To meet the EISA statutory requirement for three year regulatory stability, the first alternative would define individual gasoline vehicle and diesel vehicle fuel consumption target curves that would not change for model years 2016 and later. The proposed target curves for this alternative are presented in Section II.C. The second alternative would use target curves that are equivalent to the EPA program in each model year 2016 to 2018. Stringency for the alternatives has been selected to allow a manufacturer, through the use of the credit and deficit carry-forward provisions that the agencies are also proposing, to rely on the same product plans to satisfy either of these two alternatives, and also EPA requirements. NHTSA is also proposing that manufacturers may voluntarily opt into the NHTSA HD pickup and van program in model years 2014 or 2015. For these model years, NHTSA's fuel consumption target curves are equivalent to EPA's target curves.

The proposed EPA and NHTSA standard curves are based on a set of vehicle, engine, and transmission technologies expected to be used to meet the recently established GHG emissions and fuel economy standards for model year 2012–2016 light-duty vehicles, with full consideration of how these technologies would perform in heavy-duty vehicle testing and use. All of these technologies are already in use or have been announced for upcoming model years in some light-duty vehicle models, and some are in use in a portion of HD pickups and vans as well. The technologies include:

- Advanced 8-speed automatic transmissions
- Aerodynamic improvements
- Electro-hydraulic power steering
- Engine friction reductions
- Improved accessories
- Low friction lubricants in powertrain components
- Lower rolling resistance tires
- Lightweighting
- Gasoline direct injection
- Gasoline engine coupled cam phasing
- Diesel aftertreatment optimization
- Air conditioning system leakage reduction (for EPA program only)

See Section III.B for a detailed analysis of these and other potential technologies, including their feasibility, costs, and effectiveness when employed for reducing fuel consumption and CO_2 emissions in HD pickups and vans.

A relatively small number of HD pickups and vans are sold by vehicle manufacturers as incomplete vehicles, without the primary load-carrying device or container attached. We are proposing that these vehicles generally be regulated as Class 2b through 8 vocational vehicles, as described in Section I.C(2)(c), because, like other vocational vehicles, we have little information on baseline aerodynamic performance and expectations for improvement. However, a sizeable subset of these incomplete vehicles, often called cab-chassis vehicles, are sold by the vehicle manufacturers in configurations with many of the components that affect GHG emissions and fuel consumption identical to those on complete pickup truck or van counterparts—including engines, cabs, frames, transmissions, axles, and wheels. We are proposing that these vehicles be included in the chassis-based HD pickup and van program. These proposed provisions are described in Section V.B.

In addition to proposed EPA CO_2 emission standards and the proposed NHTSA fuel consumption standards for HD pickups and vans, EPA is also proposing standards for two additional GHGs, N_2O and CH_4, as well as standards for air conditioning-related HFC emissions. These standards are discussed in more detail in Section II.E. Finally, EPA is proposing standards that would apply to HD pickups and vans in use. All of the proposed standards for these HD pickups and vans, as well as details about the proposed provisions for certification and implementation of these standards, are discussed in Section II.C.

(c) Class 2b–8 Vocational Vehicles

Class 2b–8 vocational vehicles consist of a wide variety of vehicle types. Some of the primary applications for vehicles in this segment include delivery, refuse, utility, dump, and cement trucks; transit, shuttle, and school buses; emergency vehicles, motor homes,[29] tow trucks, among others. These vehicles and their engines contribute approximately 15 percent of today's heavy-duty truck sector GHG emissions.

Manufacturing of vehicles in this segment of the industry is organized in a more complex way than that of the other heavy-duty categories. Class 2b–8 vocational vehicles are often built as a chassis with an installed engine and an installed transmission. Both the engine and transmissions are typically manufactured by other manufacturers and the chassis manufacturer purchases and installs them. Many of the same companies that build Class 7 and 8 tractors are also in the Class 2b–8 chassis manufacturing market. The chassis is typically then sent to a body manufacturer, which completes the vehicle by installing the appropriate feature—such as dump bed, delivery box, or utility bucket—onto the chassis. Vehicle body manufacturers tend to be small businesses that specialize in specific types of bodies or specialized features.

EPA and NHTSA are proposing that in this vocational vehicle category the chassis manufacturers be the focus of the proposed GHG and fuel consumption standards. They play a central role in the manufacturing process, and the product they produce—the chassis with engine and transmissions—includes the primary technologies that affect emissions and fuel consumption. They also constitute a much more limited group of manufacturers for purposes of developing a regulatory program. In contrast, a focus on the body manufacturers would be much less practical, since they represent a much more diverse set of manufacturers, and the part of the vehicle that they add has a very limited impact on opportunities to reduce GHG emissions and fuel consumption (given the limited role that aerodynamics plays in the types of lower speed operation typically found with vocational vehicles). Therefore, the proposed standards in this vocational vehicle category would apply to the chassis manufacturers of all heavy-duty vehicles not otherwise covered by the HD pickup and van standards or Class 7 and 8 combination tractor standards discussed above. The agencies request comment on our proposed focus on chassis manufacturers.

As discussed above, EPA and NHTSA have concluded that reductions in GHG emissions and fuel consumption require addressing both the vehicle and the engine. As discussed above for Class 7 and 8 combination tractors, the agencies are each proposing two sets of standards for Class 2b–8 vocational vehicles. For vehicle-related emissions and fuel consumption, the agencies are proposing standards for chassis manufacturers: EPA CO_2 (g/ton-mile) standards and NHTSA fuel consumption (gal/1,000 ton-mile) standards). Also as in the case of Class 7 and 8 tractors, we propose to use GEM, a customized vehicle simulation model, to determine compliance with the vocational vehicle standards. The primary manufacturer-generated input

[29] Again, we note that NHTSA's proposed fuel consumption standards would not apply to non-commercial vehicles like motor homes.

into the proposed compliance model for this category of trucks would be a measure of tire rolling resistance, as discussed further below, because tire improvements are the primary means of vehicle improvement available at this time. The model would also assume the use of a typical representative engine in the simulation, resulting in an overall value for CO_2 emissions and one for fuel consumption. As is the case for combination tractors, the manufacturers of the engines intended for vocational vehicles would be subject to separate engine-based standards.

(i) Proposed Standards for Class 2b–8 Vocational Vehicles

Based on our analysis and research, the agencies believe that the primary opportunity for reductions in vocational vehicle GHG emissions and fuel consumption will be through improved engine technologies and improved tire rolling resistance. For engines, as proposed for combination tractors, EPA and NHTSA are proposing separate standards for the manufacturers of engines used in Class 2b–8 vocational vehicles. EPA's proposed engine-based CO_2 standards and NHTSA's proposed engine-based fuel consumption standards would vary based on the expected weight class and usage of the truck into which the engine would be installed. The agencies propose to use the groupings EPA currently uses for other heavy-duty engine standards—light heavy-duty, medium heavy-duty, and heavy heavy-duty, as discussed in Section II below.

Tire rolling resistance is closely related to the weight of the vehicle. Therefore, we propose that the vehicle-based standards for these trucks vary according to one key attribute, GVWR. For this initial HD rulemaking, we propose that these standards be based on the same groupings of truck weight classes used for the engine standards—light heavy-duty, medium heavy-duty, and heavy heavy-duty. These groupings are appropriate for the proposed vehicle-based standards because they parallel the general divisions among key engine characteristics, as discussed in Section II.

The agencies intend to monitor the development of and production feasibility of new vehicle-related GHG and fuel consumption reduction improving technologies and consider including these technologies in future rulemakings. As discussed below, we are including provisions to account for and credit the use of hybrid technology as a technology that can reduce emissions and fuel consumption. Hybrid technology can currently be a cost-effective technology in certain specific vocational applications, and the agencies want to recognize and promote the use of this technology. We also are proposing a mechanism whereby credits can be generated by use of other technologies not included in the compliance model. (*See* Sections I.E and IV below.)

Table I–3 presents EPA's proposed CO_2 standards and NHTSA's proposed fuel consumption standards for chassis manufacturers of Class 2b through Class 8 vocational vehicles for the 2017 model year for illustrative purposes.

Table I-3: Proposed 2017 Class 2b-8 Vocational Vehicle EPA CO_2 Standards and NHTSA Fuel Consumption Standards

EPA CO_2 (gram/ton-mile) Standard Effective 2017 Model Year			
	Light Heavy-Duty Class 2b-5	Medium Heavy-Duty Class 6-7	Heavy Heavy-Duty Class 8
CO_2 Emissions	344	204	107
NHTSA Fuel Consumption (gallon per 1,000 ton-mile) Standard Effective 2017 Model Year			
	Light Heavy-Duty Class 2b-5	Medium Heavy-Duty Class 6-7	Heavy Heavy-Duty Class 8
Fuel Consumption	33.8	20.0	10.5

At this time, NHTSA and EPA are not prepared to propose alternative standards based on a whole-vehicle chassis test for vocational vehicles in this initial heavy-duty rulemaking. As discussed above for combination tractors, the primary reason is the very small number of chassis-test facilities that currently exist. Thus, the agencies are proposing only the compliance-model based standards and engine standards discussed above, and seek comment on the appropriateness of chassis-test-based standards for the vocational vehicle category.

For vocational vehicles using hybrid technology, the agencies are proposing two specialized approaches to allow manufacturers to gain credit for the emissions and fuel consumption reductions associated with hybrid technology. One option to account for the reductions associated with vocational vehicles using hybrid technology would compare vehicle-based chassis tests with and without the hybrid technology. The other option would allow a manufacturer to simulate the operation of the hybrid system in an engine-based test. The options are further discussed in Section IV.

The proposed program also provides for opportunities to generate credits for technologies not measured by the GEM, again described more fully in Section IV.

As mentioned above for Class 7 and 8 combination tractors, EPA believes that N_2O and CH_4 emissions are technologically related solely to the engine, fuel, and emissions aftertreatment systems, and the agency is not aware of any influence of vehicle-based technologies on these emissions. Therefore, for Class 2b–8 vocational vehicles, EPA is not proposing separate vehicle-based standards for these GHGs, but is proposing engine-based N_2O and CH_4 standards for manufacturers of the engines to be used in vocational vehicles. EPA expects that

manufacturers of current engine technologies would be able to comply with the proposed "cap" standards with little or no technological improvements; the value of the standards would be in that they would prevent significant increases in these emissions as alternative technologies are developed and introduced in the future. Compliance with the proposed EPA engine-based CO_2 standards and the proposed NHTSA fuel consumption standards, as well as the proposed EPA N_2O and CH_4 standards, would be determined using the appropriate EPA engine test procedure, as discussed in Section II below.

As with the other regulatory categories of heavy-duty vehicles, EPA and NHTSA are proposing standards that would apply to Class 2b–8 vocational vehicles at the time of production, and EPA is proposing standards for a specified period of time in use. All of the proposed standards for these trucks, as well as details about the proposed provisions for certification and implementation of these standards, are discussed in more detail later in this notice and in the draft RIA.

EPA is not proposing A/C refrigerant leakage standards for Class 2b–8 vocational vehicles at this time, primarily because of the number of entities involved in their manufacture and thus the potential for different entities besides the chassis manufacturer to be involved in the A/C system production and installation. EPA requests comment on how A/C standards might practically be applied to manufacturers of vocational vehicles.

(d) What Manufacturers Are Not Covered by the Proposed Standards?

EPA and NHTSA are proposing to temporarily defer the proposed greenhouse gas emissions and fuel consumption standards for any manufacturers of heavy-duty engines, manufacturers of combination tractors, and chassis manufacturers for vocational vehicles that meet the "small business" size criteria set by the Small Business Administration. We are not aware of any manufacturers of HD pickups and vans that meet these criteria. For each of the other categories and for engines, we have identified a small number of manufacturers that would appear to qualify as small businesses. The production of these companies is small, and we believe that deferring the standards for these companies at this time would have a negligible impact on the GHG emission reductions and fuel consumption reductions that the program would otherwise achieve. We request comment on our assumption that the impact of these exemptions for small businesses will be small and further whether it will be possible to circumvent the regulations by creating new small businesses to displace existing manufacturers. We discuss the specific deferral provisions in more detail in Section II.

The agencies will consider appropriate GHG emissions and fuel consumption standards for these entities as part of a future regulatory action.

D. Summary of Costs and Benefits of the HD National Program

This section summarizes the projected costs and benefits of the proposed NHTSA fuel consumption and EPA GHG emissions standards. These projections help to inform the agencies' choices among the alternatives considered and provide further confirmation that the proposed standards are an appropriate choice within the spectrum of choices allowable under the agencies' respective statutory criteria. NHTSA and EPA have used common projected costs and benefits as the bases for our respective standards.

The agencies have analyzed in detail the projected costs and benefits of the proposed GHG and fuel consumption standards. Table I–4 shows estimated lifetime discounted costs, benefits and net benefits for all heavy-duty vehicles projected to be sold in model years 2014–2018. These figures depend on estimated values for the social cost of carbon (SCC), as described in Section VIII.G.

Table I-4: Estimated Lifetime Discounted Costs, Benefits, and Net Benefits for 2014-2018 Model Year HD Vehicles assuming the $22/ton SCC Value[a,b] (2008 dollars)

3% Discount Rate	$billions
Costs	$7.7
Benefits	$49
Net Benefits	$41
7% Discount Rate	
Costs	$7.7
Benefits	$34
Net Benefits	$27

Notes:

[a] Although the agencies estimated the benefits associated with four different values of a one ton CO_2 reduction (SCC: $5, $22, $36, $66), for the purposes of this overview presentation of estimated costs and benefits we are showing the benefits associated with the marginal value deemed to be central by the interagency working group on this topic: $22 per ton of CO_2, in 2008 dollars and 2010 emissions and fuel consumption. As noted in Section VIII.F, SCC increases over time.

[b] Note that net present value of reduced GHG emissions is calculated differently than other benefits. The same discount rate used to discount the value of damages from future emissions (SCC at 5, 3, and 2.5 percent) is used to calculate net present value of SCC for internal consistency. Refer to Section VIII.F for more detail.

Table I–5 shows the estimated lifetime reductions in CO_2 emissions (in million metric tons (MMT)) and fuel consumption for all heavy-duty vehicles sold in the model years 2014–2018. The values in Table I–5 are projected lifetime totals for each model year and are not discounted. The two agencies' standards together comprise the HD National Program, and the agencies' respective GHG emissions and fuel consumption standards, jointly, are the source of the benefits and costs of the HD National Program.

Table I–5 are projected lifetime totals for each model year and are not discounted. The two agencies' standards together comprise the HD National Program, and the agencies' respective GHG emissions and fuel consumption standards, jointly, are the source of the benefits and costs of the HD National Program.

Table I-5: Estimated Lifetime Reductions in Fuel Consumption and CO_2 Emissions for 2014-2018 Model Year HD Vehicles

		2014	2015	2016	2017	2018	Total
All Heavy-Duty Vehicles	Fuel (billion gallons)	3.0	3.1	3.5	5.2	5.8	20.5
	Fuel (billion barrels)	0.07	0.07	0.08	0.12	0.14	0.5
	CO_2 (MMT)[a]	36.2	37.6	41.6	62.0	68.7	246

[a] Includes upstream and downstream CO_2 reductions.

Table I–6 shows the estimated lifetime discounted benefits for all heavy-duty vehicles sold in model years 2014–2018. Although the agencies estimated the benefits associated with four different values of a one ton CO_2 reduction ($5, $22, $36, $66), for the purposes of this overview presentation of estimated benefits the agencies are showing the benefits associated with one of these marginal values, $22 per ton of CO_2, in 2008 dollars and 2010 emissions. Table I–6 presents benefits based on the $22 value. Section VIII.F presents the four marginal values used to estimate monetized benefits of CO_2 reductions and Section VIII presents the program benefits using each of the four marginal values, which represent only a partial accounting of total benefits due to omitted climate change impacts and other factors that are not readily monetized. The values in the table are discounted values for each model year of vehicles throughout their projected lifetimes. The analysis includes other economic impacts such as fuel savings, energy security, and other externalities such as reduced accidents, congestion and noise. However, the analysis supporting the proposal omits other impacts such as benefits related to non-GHG emission reductions. The lifetime discounted benefits are shown for one of four different SCC values considered by EPA and NHTSA. The values in Table I–6 do not include costs associated with new technology required to meet the GHG and fuel consumption standards.

Table I-6: Estimated Lifetime Discounted Benefits for 2014-2018 Model Year HD Vehicles Assuming the $22/ton SCC Value[a,b] (billions of 2008 dollars)

Discount Rate	Model Year					
	2014	2015	2016	2017	2018	Total
3%	$7.0	$7.3	$8.2	$12	$14	$49
7%	$5.4	$5.4	$5.9	$8.4	$9.1	$34

Notes:

[a] The analysis includes impacts such as the economic value of reduced fuel consumption and accompanying climate-related economic benefits from reducing emissions of CO_2 (but not other GHGs), and reductions in energy security externalities caused by U.S. petroleum consumption and imports. The analysis also includes economic impacts stemming from additional heavy-duty vehicle use, such as the economic damages caused by accidents, congestion and noise.

[b] Note that net present value of reduced CO_2 emissions is calculated differently than other benefits. The same discount rate used to discount the value of damages from future emissions (SCC at 5, 3, and 2.5 percent) is used to calculate net present value of SCC for internal consistency. Refer to Section VIII.F for more detail.

Table I–7 shows the agencies' estimated lifetime fuel savings, lifetime CO_2 emission reductions, and the monetized net present values of those fuel savings and CO_2 emission reductions. The gallons of fuel and CO_2 emission reductions are projected lifetime values for all vehicles sold in the model years 2014–2018. The estimated fuel savings in billions of barrels and the GHG reductions in million metric tons of CO_2 shown in Table I–7 are totals for the five model years throughout their projected lifetime and are not discounted. The monetized values shown in Table I–7 are the summed values of the discounted monetized-fuel consumption and

monetized-CO_2 reductions for the five model years 2014–2018 throughout their lifetimes. The monetized values in Table I–7 reflect both a 3 percent and a 7 percent discount rate as noted.

Table I-7: Estimated Lifetime Reductions and Associated Discounted Monetized Benefits for 2014-2018 Model Year HD Vehicles (monetized values in 2008 dollars)

	Amount	$ value (billions)
Fuel Consumption Reductions	0.5 billion barrels	$42, 3% discount rate $28, 7% discount rate
CO_2 Emission Reductions[a] Valued assuming $22/ton CO_2 in 2010	246 MMT CO_2	$4.1[b]

Notes:
[a] Includes both upstream and downstream CO_2 emission reductions.
[b] Note that net present value of reduced CO_2 emissions is calculated differently than other benefits. The same discount rate used to discount the value of damages from future emissions (SCC at 5, 3, and 2.5 percent) is used to calculate net present value of SCC for internal consistency. Refer to Section VIII.F for more detail.

Table I–8 shows the estimated incremental and total technology outlays for all heavy-duty vehicles for each of the model years 2014–2018. The technology outlays shown in Table I–8 are for the industry as a whole and do not account for fuel savings associated with the program.

Table I-8: Estimated Incremental Technology Outlays for 2014-2018 Model Year HD Vehicles (billions of 2008 dollars)

	2014	2015	2016	2017	2018	Total
All Heavy-Duty Vehicles	$1.3	$1.3	$1.5	$1.6	$2.0	$7.7

Table I–9 shows EPA's estimated incremental cost increase of the average new heavy-duty vehicles for each model year 2014–2018. The values shown are incremental to a baseline vehicle and are not cumulative.

Table I-9: Estimated Incremental Increase in Average Cost for 2014-2018 Model Year HD Vehicles (2008 dollars per unit)

	2014	2015	2016	2017	2018
Combination Tractors	$5,896	$5,733	$5,480	$6,150	$5,901
HD Pickups &Vans	$225	$292	$567	$848	$1,411
Vocational Trucks	$374	$367	$400	$392	$359

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E. Program Flexibilities

For each of the heavy-duty vehicle and heavy-duty engine categories for which we are proposing respective standards, EPA and NHTSA are also proposing provisions designed to give manufacturers a degree of flexibility in complying with the standards. These proposed provisions have enabled the agencies to consider overall standards that are more stringent and that would become effective sooner than we could consider with a more rigid program, one in which all of a manufacturer's similar vehicles or engines would be required to achieve the same emissions or fuel consumption levels, and at the same time.[30] We believe that incorporating carefully structured regulatory flexibility provisions into the overall program is an important way to achieve each agency's goals for the program.

[30] NHTSA notes that it has greater flexibility in the HD program to include consideration of credits and other flexibilities in determining appropriate and feasible levels of stringency than it does in the light-duty CAFE program. *Cf.* 49 U.S.C. 32902(h), which applies to light-duty CAFE but not heavy-duty fuel efficiency under 49 U.S.C. 32902(k).

NHTSA's and EPA's proposed flexibility provisions are essentially identical to each other in structure and function. For combination tractor and vocational vehicle categories and for heavy-duty engines, we are proposing four primary types of flexibility—averaging, banking, and trading (ABT) provisions, early credits, advanced technology credits (including hybrid powertrains), and innovative technology credit provisions. The proposed ABT provisions are patterned on existing EPA ABT programs and would allow a vehicle manufacturer to reduce CO_2 emission and fuel consumption levels

further than the level of the standard for one or more vehicles to generate ABT credits. The manufacturer could then use those credits to offset higher emission or fuel consumption levels in other similar vehicles, "bank" the credits for later use, or "trade" the credits to another manufacturer. We are proposing similar ABT provisions for manufacturers of heavy-duty engines. For HD pickups and vans, we are proposing a fleet averaging system very similar to the light-duty GHG and CAFE fleet averaging system.

To best ensure that the overall emission and fuel consumption reductions of the program would be achieved and to minimize any effect on the ability of the market to respond to consumer needs, the agencies propose to restrict the use of averaging to limited sets of vehicles and engines expected to have similar emission or fuel consumption characteristics. For example, averaging would be allowed among Class 7 low-roof day cab vehicles, but not among those vehicles and Class 8 sleeper cabs or vocational vehicles. Also, we propose that credits generated by vehicles not be applicable to engine compliance, and vice versa. For HD pickups and vans, we propose that fleet averaging be allowed with minimum restriction within the HD pickup and van category.

In addition to ABT, the agencies are proposing that a manufacturer that reduces CO_2 emissions and fuel consumption below required levels prior to the beginning of the program be allowed to generate the same number of credits ("early credits") that they would after the program begins.

The agencies are also proposing that manufacturers that show improvements in CO_2 emissions and fuel consumption and incorporate certain technologies (including hybrid powertrains, Rankine engines, or electric vehicles) be eligible for special "advanced technology" credits. Unlike other credits in this proposal, the advanced technology credits could be applied to any heavy-duty vehicle or engine, and not be limited to the vehicle category generating the credit.

The technologies eligible for advanced technology credits above lend themselves to straightforward methodologies for quantifying the emission or fuel consumption reductions. For other technologies which can reduce CO_2 and fuel consumption, but for which there do not yet exist established methods for quantifying reductions, the agencies still seek to encourage the development of such innovative technologies, and are therefore proposing special "innovative technology" credits. These innovative technology credits would apply to technologies that are shown to produce emission and fuel consumption reductions that are not adequately recognized on the current test procedures and that are not yet in widespread use. Manufacturers would need to quantify the reductions in fuel consumption and CO_2 emissions that the technology could achieve, above and beyond those achieved on the existing test procedures. As with ABT, we propose that the use of innovative technology credits be only allowed among vehicles and engines expected to have similar emissions and fuel consumption characteristics (*e.g.,* within each of the nine Class 7 & 8 combination tractor subcategories, or within each of the three Class 2b–8 vocational vehicle subcategories).

A detailed discussion of each agency's ABT, early credit, advanced technology, and innovative technology provisions for each regulatory category of heavy-duty vehicles and engines is found in Section IV below.

F. EPA and NHTSA Statutory Authorities

(1) EPA Authority

Title II of the CAA provides for comprehensive regulation of mobile sources, authorizing EPA to regulate emissions of air pollutants from all mobile source categories. When acting under Title II of the CAA, EPA considers such issues as technology effectiveness, its cost (both per vehicle, per manufacturer, and per consumer), the lead time necessary to implement the technology, and based on this the feasibility and practicability of potential standards; the impacts of potential standards on emissions reductions of both GHGs and non-GHGs; the impacts of standards on oil conservation and energy security; the impacts of standards on fuel savings by customers; the impacts of standards on the truck industry; other energy impacts; as well as other relevant factors such as impacts on safety.

This proposal implements a specific provision from Title II, section 202(a).[31] Section 202(a)(1) of the CAA states that "the Administrator shall by regulation prescribe (and from time to time revise) * * * standards applicable to the emission of any air pollutant from any class or classes of new motor vehicles * * *, which in his judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare." With EPA's December 2009 final findings for greenhouse gases, section 202(a) authorizes EPA to issue standards applicable to emissions of those pollutants from new motor vehicles.

Any standards under CAA section 202(a)(1) "shall be applicable to such vehicles * * * for their useful life." Emission standards set by the EPA under CAA section 202(a)(1) are technology-based, as the levels chosen must be premised on a finding of technological feasibility. Thus, standards promulgated under CAA section 202(a) are to take effect only "after providing such period as the Administrator finds necessary to permit the development and application of the requisite technology, giving appropriate consideration to the cost of compliance within such period" (section 202(a)(2); *see also NRDC* v. *EPA*, 655 F.2d 318, 322 (DC Cir. 1981)). EPA is afforded considerable discretion under section 202(a) when assessing issues of technical feasibility and availability of lead time to implement new technology. Such determinations are "subject to the restraints of reasonableness", which "does not open the door to 'crystal ball' inquiry." *NRDC*, 655 F.2d at 328, quoting *International Harvester Co.* v. *Ruckelshaus*, 478 F.2d 615, 629 (DC Cir. 1973). However, "EPA is not obliged to provide detailed solutions to every engineering problem posed in the perfection of the trap-oxidizer. In the absence of theoretical objections to the technology, the agency need only identify the major steps necessary for development of the device, and give plausible reasons for its belief that the industry will be able to solve those problems in the time remaining. The EPA is not required to rebut all speculation that unspecified factors may hinder 'real world' emission control." *NRDC,* 655 F.2d at 333–34. In developing such technology-based standards, EPA has the discretion to consider different standards for appropriate groupings of vehicles ("class or classes of new motor vehicles"), or a single standard for a larger grouping of motor vehicles (*NRDC,* 655 F.2d at 338).

Although standards under CAA section 202(a)(1) are technology-based, they are not based exclusively on technological capability. EPA has the discretion to consider and weigh various factors along with technological feasibility, such as the cost of compliance (*see* section 202(a)(2)), lead time necessary for compliance (section 202(a)(2)), safety (*see NRDC,* 655 F.2d at 336 n. 31) and other impacts on consumers, and energy impacts associated with use of the technology. *See George E. Warren Corp.* v. *EPA*, 159

[31] *See* 42 U.S.C. 7521(a).

F.3d 616, 623–624 (DC Cir. 1998) (ordinarily permissible for EPA to consider factors not specifically enumerated in the CAA). *See also Entergy Corp.* v. *Riverkeeper, Inc.*, 129 S.Ct. 1498, 1508–09 (2009) (congressional silence did not bar EPA from employing cost-benefit analysis under the Clean Water Act absent some other clear indication that such analysis was prohibited; rather, silence indicated discretion to use or not use such an approach as the agency deems appropriate).

In addition, EPA has clear authority to set standards under CAA section 202(a) that are technology forcing when EPA considers that to be appropriate, but is not required to do so (as compared to standards set under provisions such as section 202(a)(3) and section 213(a)(3)). EPA has interpreted a similar statutory provision, CAA section 231, as follows:

While the statutory language of section 231 is not identical to other provisions in title II of the CAA that direct EPA to establish technology-based standards for various types of engines, EPA interprets its authority under section 231 to be somewhat similar to those provisions that require us to identify a reasonable balance of specified emissions reduction, cost, safety, noise, and other factors. *See, e.g., Husqvarna AB* v. *EPA,* 254 F.3d 195 (DC Cir. 2001) (upholding EPA's promulgation of technology-based standards for small non-road engines under section 213(a)(3) of the CAA). However, EPA is not compelled under section 231 to obtain the "greatest degree of emission reduction achievable" as per sections 213 and 202 of the CAA, and so EPA does not interpret the Act as requiring the agency to give subordinate status to factors such as cost, safety, and noise in determining what standards are reasonable for aircraft engines. Rather, EPA has greater flexibility under section 231 in determining what standard is most reasonable for aircraft engines, and is not required to achieve a "technology forcing" result (70 FR 69664 and 69676, November 17, 2005).

This interpretation was upheld as reasonable in *NACAA* v. *EPA,* 489 F.3d 1221, 1230 (DC Cir. 2007). CAA section 202(a) does not specify the degree of weight to apply to each factor, and EPA accordingly has discretion in choosing an appropriate balance among factors. *See Sierra Club* v. *EPA,* 325 F.3d 374, 378 (DC Cir. 2003) (even where a provision is technology-forcing, the provision "does not resolve how the Administrator should weigh all [the statutory] factors in the process of finding the 'greatest emission reduction achievable' "). *Also see Husqvarna AB* v. *EPA,* 254 F.3d 195, 200 (DC Cir. 2001) (great discretion to balance statutory factors in considering level of technology-based standard, and statutory requirement "to [give appropriate] consideration to the cost of applying * * * technology" does not mandate a specific method of cost analysis); *see also Hercules Inc.* v. *EPA,* 598 F.2d 91, 106 (DC Cir. 1978) ("In reviewing a numerical standard the agencies must ask whether the agency's numbers are within a zone of reasonableness, not whether its numbers are precisely right"); *Permian Basin Area Rate Cases,* 390 U.S. 747, 797 (1968) (same); *Federal Power Commission* v. *Conway Corp.,* 426 U.S. 271, 278 (1976) (same); *Exxon Mobil Gas Marketing Co.* v. *FERC,* 297 F.3d 1071, 1084 (DC Cir. 2002) (same).

(a) EPA Testing Authority

Under section 203 of the CAA, sales of vehicles are prohibited unless the vehicle is covered by a certificate of conformity. EPA issues certificates of conformity pursuant to section 206 of the Act, based on (necessarily) pre-sale testing conducted either by EPA or by the manufacturer. The Heavy-duty Federal Test Procedure (Heavy-duty FTP) and the Supplemental Engine Test (SET) are used for this purpose. Compliance with standards is required not only at certification but throughout a vehicle's useful life, so that testing requirements may continue post-certification. Useful life standards may apply an adjustment factor to account for vehicle emission control deterioration or variability in use (section 206(a)).

(b) EPA established the Light-duty FTP for emissions measurement in the early 1970s. In 1976, in response to the Energy Policy and Conservation Act, EPA extended the use of the Light-duty FTP to fuel economy measurement (*See* 49 U.S.C. 32904(c)). EPA can determine fuel efficiency of a vehicle by measuring the amount of CO_2 and all other carbon compounds (*e.g.,* total hydrocarbons and carbon monoxide (CO)), and then, by mass balance, calculating the amount of fuel consumed.

(b) EPA Enforcement Authority

Section 207 of the CAA grants EPA broad authority to require manufacturers to remedy vehicles if EPA determines there are a substantial number of noncomplying vehicles. In addition, section 205 of the CAA authorizes EPA to assess penalties of up to $37,500 per vehicle for violations of various prohibited acts specified in the CAA. In determining the appropriate penalty, EPA must consider a variety of factors such as the gravity of the violation, the economic impact of the violation, the violator's history of compliance, and "such other matters as justice may require."

(2) NHTSA Authority

EISA authorizes NHTSA to create a fuel efficiency improvement program for "commercial medium- and heavy-duty on-highway vehicles and work trucks" [32] by rulemaking, which is to include standards, test methods, measurement metrics, and enforcement protocols. *See* 49 U.S.C. 32902(k)(2). Congress directed that the standards, test methods, measurement metrics, and compliance and enforcement protocols be "appropriate, cost-effective, and technologically feasible" for the vehicles to be regulated, while achieving the "maximum feasible improvement" in fuel efficiency.

Since this is the first rulemaking that NHTSA has conducted under 49 U.S.C. 32902(k)(2), the agency must interpret these elements and factors in the context of setting standards, choosing metrics, and determining test methods and compliance/enforcement mechanisms. Congress also gave NHTSA the authority to set separate standards for different classes of these vehicles, but required that all standards adopted provide not less than four full model years of regulatory lead-time and three full model years of regulatory stability.

In EISA, Congress required NHTSA to prescribe separate average fuel economy standards for passenger cars and light trucks in accordance with the provisions in 49 U.S.C. section 32902(b), and to prescribe standards for work trucks and commercial medium- and heavy-duty vehicles in accordance with the provisions in 49 U.S.C. section 32902(k). *See* 49 U.S.C. section 32902(b)(1). We note that Congress also added in EISA a requirement that NHTSA shall issue regulations prescribing fuel economy standards for at least 1, but not more than 5, model years. *See* 49 U.S.C. section 32902(b)(3)(B). For purposes of the fuel efficiency standards that the agency is proposing for HD vehicles and engines, NHTSA believes that one permissible reading of the statute is that Congress did not intend for the 5-year maximum limit to apply to standards promulgated in accordance with 49 U.S.C. section 32902(k), given the language in

[31] "Commercial medium- and heavy-duty on-highway vehicles" are defined at 49 U.S.C. 32901(a)(7), and "work trucks" are defined at (a)(19).

32902(b)(1). Based on this interpretation, NHTSA proposes that the standards ultimately finalized for HD vehicles and engines would remain in effect indefinitely at their 2018 or 2019 model year levels until amended by a future rulemaking action. In any future rulemaking action to amend the standards, NHTSA would ensure not less than four full model years of regulatory lead-time and three full model years of regulatory stability. NHTSA seeks comment on this interpretation of EISA.

(a) NHTSA Testing Authority

49 U.S.C. 32902(k)(2) states that NHTSA must adopt and implement appropriate, cost-effective, and technologically feasible test methods and measurement metrics as part of the fuel efficiency improvement program.

(b) NHTSA Enforcement Authority

49 U.S.C. 32902(k)(2) also states that NHTSA must adopt and implement appropriate, cost-effective, and technologically feasible compliance and enforcement protocols for the fuel efficiency improvement program.

In 49 U.S.C. 32902(k)(2), Congress did not speak directly to the "compliance and enforcement protocols" it envisioned. Instead, it left the matter generally to the Secretary. Congress' approach is unlike CAFE enforcement for passenger cars and light trucks, where Congress specified a program where a manufacturer either complies with standards or pays civil penalties. But Congress did not specify in 49 U.S.C. 32902(k) what it precisely meant in directing NHTSA to develop "compliance and enforcement protocols." It appears, therefore, that Congress has assigned this matter to the agency's discretion.

The statute is silent with respect to how "protocol" should be interpreted. The term "protocol" is imprecise. For example, in a case interpreting section 301(c)(2) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the DC Circuit noted that the word "protocols" has many definitions that are not much help. *Kennecott Utah Copper Corp., Inc.* v. *U.S. Dept. of Interior,* 88 F.3d. 1191, 1216 (DC Cir. 1996). Section 301(c)(2) of CERCLA prescribed the creation of two types of procedures for conducting natural resources damages assessments. The regulations were to specify (a) "standard procedures for simplified assessments requiring minimal field observation" (the "Type A" rules), and (b) "alternative protocols for conducting assessments in individual cases" (the "Type B" rules).[33] The court upheld the challenged provisions, which were a part of a set of rules establishing a step-by-step procedure to evaluate options based on certain criteria, and to make a decision and document the results.

Taking the considerations above into account, including Congress' instructions to adopt and implement compliance and enforcement protocols, and the Secretary's authority to formulate policy and make rules to fill gaps left, implicitly or explicitly, by Congress, the agency interprets "protocol" in the context of EISA as authorizing the agency to determine both whether manufacturers have complied with the standards, and to establish the enforcement mechanisms and decision criteria for non-compliance. NHTSA seeks comment on its interpretation of this statutory requirement.

G. Future HD GHG and Fuel Consumption Rulemakings

This proposal represents a first regulatory step by NHTSA and EPA to address the multi-faceted challenges of reducing fuel use and greenhouse gas emissions from these vehicles. By focusing on existing technologies and well-developed regulatory tools, the agencies are able to propose rules that we believe will produce real and important reductions in GHG emissions and fuel consumption within only a few years. Within the context of this regulatory timeframe, our proposal is very aggressive—with limited lead time compared to historic heavy-duty regulations—but pragmatic in the context of technologies that are available.

While we are now only proposing this first step, it is worthwhile to consider how future regulations that may follow this step may be constructed. Technologies such as hybrid drivetrains, advanced bottoming cycle engines, and full electric vehicles are promoted in this first step through incentive concepts as discussed in Section IV, but we believe that these advanced technologies would not be necessary to meet the proposed standards, which are premised on the use of existing technologies. When we begin our future work to develop a possible next set of regulatory standards, the agencies expect these advanced technologies to be an important part of the regulatory program and will consider them in setting the stringency of any standards beyond the 2018 model year.

We will not only consider the progress of technology in our future regulatory efforts, but the agencies are also committed to fully considering a range of regulatory approaches. To more completely capture the complex interactions of the total vehicle and the potential to reduce fuel consumption and GHG emissions through the optimization of those interactions may require a more sophisticated approach to vehicle testing than we are proposing for the largest heavy-duty vehicles. In future regulations, the agencies expect to fully evaluate the potential to expand the use of vehicle compliance models to reflect engine and drivetrain performance. Similarly, we intend to consider the potential for complete vehicle testing using a chassis dynamometer, not only as a means for compliance, but also as a complementary tool for the development of more complex vehicle modeling approaches. In considering these more comprehensive regulatory approaches, the agencies will also reevaluate whether separate regulation of trucks and engines remains necessary.

In addition to technology and test procedures, vehicle and engine drive cycles are an important part of the overall approach to evaluating and improving vehicle performance. EPA, working through the WP.29 Global Technical Regulation process, has actively participated in the development of a new World Harmonized Duty Cycle for heavy-duty engines. EPA is committed to bringing forward these new procedures as part of our overall comprehensive approach for controlling criteria and GHG emissions. However, we believe the important issues and technical work related to setting new criteria emissions standards appropriate for the World Harmonized Duty Cycle are significant and beyond the scope of this rulemaking. Therefore, the agencies are not proposing to adopt these test procedures in this proposal, but we are ready to work with interested stakeholders to adopt these procedures in a future action.

As with this proposal, our future efforts will be based on collaborative outreach with the stakeholder community and will be focused on a program that delivers on our energy security and environmental goals without restricting the industry's ability to produce a very diverse range of vehicles serving a wide range of needs.

[33] *State of Ohio* v. *U.S. Dept. of Interior,* 880 F.2d 432, 439 (DC Cir. 1989).

II. Proposed GHG and Fuel Consumption Standards for Heavy-Duty Engines and Vehicles

This section describes the standards and implementation dates that the agencies are proposing for the three categories of heavy-duty vehicles. The agencies have performed a technology analysis to determine the level of standards that we believe would be appropriate, cost-effective, and feasible during the rulemaking timeframe. This analysis, described in Section III and in more detail in the draft RIA Chapter 2, considered:

- The level of technology that is incorporated in current new trucks,
- The available data on corresponding CO_2 emissions and fuel consumption for these vehicles,
- Technologies that would reduce CO_2 emissions and fuel consumption and that are judged to be feasible and appropriate for these vehicles through 2018 model year,
- The effectiveness and cost of these technologies,
- Projections of future U.S. sales for trucks, and
- Forecasts of manufacturers' product redesign schedules.

A. What vehicles would be affected?

EPA and NHTSA are proposing standards for heavy-duty engines and also for what we refer to generally as "heavy-duty trucks." As noted in Section I, for purposes of this preamble, the term "heavy-duty" or "HD" is used to apply to all highway vehicles and engines that are not regulated by the light-duty vehicle, light-duty truck and medium-duty passenger vehicle greenhouse gas and CAFE standards issued for MYs 2012–2016. Thus, in this notice, unless specified otherwise, the heavy-duty category incorporates all vehicles rated with GVWR greater than 8,500 pounds, and the engines that power these vehicles, except for MDPVs. The CAA defines heavy-duty vehicles as trucks, buses or other motor vehicles with GVWR exceeding 6,000 pounds. *See* CAA section 202(b)(3). In the context of the CAA, the term HD as used in these proposed rules thus refers to a subset of these vehicles and engines. EISA section 103(a)(3) defines a 'commercial medium- and heavy-duty on-highway vehicle' as an on-highway vehicle with GVWR of 10,000 pounds or more.[34] EISA section 103(a)(6) defines a 'work truck' as a vehicle that is rated at between 8,500 and 10,000 pounds gross vehicle weight and is not a medium-duty passenger vehicle.[35] Therefore, the term "heavy-duty trucks" in this proposal refers to both work trucks and commercial medium- and heavy-duty on-highway vehicles as defined by EISA. Heavy-duty engines affected by the proposed standards are those that are installed in commercial medium- and heavy-duty trucks, except for the engines installed in vehicles certified to a complete vehicle emissions standard based on a chassis test, which would be addressed as a part of those complete vehicles, and except for engines used exclusively for stationary power when the vehicle is parked. The agencies' scope is the same with the exception of recreational vehicles (or motor homes), as discussed above. EPA is proposing to include recreational on-highway vehicles within their rulemaking, while NHTSA is limiting their scope to commercial trucks which would not include these vehicles.

EPA and NHTSA are proposing standards for each of the following categories, which together comprise all heavy-duty vehicles and all engines used in such vehicles.[36] In order to most appropriately regulate the broad range of heavy-duty vehicles, the agencies are proposing to set separate engine and vehicle standards for the combination tractors and the Class 2b through 8 vocational vehicles and the engines installed in them. The engine standards and test procedures for engines installed in the tractors and vocational vehicles are discussed within the applicable vehicle sections.

- Class 7 and 8 Combination Tractors.
- Heavy-Duty Pickup Trucks and Vans.
- Class 2b through 8 Vocational Vehicles.

As discussed in Section IX, the agencies are not proposing GHG emission and fuel consumption standards for trailers at this time. In addition, the agencies are proposing to not set standards at this time for engine, chassis, and vehicle manufacturers which are small businesses (as defined). More detailed discussion of each regulatory category is included in the subsequent sections below.

B. Class 7 and 8 Combination Tractors

EPA is proposing CO_2 standards and NHTSA is proposing fuel consumption standards for new Class 7 and 8 combination tractors. The standards are for the tractor cab, with a separate standard for the engines that are installed in the tractor. Together these standards would achieve reductions up to 20 percent from tractors. As discussed below, EPA is proposing to adopt the existing useful life definitions for heavy-duty engines for the Class 7 and 8 tractors. NHTSA is proposing fuel consumption standards for tractors, and engine standards for heavy-duty engines for Class 7 and 8 tractors. The agencies' analyses, as discussed briefly below and in more detail later in this preamble and in the draft RIA Chapter 2, show that these standards are appropriate and feasible under each agency's respective statutory authorities.

EPA is also proposing standards to control N_2O, CH_4, and HFC emissions from Class 7 and 8 combination tractors. The proposed heavy-duty engine standards for both N_2O and CH_4 and details of the standard are included in the discussion in Section II. The proposed air conditioning leakage standards applying to tractor manufacturers to address HFC emissions are included in Section II.

The agencies are proposing CO_2 emissions and fuel consumption standards for the combination tractors that will focus on reductions that can be achieved through improvements in the tractor (such as aerodynamics), tires, and other vehicle systems. The agencies are also proposing heavy-duty engine standards for CO_2 emissions and fuel consumption that would focus on potential technological improvements in fuel combustion and overall engine efficiency.

The agencies have analyzed the feasibility of achieving the CO_2 and fuel consumption standards, based on projections of what actions manufacturers are expected to take to reduce emissions and fuel consumption. EPA and NHTSA also present the estimated costs and benefits of the

[34] Codified at 49 U.S.C. 32901(a)(7).

[35] EISA Section 103(a)(6) is codified at 49 U.S.C. 32901(a)(19). EPA defines medium-duty passenger vehicles as any complete vehicle between 8,500 and 10,000 pounds GVWR designed primarily for the transportation of persons which meet the criteria outlined in 40 CFR 86.1803–01. The definition specifically excludes any vehicle that (1) Has a capacity of more than 12 persons total or, (2) is designed to accommodate more than 9 persons in seating rearward of the driver's seat or, (3) has a cargo box (*e.g.,* pick-up box or bed) of six feet or more in interior length. (*See* the Tier 2 final rulemaking, 65 FR 6698, February 10, 2000.)

[36] Both agencies have authority to develop separate standards for vehicle and engine categories, as appropriate. *See* CAA section 202(a)(1) (authority to establish standards for "any class or classes of new motor vehicles or engines" and 49 U.S.C 32902(k)(2) (authority to establish standards for HD vehicles that are "appropriate, cost-effective, and technologically feasible" that are designed to achieve the "maximum feasible improvement" in fuel efficiency; authority to establish "separate standards for different classes of vehicles under this subsection." NHTSA interprets 49 U.S.C. 32902(k)(2) to include a grant of authority to establish engines standards pursuant to the broader statement of authority to establish standards that achieve the maximum feasible improvement in fuel efficiency.

standards in Section III. In developing the proposed rules, the agencies have evaluated the kinds of technologies that could be utilized by engine and tractor manufacturers, as well as the associated costs for the industry and fuel savings for the consumer and the magnitude of the CO_2 and fuel savings that may be achieved.

EPA and NHTSA are proposing attribute-based standards for the Class 7 and 8 combination tractors, or, put another way, we are proposing to set different standards for different subcategories of these tractors with the basis for subcategorization being particular tractor attributes. Attribute-based standards in general recognize the variety of functions performed by vehicles and engines, which in turn can affect the kind of technology that is available to control emissions and reduce fuel consumption, or its effectiveness. Attributes that characterize differences in the design of vehicles, as well as differences in how the vehicles will be employed in-use, can be key factors in evaluating technological improvements for reducing CO_2 emissions and fuel consumption. Developing an appropriate attribute-based standard can also avoid interfering with the ability of the market to offer a variety of products to meet consumer demand. There are several examples of where the agencies have utilized an attribute-based standard. In addition to the example of the recent light-duty vehicle fuel economy and GHG rule, in which the standards are based on the attribute of vehicle "footprint," the existing heavy-duty highway engine criteria pollutant emission standards for many years have been based on a vehicle weight attribute (Light Heavy, Medium Heavy, Heavy Heavy) with different useful life periods, which is the same approach proposed for the engine GHG and fuel consumption standards discussed below.

Heavy-duty combination tractors are built to move freight. The ability of a truck to meet a customer's freight transportation requirements depends on three major characteristics of the tractor: The gross vehicle weight rating (which along with gross combined weight rating (GCWR) establishes the maximum carrying capacity of the tractor and trailer), cab type (sleeper cabs provide overnight accommodations for drivers), and the tractor roof height (to mate tractors to trailers for the most fuel-efficient configuration). Each of these attributes impacts the baseline fuel consumption and GHG emissions, as well as the effectiveness of possible technologies, like aerodynamics, and is discussed in more detail below.

The first tractor characteristic to consider is payload which is determined by a tractor's GVWR and GCWR relative to the weight of the tractor, trailer, fuel, driver, and equipment. Class 7 trucks, which have a GVWR of 26,001–33,000 pounds and a typical GCWR of 65,000 pounds, have a lesser payload capacity than Class 8 trucks. Class 8 trucks have a GVWR of greater than 33,000 pounds and a typical 80,000 pound GCWR. Consistent with the recommendation in the National Academy of Sciences 2010 Report to NHTSA,[37] the agencies are proposing a load-specific fuel consumption metric (g/ton-mile and gal/1,000 ton-mile) where the "ton" represents the amount of payload. Generally, higher payload capacity trucks have better specific fuel consumption and GHG emissions than lower payload capacity trucks. Therefore, since the amount of payload that a Class 7 truck can carry is less than the Class 8 truck's payload capacity, the baseline fuel consumption and GHG emissions performance per ton-mile differs between the categories. It is consequently reasonable to distinguish between these two vehicle categories, so that the agencies are proposing separate standards for Class 7 and Class 8 tractors.

The agencies are not proposing to set a single standard for both Class 7 and 8 tractors based on the payload carrying capabilities and assumed typical payload levels of Class 8 tractors alone, as that would quite likely have the perverse impact of increasing fuel consumption and greenhouse gas emissions. Such a single standard would penalize Class 7 vehicles in favor of Class 8 vehicles. However, the greater capabilities of Class 8 tractors and their related greater efficiency when measured on a per ton-mile basis is only relevant in the context of operations where that greater capacity is needed. For many applications such as regional distribution, the trailer payloads dictated by the goods being carried are lower than the average Class 8 tractor payload. In those situations, Class 7 tractors are more efficient than Class 8 tractors when measured by ton-mile of actual freight carried. This is because the extra capabilities of Class 8 tractors add additional weight to vehicle that is only beneficial in the context of its higher capabilities. The existing market already selects for vehicle performance based on the projected payloads. By setting separate standards the agencies do not advantage or disadvantage Class 7 or 8 tractors relative to one another and continue to allow trucking fleets to purchase the vehicle most appropriate to their business practices.

The second characteristic that affects fuel consumption and GHG emissions is the relationship between the tractor cab roof height and the type of trailer used to carry the freight. The primary trailer types are box, flat bed, tanker, bulk carrier, chassis, and low boys. Tractor manufacturers sell tractors in three roof heights—low, mid, and high. The manufacturers do this to obtain the best aerodynamic performance of a tractor-trailer combination, resulting in reductions of GHG emissions and fuel consumption, because it allows the frontal area of the tractor to be similar in size to the frontal area of the trailer. In other words, high roof tractors are designed to be paired with a (relatively tall) box trailer while a low roof tractor is designed to pull a (relatively low) flat bed trailer. The baseline performance of a high roof, mid roof, and low roof tractor differs due to the variation in frontal area which determines the aerodynamic drag. For example, the frontal area of a low roof tractor is approximately 6 square meters, while a high roof tractor has a frontal area of approximately 9.8 square meters. Therefore, as explained below, the agencies are proposing that the roof height of the tractor determine the trailer type required to be used to demonstrate compliance of a truck with the fuel consumption and CO_2 emissions standards. As with vehicle weight classes, setting separate standards for each tractor roof height helps ensure that all tractors are regulated to achieve appropriate improvements, without inadvertently leading to increased emissions and fuel consumption by shifting the mix of vehicle roof heights offered in the market away from a level customarily tied to the actual trailers vehicles will haul in-use.

Tractor cabs typically can be divided into two configurations—day cabs and sleeper cabs. Line haul operations typically require overnight accommodations due to Federal Motor Carrier Safety Administration hours of operation requirements.[38] Therefore,

[37] *See* 2010 NAS Report, Note 19, Recommendation 2–1.

[38] The Federal Motor Carrier Safety Administration's Hours-of-Service regulations put limits in place for when and how long commercial motor vehicle drivers may drive. They are based on an exhaustive scientific review and are designed to ensure truck drivers get the necessary rest to perform safe operations. *See* 49 CFR part 395, and *see also http://www.fmcsa.dot.gov/rules-regulations/topics/hos/index.htm* (last accessed August 8, 2010).

some truck buyers purchase tractor cabs with sleeping accommodations, also known as sleeper cabs, because they do not return to their home base nightly. Sleeper cabs tend to have a greater empty curb weight than day cabs due to the larger cab volume and accommodations, which lead to a higher baseline fuel consumption for sleeper cabs when compared to day cabs. In addition, there are specific technologies, such as extended idle reduction technologies, which are appropriate only for tractors which hotel—such as sleeper cabs. To respect these differences, the agencies are proposing to create separate standards for sleeper cabs and day cabs.

To account for the relevant combinations of these attributes, the agencies therefore propose to segment combination tractors into the following nine regulatory subcategories:

- Class 7 Day Cab with Low Roof
- Class 7 Day Cab with Mid Roof
- Class 7 Day Cab with High Roof
- Class 8 Day Cab with Low Roof
- Class 8 Day Cab with Mid Roof
- Class 8 Day Cab with High Roof
- Class 8 Sleeper Cab with Low Roof
- Class 8 Sleeper Cab with Mid Roof
- Class 8 Sleeper Cab with High Roof

The agencies have not identified any Class 7 or Class 8 day cabs with mid roof heights in the market today but welcome comments with regard to this market characterization.

Adjustable roof fairings are used today on what the agencies consider to be low roof tractors. The adjustable fairings allow the operator to change the fairing height to better match the type of trailer that is being pulled which can reduce fuel consumption and GHG emissions during operation. The agencies propose to treat tractors with adjustable roof fairings as low roof tractors and test with the fairing down. The agencies welcome comments on this approach and data to support whether to allow additional credits for their use.

The agencies are proposing to classify all vehicles with sleeper cabs as tractors. The proposed rules would not allow vehicles with sleeper cabs to be classified as vocational vehicles. This provision is intended prevent the initial manufacture of straight truck vocational vehicles with sleeper cabs that, soon after introduction into commerce, would be converted to combination tractors, as a means to circumvent the Class 8 sleeper cab regulations. The agencies welcome comments on the likelihood of manufacturers using such an approach to circumvent the regulations and the appropriate regulatory provisions the agencies should consider to prevent such actions.

(1) What are the proposed Class 7 and 8 tractor and engine CO_2 emissions and fuel consumption standards and their timing?

In developing the proposed tractor and engine standards, the agencies have evaluated the current levels of emissions and fuel consumption, the kinds of technologies that could be utilized by truck and engine manufacturers to reduce emissions and fuel consumption from tractors and engines, the associated lead time, the associated costs for the industry, fuel savings for the consumer, and the magnitude of the CO_2 and fuel savings that may be achieved. The technologies that the agencies considered while setting the proposed tractor standards include improvements in aerodynamic design, lower rolling resistance tires, extended idle reduction technologies, and vehicle empty weight reduction. The technologies that the agencies considered while setting the engine standards include engine friction reduction, aftertreatment optimization, and turbocompounding, among others. The agencies' evaluation indicates that these technologies are available today, but have very low application rates in the market. The agencies have analyzed the technical feasibility of achieving the proposed CO_2 and fuel consumption standards for tractors and engines, based on projections of what actions manufacturers would be expected to take to reduce emissions and fuel consumption to achieve the standards. EPA and NHTSA also present the estimated costs and benefits of the Class 7 and 8 combination tractor and engine standards in Section III and in draft RIA Chapter 2.

(a) Tractor Standards

The agencies are proposing the following standards for Class 7 and 8 combination tractors in Table II–1, using the subcategorization approach just explained. As noted, the agencies are not aware of any mid roof day cab tractors at this time, but are proposing that any Class 7 and 8 day cabs with a mid roof would meet the respective low roof standards, based on the similarity in baseline performance and similarity in expected improvement of mid roof sleeper cabs relative to low roof sleeper cabs.

As explained below in Section III, EPA has determined that there is sufficient lead time to introduce various tractor and engine technologies into the fleet starting in the 2014 model year, and is proposing standards starting for that model year predicated on performance of those technologies. EPA is proposing more stringent tractor standards for the 2017 model year which reflect the CO_2 emissions reductions required through the 2017 model year engine standards. (As explained in Section II.B.(2)(h)(v) below, engine performance is one of the inputs into the proposed compliance model, and that input will change in 2017 to reflect the 2017 MY engine standards.) The 2017 MY vehicle standards are not premised on tractor manufacturers installing additional vehicle technologies. EPA's proposed standards apply throughout the useful life period as described in Section V. Similar to EPA's non-GHG standards approach, manufacturers may generate and use credits from Class 7 and 8 combination tractors to show compliance with the standards.

NHTSA is proposing Class 7 and 8 tractor fuel consumption standards that are voluntary standards in the 2014 and 2015 model years and become mandatory beginning in the 2016 model year, as required by the lead time and stability requirement within EISA. NHTSA is also proposing new standards for the 2017 model year which reflect additional improvements in only the heavy-duty engines. While NHTSA proposes to use useful life considerations for establishing fuel consumption performance for initial compliance and for ABT, NHTSA does not intend to implement an in-use compliance program for fuel consumption because it is not currently anticipated there will be notable deterioration of fuel consumption over the useful life. NHTSA believes that the vehicle and engine standards proposed for combination tractors are appropriate, cost-effective, and technologically feasible in the rulemaking timeframe based on our analysis detailed below in Section III and in the Chapter 2 of the draft RIA.

EPA and NHTSA are not proposing to make the 2017 vehicle standards more stringent based on the application of additional truck technologies because projected application rates of truck technologies used in setting the 2014 model year truck standard already reflect the maximum application rates we believe appropriate for these vehicles given their specific use patterns as described in Section III. We considered setting more stringent standards for Class 7 and 8 tractors based on the application of more advanced aerodynamic systems, such as self-compensating side extenders or other advanced aerodynamic technologies, but concluded that those

technologies would not be fully developed in the necessary lead time. We request comment on this decision, supported by data as appropriate.

Table II-1: Heavy-duty Combination Tractor Emissions and Fuel Consumption Standards

2014 Model Year CO_2 Grams per Ton-Mile			
	Day Cab		Sleeper Cab
	Class 7	Class 8	Class 8
Low Roof	104	79	65
Mid Roof	104	79	70
High Roof	118	87	73
2014-2016 Model Year Gallons of Fuel per 1,000 Ton-Mile[39]			
	Day Cab		Sleeper Cab
	Class 7	Class 8	Class 8
Low Roof	10.3	7.8	6.3
Mid Roof	10.3	7.8	6.9
High Roof	11.6	8.6	7.1
2017 Model Year CO_2 Grams per Ton-Mile			
	Day Cab		Sleeper Cab
	Class 7	Class 8	Class 8
Low Roof	103	78	64
Mid Roof	103	78	69
High Roof	116	86	71
2017Model Year Gallons of Fuel per 1,000 Ton-Mile			
	Day Cab		Sleeper Cab
	Class 7	Class 8	Class 8
Low Roof	10.1	7.7	6.3
Mid Roof	10.1	7.7	6.8
High Roof	11.4	8.5	7.0

Based on our analysis, the 2017 model year standards represent up to a 20 percent reduction in CO_2 emissions and fuel consumption over a 2010 model year baseline, as detailed in Section III.A.2.

(i) Off-Road Tractor Standards

In developing the proposal EPA and NHTSA received comment from manufacturers and owners that tractors sometimes have very limited on-road usage. These trucks are defined to be motor vehicles under 40 CFR 85.1703, but they will spend the majority of their operations off-road. Tractors, such as those used in oil fields, will experience little benefit from improved aerodynamics and low rolling resistance tires. The agencies are therefore proposing to allow a narrow range of these de facto off-road trucks to be excluded from the proposed tractor standards because the trucks do not travel at speeds high enough to realize aerodynamic improvements and require special off-road tires such as lug tires. The trucks must still use a certified engine, which will provide fuel consumption and CO_2 emission reductions to the truck in all applications. To ensure the limited use of these trucks, the agencies are proposing requirements that the vehicles have off-road tires, have limited high speed operation, and are designed for specific off-road applications.[40] The agencies are proposing that a truck must meet the following requirements to qualify for an exemption from the vehicle standards for Class 7 and 8 tractors:

- Installed tires which are lug tires or contain a speed rating of less than or equal to 60 mph; and
- Include a vehicle speed limiter governed to 55 mph, and
- Contain Power Take-Off controls, or have axle configurations other than 4x2, 6x2, or 6x4 and has GVWR greater than 57,000 pounds; and
- Has a frame Resisting Bending Moment greater than 2,000,000 lb-in.[41]

EPA and NHTSA have concluded that the onroad performance losses and additional costs to develop a truck which meets these specifications will limit the exemption to trucks built for

[39] Manufacturers may voluntarily opt-in to the NHTSA fuel consumption program in 2014 or 2015. If a manufacturer opts-in, the program becomes mandatory. *See* Section [add cross reference] below for more information about NHTSA's voluntary opt-in program for MYs 2014 and 2015.

[40] For purposes of compliance with NHTSA's safety regulations, such as FMVSS Nos. 119 and 121, a manufacturer wishing for their vehicle to classify as "off-road" would still need to work with the relevant NHTSA office to declare its vehicle as "off-road" if it uses public roads at any point in its service.

[41] The agencies have found based on standard truck specifications, that vehicles designed for significant off-road applications, such as concrete pumper and logging trucks have resisting bending moment greater than 2,100,000 lb-in. (ranging up to 3,580,000 lb-in.). The typical on highway tractors have resisting bending moment of 1,390,000 lb-in.

the desired purposes.[42] The agencies welcome comment on the proposed requirements and exemptions.

(b) Engine Standards

EPA is proposing GHG standards and NHTSA is proposing fuel consumption standards for new heavy-duty engines. The standards will vary depending on the type of vehicle in which they are used, as well as whether the engines are diesel or gasoline powered. This section discusses the standards for engines used in Class 7 and 8 combination tractors and also provides some overall background information. More information is also provided in the discussion of the standards for engines used in vocational vehicles.

EPA's existing criteria pollutant emissions regulations for heavy-duty highway engines establish four regulatory categories that represent the engine's intended and primary truck application.[43] The Light Heavy-Duty (LHD) diesel engines are intended for application in Class 2b through Class 5 trucks (8,501 through 19,500 pounds GVWR). The Medium Heavy-Duty (MHD) diesel engines are intended for Class 6 and Class 7 trucks (19,501 through 33,000 pounds GVWR). The Heavy Heavy-Duty (HDD) diesel engines are primarily used in Class 8 trucks (33,001 pounds and greater GVWR). Lastly, spark ignition engines (primarily gasoline-powered engines) installed in incomplete vehicles less than 14,000 pounds GVWR and spark ignition engines that are installed in all vehicles (complete or incomplete) greater than 14,000 pounds GVWR are grouped into a single engine regulatory subcategory. The engines in these four regulatory subcategories range in size between approximately five liters and sixteen liters. The agencies welcome comments on updating the definitions of each subcategory, such as the typical horsepower levels, as described in 40 CFR 1036.140.

For the purposes of the GHG engine emissions and engine fuel consumption standards that EPA and NHTSA are proposing, the agencies intend to maintain these same four regulatory subcategories. This class structure would enable the agencies to set standards that appropriately reflect the technology available for engines for use in each type of vehicle, and that are therefore technologically feasible for these engines. This section discusses the MHD and HHD diesel engines used in Class 7 and 8 combination tractors. Additional details regarding the other heavy-duty engine standards are included in Section II.D.1.b.

EPA's proposed heavy-duty CO_2 emission standards for diesel engines installed in combination tractors are presented in Table II–2. We should note that this does not cover gasoline or LHDD engines as they are not used in Class 7 and 8 combination tractors. Similar to EPA's non-GHG standards approach, manufacturers may generate and use credits to show compliance with the standards. EPA is proposing to adopt the existing useful life definitions for heavy-duty engines. The EPA standards would become effective in the 2014 model year, with more stringent standards becoming effective in model year 2017. Recently, EPA's heavy-duty highway engine program for criteria pollutants provided new emissions standards for the industry in three year increments. Largely, the heavy-duty engine and truck manufacturer product plans have fallen into three year cycles to reflect this regulatory environment. The proposed two-step CO_2 emission standards recognize the opportunity for technology improvements over this timeframe while reflecting the typical diesel truck manufacturers' product plan cycles.

With respect to the lead time and cost of incorporating technology improvements that reduce GHG emissions and fuel consumption, EPA and NHTSA place important weight on the fact that during MYs 2014–2017 engine manufacturers are expected to redesign and upgrade their products. Over these four model years there will be an opportunity for manufacturers to evaluate almost every one of their engine models and add technology in a cost-effective way, consistent with existing redesign schedules, to control GHG emissions and reduce fuel consumption. The time-frame and levels for the standards, as well as the ability to average, bank and trade credits and carry a deficit forward for a limited time, are expected to provide manufacturers the time needed to incorporate technology that will achieve the proposed GHG and fuel consumption reductions, and to do this as part of the normal engine redesign process. This is an important aspect of the proposed rules, as it will avoid the much higher costs that would occur if manufacturers needed to add or change technology at times other than these scheduled redesigns. This time period will also provide manufacturers the opportunity to plan for compliance using a multi-year time frame, again in accord with their normal business practice. Further details on lead time, redesigns and technical feasibility can be found in Section III.

NHTSA's fuel consumption standards, also presented in Table II–2, would contain voluntary engine standards starting in 2014 model year, with mandatory engine standards starting in 2017 model year, harmonized with EPA's 2017 model year standards. A manufacturer may opt-in to NHTSA's voluntary standards in 2014, 2015 or 2016. Once a manufacturer opts-in, the standards become mandatory for the opt-in and subsequent model years, and the manufacturer may not reverse its decision. To opt into the program, a manufacturer must declare its intent to opt in to the program at the same time it submits the Pre-Certification Compliance Report. See 49 CFR 535.8 for information related to the Pre-Certification Compliance Report. A manufacturer opting into the program would begin tracking credits and debits beginning in the model year in which they opt into the program.

[42] The estimated cost for a lift axle is approximately $10,000. Axles with weight ratings greater than a typical on-road axle cost an additional $3,000.

[43] *See* 40 CFR 1036.140.

Table II-2: Proposed Heavy-duty Diesel Engine Standards for Engines Installed in Tractors

Effective 2014 Model Year		
	MHD Diesel Engine	HHD Diesel Engine
CO_2 Standard (g/bhp-hr)	502	475
Voluntary Fuel Consumption Standard (gallon/100 bhp-hr)	4.93	4.67
Effective 2017 Model Year		
	MHD Diesel Engine	HHD Diesel Engine
CO_2 Standard (g/bhp-hr)	487	460
Fuel Consumption (gallon/100 bhp-hr)	4.78	4.52

Combination tractors spend the majority of their operation at steady state conditions, and will obtain in-use benefit of technologies such as turbocompounding and other waste heat recovery technologies during this kind of typical engine operation. Therefore, the engines installed in tractors would be required to meet the standard based on the steady-state SET test cycle, as discussed further in Section II.B(2)(i).

The baseline HHD diesel engine performance in 2010 model year on the SET is 490 g CO_2/bhp-hr (4.81 gal/100 bhp-hr), as determined from confidential data provided by manufacturers and data submitted for the non-GHG emissions certification process. Similarly, the baseline MHD diesel engine performance on the SET cycle is 518 g CO_2/bhp-hr (5.09 gallon/100-bhp-hr) in the 2010 model year. Further discussion of the derivation of the baseline can be found in Section III The diesel engine standards that EPA is proposing and the voluntary standards being proposed by NHTSA for the 2014 model year would require diesel engine manufacturers to achieve on average a three percent reduction in fuel consumption and CO_2 emissions over the baseline 2010 model year performance for the engines. The agencies' assessment of the findings of the 2010 NAS Report and other literature sources indicates that there are technologies available to reduce fuel consumption by this level in the proposed timeframe. These technologies include improved turbochargers, aftertreatment optimization, low temperature exhaust gas recirculation, and engine friction reductions. Additional discussion on technical feasibility is included in Section III below and in draft RIA Chapter 2.

Furthermore, the agencies are proposing that diesel engines further reduce fuel consumption and CO_2 emissions from the 2010 model year baseline in 2017 model year. The proposed reductions represent on average a six percent reduction for MHD and HHD diesel engines required to use the SET-based standard. The additional reductions could likely be achieved through the increased refinement of the technologies projected to be implemented for 2014, plus the addition of turbocompounding or other waste heat recovery systems. The agencies' analysis indicates that this type of advanced engine technology would require a longer development time than the 2014 model year, and we therefore are proposing to provide additional lead time to allow for its introduction.

The agencies are aware that some truck and engine manufacturers would prefer to align their product development plans for these engine standards with their current plans to meet Onboard Diagnostic regulations for EPA and California in 2013 and 2016. We believe our proposed averaging, banking and trading provisions already provide these manufacturers with considerable flexibility to manage their GHG compliance plans consistent with the 2013 model year. Nevertheless, we are requesting comment on whether EPA and NHTSA should provide additional defined phase-in schedules that would more explicitly accommodate this request. For example, we request comment on a phase-in schedule with a standard of 485 g/bhp-hr for the model years 2013–2015 followed by a standard of 460 g/bhp-hr for 2016–18 model years with the associated fuel consumption values for the NHTSA program. This phase-in schedule is just one of many potential schedules that would provide identical fuel savings and emissions reductions for the period from 2013–2018. If commenters wish to discuss a different phase-in schedule than the one proposed by the agencies, we request that commenters include a description of their preferred phase-in schedule, including an analysis showing that it would be at least as effective (or more) as the primary program for the period through the 2018 model year. We also request comment on whether similar provisions should be made for the vocational engine standards discussed later in this section.

In proposing this standard for heavy-duty diesel engines used in Class 7 and 8 combination tractors, the agencies have examined the current performance levels of the engines across the fleet. EPA and NHTSA found that a large majority of the engines were generally relatively close to the average baseline, with some above and some below. We recognize, however, that when regulating a category of engines for the first time, there will be individual products that may deviate significantly from this baseline level of performance. For the current fleet there is a relatively small group of engines that are significantly worse than the average baseline for other engines. In proposing the standards, the agencies have looked primarily at the typical performance levels of the majority of the engines in the fleet, and the increased performance that would be achieved through increased spread of technology. The agencies also recognize that for the smaller group of products, the same reduction from the industry baseline may experience significant issues of available lead-time and cost because these products may require a total redesign in order to meet the standards. These are limited instances where certain engine families have high atypically high baseline CO_2 levels and limited line of engines across which to average performance. *See* 75 FR 25414–25419, which adopts temporary lead time allowance alternative standards to

deal with a similar issue for a subset of light-duty vehicles. To accommodate these situations, the agencies are proposing a regulatory alternative whereby a manufacturer, for a limited period, would have the option to comply with a unique standard based on a three percent reduction from an individual engine's own 2011 model year baseline level, rather than meeting the otherwise-applicable standard level. Our assessment is that this three percent reduction is appropriate given the potential for manufacturers to apply similar technology packages with similar cost to what we have estimated for the primary program. We do not believe this alternative needs to continue past the 2016 model year since manufacturers will have had ample opportunity to benchmark competitive products during redesign cycles and to make appropriate changes to bring their product performance into line with the rest of the industry. This alternative would not be available unless and until a manufacturer had exhausted all available credits and credit opportunities, and engines under the alternative standard could not generate credits. We are proposing that manufacturers can select engine families for this alternative standard without agency approval, but are proposing to require that manufacturers notify the agency of their choice and to include in that notification a demonstration that it has exhausted all available credits and credit opportunities.

The agencies are also requesting comment on the potential to extend this regulatory alternative for one additional year for a single engine family with performance measured in that year as six percent beyond the engine's own 2011 baseline level. We also request comment on the level of reduction beyond the baseline that is appropriate in this alternative. The three percent level reflects the aggregate improvement beyond the baseline we are requiring of the entire industry. As this provision is intended to address potential issues for legacy products that we would expect to be replaced or significantly improved at the manufacturer's next product redesign, we request comment if a two percent reduction would be more appropriate. We would consider two percent rather than three percent if we were convinced that making all of the changes we have outlined in our assessment of the technical feasibility of the standards was not possible for some engines due to legacy design issues that will change in the future. We are proposing that manufacturers making use of these provisions would need to exhaust all credits within this subcategory prior to using this flexibility and would not be able to generate emissions credits from other engines in the same regulatory subcategory as the engines complying using this alternate approach.

EPA and NHTSA considered setting even more stringent engine standards for the 2017 model year based on the use of more sophisticated waste heat recovery technologies such as bottoming cycle engine designs. We are not proposing more stringent standards because we do not believe this technology can be broadly available by 2017 model year. We request comment on the technological feasibility and cost-effectiveness of more stringent standards in the timeframe of the proposed standards.

(c) In-Use Standards

Section 202(a)(1) of the CAA specifies that EPA is to adopt emissions standards that are applicable for the useful life of the vehicle. The in-use standards that EPA is proposing would apply to individual vehicles and engines. NHTSA is not proposing to adopt in-use.

EPA is proposing that the in-use standards for heavy-duty engines installed in tractors be established by adding an adjustment factor to the full useful life emissions and fuel consumption results projected in the EPA certification process. EPA is proposing a 2 percent adjustment factor for the in-use standard to provide a reasonable margin for production and test-to-test variability that could result in differences between the initial emission test results and emission results obtained during subsequent in-use testing. Details on the development of the adjustment factor are included in draft RIA Chapter 3.

EPA is also proposing that the useful life for these engine and vehicles with respect to GHG emissions be set equal to the respective useful life periods for criteria pollutants. EPA proposes that the existing engine useful life periods, as included in Table II–3:, be broadened to include CO_2 emissions and fuel consumption for both engines and tractors (*see* 40 CFR 86.004–2).

Table II-3: Tractor and Engine Useful Life Periods

	Years	Miles
Medium Heavy-Duty Diesel Engines and Class 7 Tractors	10	185,000
Heavy Heavy-Duty Diesel Engines and Class 8 Tractors	10	435,000

EPA and NHTSA request comments on the magnitude and need for an in-use adjustment factor for the engine standard and the compliance model (GEM) based tractor standard.

(2) Test Procedures and Related Issues

The agencies are proposing a complete set of test procedures to evaluate fuel consumption and CO_2 emissions from Class 7 and 8 tractors and the engines installed in them. The test procedures related to the tractors are all new, while the engine test procedures build substantially on EPA's current non-GHG emissions test procedures, except as noted. This section discusses the proposed simulation model developed for demonstrating compliance with the tractor standard and the proposed engine test procedures.

(a) Truck Simulation Model

We are proposing to set separate engine and vehicle-based emission standards to achieve the goal of reducing emissions and fuel consumption for both trucks and engines. For the Class 7 and 8 tractors, engine manufacturers would be subject to the engine standards, and Class 7 and 8 tractor manufacturers would be required to install engines in their tractors certified for use in the tractor. The tractor manufacturer would be subject to a separate vehicle-based standard that would use a proposed truck simulation model to evaluate the

impact of the tractor cab design to determine compliance with the tractor standard.

A simulation model, in general, uses various inputs to characterize a vehicle's properties (such as weight, aerodynamics, and rolling resistance) and predicts how the vehicle would behave on the road when it follows a driving cycle (vehicle speed versus time). On a second-by-second basis, the model determines how much engine power needs to be generated for the vehicle to follow the driving cycle as closely as possible. The engine power is then transmitted to the wheels through transmission, driveline, and axles to move the vehicle according to the driving cycle. The second-by-second fuel consumption of the vehicle, which corresponds to the engine power demand to move the vehicle, is then calculated according to a fuel consumption map in the model. Similar to a chassis dynamometer test, the second-by-second fuel consumption is aggregated over the complete drive cycle to determine the fuel consumption of the vehicle.

NHTSA and EPA are proposing to evaluate fuel consumption and CO_2 emissions respectively through a simulation of whole-vehicle operation, consistent with the NAS recommendation to use a truck model to evaluate truck performance. The agencies developed the Greenhouse gas Emissions Model (GEM) for the specific purpose of this proposal to evaluate truck performance. The GEM is similar in concept to a number of vehicle simulation tools developed by commercial and government entities. The model developed by the agencies and proposed here was designed for the express purpose of vehicle compliance demonstration and is therefore simpler and less configurable than similar commercial products. This approach gives a compact and quicker tool for vehicle compliance without the overhead and costs of a more sophisticated model. Details of the model are included in Chapter 4 of the draft RIA. The agencies are aware of several other simulation tools developed by universities and private companies. Tools such as Argonne National Laboratory's Autonomie, Gamma Technologies' GT–Drive, AVL's CRUISE, Ricardo's VSIM, Dassault's DYMOLA, and University of Michigan's HE–VESIM codes are publicly available. In addition, manufacturers of engines, vehicles, and trucks often have their own in-house simulation tools. The agencies welcome comments on other simulation tools which could be used by the agencies. The use criteria for this model are that it must be able to be managed by the agencies for compliance purposes, has no cost to the end-user, is freely available and distributable as an executable file, contains open source code to provide transparency in the model's operation yet contains features which cannot be changed by the user, and is easy to use by any user with minimal or no prior experience.

GEM is designed to focus on the inputs most closely associated with fuel consumption and CO_2 emissions—*i.e.,* on those which have the largest impacts such as aerodynamics, rolling resistance, weight, and others.

EPA has validated GEM based on the chassis test results from a SmartWay certified tractor tested at Southwest Research Institute. The validation work conducted on these three vehicles is representative of the other Class 7 and 8 tractors. Many aspects of one tractor configuration (such as the engine, transmission, axle configuration, tire sizes, and control systems) are similar to those used on the manufacturer's sister models. For example, the powertrain configuration of a sleeper cab with any roof height is similar to the one used on a day cab with any roof height. Overall, the GEM predicted the fuel consumption and CO_2 emissions within 4 percent of the chassis test procedure results for three test cycles—the California ARB Transient cycle, 65 mph cruise cycle, and 55 mph cruise cycle. These cycles are the ones the agencies are proposing to utilize in compliance testing. Test to test variation for heavy-duty vehicle chassis testing can be higher than 4 percent based on driver variation. The proposed simulation model is described in greater detail in Chapter 4 of the draft RIA and is available for download by interested parties at (*http://www.epa.gov/otaq/climate/regulations.htm*). We request comment on all aspects of this approach to compliance determination in general and to the use of the GEM in particular.

The agencies are proposing that for demonstrating compliance, a Class 7 and 8 tractor manufacturer would measure the performance of specified tractor systems (such as aerodynamics and tire rolling resistance), input the values into GEM, and compare the model's output to the standard. The agencies propose that a tractor manufacturer would provide the inputs for each of following factors for each of the tractors it wished to certify under CO_2 standards and for establishing fuel consumption values: Coefficient of Drag, Tire Rolling Resistance Coefficient, Weight Reduction, Vehicle Speed Limiter, and Extended Idle Reduction Technology. These are the technologies on which the agencies' own feasibility analysis for these vehicles is predicated. An example of the GEM input screen is included in Figure II–3.

The input values for the simulation model would be derived by the manufacturer from test procedures proposed by the agencies in this proposal. The agencies are proposing several testing alternatives for aerodynamic assessment, a single procedure for tire rolling resistance coefficient determination, and a prescribed method to determine tractor weight reduction. The agencies are proposing defined model inputs for determining vehicle speed limiter and extended idle reduction technology benefits. The other aspects of vehicle performance are fixed within the model as defined by the agencies and are not varied for the purpose of compliance.

(b) Metric

Test metrics which are quantifiable and meaningful are critical for a regulatory program. The CO_2 and fuel consumption metric should reflect what we wish to control (CO_2 or fuel consumption) relative to the clearest value of its use: In this case, carrying freight. It should encourage efficiency improvements that will lead to reductions in emissions and fuel consumption during real world operation. The agencies are proposing standards for Class 7 and 8 combination tractors that would be expressed in terms of moving a ton (2000 pounds) of freight over one mile. Thus, NHTSA's proposed fuel consumption standards for these trucks would be represented as gallons of fuel used to move one ton of freight 1,000 miles, or gal/1,000 ton-mile. EPA's proposed CO_2 vehicle standards would be represented as grams of CO_2 per ton-mile.

Similarly, the NAS panel concluded, in their report, that a load-specific fuel consumption metric is appropriate for HD trucks. The panel spent considerable time explaining the advantages of and recommending a load-specific fuel consumption approach to regulating the fuel efficiency of heavy-duty trucks. *See* NAS Report pages 20 through 28. The panel first points out that the nonlinear relationship between fuel economy and fuel consumption has led consumers of light-duty vehicles to have difficulty in judging the benefits of replacing the most inefficient vehicles. The panel describes an example where a light-duty vehicle can save the same 107 gallons per year (assuming 12,000 miles travelled per year) by improving one vehicle's fuel efficiency from 14 to 16 mpg or improving another vehicle's fuel efficiency from 35 to 50.8 mpg. The use

of miles per gallon leads consumers to undervalue the importance of small mpg improvements in vehicles with lower fuel economy. Therefore, the NAS panel recommends the use of a fuel consumption metric over a fuel economy metric. The panel also describes the primary purpose of most heavy-duty vehicles as moving freight or passengers (the payload). Therefore, they concluded that the most appropriate way to represent an attribute-based fuel consumption metric is to normalize the fuel consumption to the payload.

With the approach to compliance NHTSA and EPA are proposing, a default payload is specified for each of the tractor categories suggesting that a gram per mile metric with a specified payload and a gram per ton-mile metric would be effectively equivalent. The primary difference between the metrics and approaches relates to our treatment of mass reductions as a means to reduce fuel consumption and greenhouse gas emissions. In the case of a gram per mile metric, mass reductions are reflected only in the calculation of the work necessary to move the vehicle mass through the drive cycle. As such it directly reduces the gram emissions in the numerator since a vehicle with less mass will require less energy to move through the drive cycle leading to lower CO_2 emissions. In the case of Class 7 and 8 tractors and our proposed gram/ton-mile metric, reductions in mass are reflected both in less mass moved through the drive cycle (the numerator) and greater payload (the denominator). We adjust the payload based on vehicle mass reductions because we estimate that approximately one third of the time the amount of freight loaded in a trailer is limited not by volume in the trailer but by the total gross vehicle weight rating of the tractor. By reducing the mass of the tractor the mass of the freight loaded in the tractor can go up. Based on this general approach, it can be estimated that for every 1,200 pounds in mass reduction total truck vehicle miles traveled and therefore trucks on the road could be reduced by one percent. Without the use of a per ton-mile metric it would not be clear or straightforward for the agencies to reflect the benefits of mass reduction from large freight carrying vehicles that are often limited in the freight they carry by the gross vehicle weight rating of the truck. The agencies seek comment on the use of a per ton-mile metric and also whether other metrics such as per cube-mile should be considered instead.

(c) Truck Aerodynamic Assessment

The aerodynamic drag of a vehicle is determined by the vehicle's coefficient of drag (Cd), frontal area, air density and speed. The agencies are proposing to establish and use pre-defined values for the input parameters to GEM which represent the frontal area and air density, while the speed of the vehicle would be determined in GEM through the proposed drive cycles. The agencies are proposing that the manufacturer would determine a truck's Cd, a dimensionless measure of a vehicle's aerodynamics, for input into the model through a combination of vehicle testing and vehicle design characteristics. Quantifying truck aerodynamics as an input to the GEM presents technical challenges because of the proliferation of truck configurations, the lack of a clearly preferable standardized test method, and subtle variations in measured Cd values among various test procedures. Class 7 and 8 tractor aerodynamics are currently developed by manufacturers using a range of techniques, including vehicle coastdown testing, wind tunnel testing, computational fluid dynamics, and constant speed tests as further discussed below. Reflecting that each of these approaches has limitations and no one approach appears to be superior to others, the agencies are proposing to allow all three aerodynamic evaluation methods to be used in demonstrating a vehicle's aerodynamic performance. The agencies welcome comments on each of these methods.

The agencies are proposing that the coefficient of drag assessment be a product of test data and vehicle characteristics using good engineering judgment. The primary tool the agencies expect to use in our own evaluation of aerodynamic performance is the coastdown procedure described in SAE Recommended Practice J2263. Allowing manufacturers to use multiple test procedures and modeling coupled with good engineering judgment to determine aerodynamic performance is consistent with the current approach used in determining representative road load forces for light-duty vehicle testing (40 CFR 86.129–00(e)(1)). The agencies anticipate that as we and the industry gain experience with assessing aerodynamic performance of HD vehicles for purposes of compliance a test-only approach may have advantages.

We believe this broad approach allowing manufacturers to use multiple different test procedures to demonstrate aerodynamic performance is appropriate given that no single test procedure is superior in all aspects to other approaches. However, we also recognize the need for consistency and a level playing field in evaluating aerodynamic performance. To accomplish this, the agencies propose to use a two-part approach that evaluates aerodynamic performance not only through testing but through the application of good engineering judgment and a technical description of the vehicles aerodynamic characteristics. The first part of the proposed evaluation approach uses a bin structure characterizing the expected aerodynamic performance of tractors based on definable vehicle attributes. This bin approach is described further below. The second proposed evaluation element uses aerodynamic testing to measure the vehicle's aerodynamic performance under standardized conditions. The agencies expect that the SAE J2263 coastdown procedures will be the primary aerodynamic testing tool but are interested in working with the regulated industry and other interested stakeholders to develop a primary test approach. Additionally, the agencies propose to have a process that would allow manufacturers to demonstrate that another aerodynamic test procedure should also be allowed for purposes of generating inputs used in assessing a truck's performance. We are requesting comment on methods that should form the primary aerodynamic testing tool, methods that may be appropriate as alternatives, and the mechanism (including standards, practices, and unique criteria) for the agencies to consider allowing alternative aerodynamic test methods.

NHTSA and EPA are proposing that manufacturers use a two part screening approach for determining the aerodynamic inputs to the GEM. The first part would require the manufacturers to assign each vehicle aerodynamic configuration to one of five aerodynamics bins created by EPA and NHTSA as described below. The assignment by bin reflects the aerodynamic characteristics of the vehicle. For each bin, EPA and NHTSA have already defined a nominal Cd that will be used in the GEM and a range of Cd values that would be expected from testing of vehicles meeting this bin description. The second part would require the manufacturer to then compare its own test results of aerodynamic performance (as conducted in accordance with the agencies' requirements) for the vehicle to confirm the actual aerodynamic performance was consistent with the agencies' expectations for vehicles within this

bin. If the predicted performance and actual observed performance match, the Cd value as an input for the GEM is the nominal Cd value defined for the bin. If, however, a manufacturer's test data demonstrates performance that is better than projected for the assigned bin a manufacturer may use the test data and good engineering judgment to demonstrate to the agencies that this particular vehicle's performance is in keeping with the performance level of a more aerodynamic bin and with the agencies' permission may use the Cd value of the more aerodynamic bin. Conversely, if the test data demonstrates that the performance is worse than the projected bin, then the manufacturer would use the Cd value from the less aerodynamic bin. Using this approach, the bin structure can be seen as the agencies' first effort to create a common measure of aerodynamic performance to benchmark the various test methods manufacturers may use to demonstrate aerodynamic performance. For example, if a manufacturer's test methods consistently produce Cd values that are better than projected by the agencies, EPA and NHTSA can use this information to further scrutinize the manufacturer's test procedure, helping to ensure that all manufacturers are competing on a level playing field.

The agencies are proposing aerodynamic technology bins which divide the wide spectrum of tractor aerodynamics into five bins (*i.e.,* categories). The first category, "Classic," represents tractor bodies which prioritize appearance or special duty capabilities over aerodynamics. The Classic trucks incorporate few, if any, aerodynamic features and may have several features which detract from aerodynamics, such as bug deflectors, custom sunshades, B-pillar exhaust stacks, and others. The second category for aerodynamics is the "Conventional" tractor body. The agencies consider Conventional tractors to be the average new tractor today which capitalizes on a generally aerodynamic shape and avoids classic features which increase drag. Tractors within the "SmartWay" category build on Conventional tractors with added components to reduce drag in the most significant areas on the tractor, such as fully enclosed roof fairings, side extending gap reducers, fuel tank fairings, and streamlined grill/hood/mirrors/bumpers. The "Advanced SmartWay" aerodynamic category builds upon the SmartWay tractor body with additional aerodynamic treatments such as underbody airflow treatment, down exhaust, and lowered ride height, among other technologies. And finally, "Advanced SmartWay II" tractors incorporate advanced technologies which are currently in the prototype stage of development, such as advanced gap reduction, rearview cameras to replace mirrors, wheel system streamlining, and advanced body designs. The agencies recognize that these proposed aerodynamic bins are static and referential and that there may be other technologies that may provide similar aerodynamic benefit. In addition, it is expected that aerodynamic equipment will advance over time and the agencies may find it appropriate and necessary to revise the bin descriptions.

Under this proposal, the manufacturer would then input into GEM the Cd value specified for each bin as also defined in Table II–4. For example, if a manufacturer tests a Class 8 sleeper cab high roof tractor with features which are similar to a SmartWay tractor and the test produces a Cd value of 0.59, then the manufacturer would assign this tractor to the Class 8 Sleeper Cab High Roof SmartWay bin. The manufacturer would then use the Cd value of 0.60 as the input to GEM.

Table II-4: Aerodynamic Input Definitions to GEM

	Class 7		Class 8				
	Day Cab		Day Cab		Sleeper Cab		
	Low/ Mid Roof	High Roof	Low/ Mid Roof	High Roof	Low Roof	Mid Roof	High Roof
Aerodynamics Test Results (Cd)							
Classic	≥0.83	≥0.73	≥0.83	≥0.73	≥0.83	≥0.78	≥0.73
Conventional	0.78-0.82	0.63-0.72	0.78-0.82	0.63-0.72	0.78-0.82	0.73-0.77	0.63-0.72
SmartWay	0.73-0.77	0.58-0.62	0.73-0.77	0.58-0.62	0.73-0.77	0.68-0.72	0.58-0.62
Advanced SmartWay	0.68-0.72	0.53-0.57	0.68-0.72	0.53-0.57	0.68-0.72	0.63-0.67	0.53-0.57
Advanced SmartWay II	≤0.67	≤0.52	≤0.67	≤0.52	≤0.67	≤0.62	≤0.52
Aerodynamic Input to GEM (Cd)							
Frontal Area (m^2)	6.0	9.8	6.0	9.8	6.0	7.7	9.8
Classic	0.85	0.75	0.85	0.75	0.85	0.80	0.75
Conventional	0.80	0.68	0.80	0.68	0.80	0.75	0.68
SmartWay	0.75	0.60	0.75	0.60	0.75	0.70	0.60
Advanced SmartWay	0.70	0.55	0.70	0.55	0.70	0.65	0.55
Advanced SmartWay II	0.65	0.50	0.65	0.50	0.65	0.60	0.50

Coefficient of drag and frontal area of the tractor-trailer combination go hand-in-hand to determine the force required to overcome aerodynamic drag. As explained above, the agencies are proposing that the Cd value is one of the GEM inputs which will be derived by the manufacturer. However, the agencies are proposing to specify the truck's frontal area for each regulatory category (i.e., each of the seven subcategories which are proposed and listed in Table II–4 under the Aerodynamic Input to GEM). The frontal area of a high roof tractor pulling a box trailer will be determined primarily by the box trailer's dimensions and the ground clearance of the tractor. The frontal area of low and mid roof tractors will be determined by the tractor itself. An alternate approach to the proposed frontal area specification is to create the aerodynamic input table (as shown in Table II–4) with values that represent the Cd multiplied by the frontal area. This approach will provide the same aerodynamic load, but it will not allow the comparison of aerodynamic efficiency across regulatory categories that can be done with the Cd values alone. The agencies are interested in comments regarding the frontal area of trucks, specifically whether the specified frontal areas are appropriate and whether the use of standard frontal areas may have unanticipated consequences.

EPA and NHTSA recognize that wind conditions, most notably wind direction, have a greater impact on real world CO_2 emissions and fuel consumption of heavy-duty trucks than of light-duty vehicles. As noted in the NAS report,[44] the wind average drag coefficient is about 15 percent higher than the zero degree coefficient of drag. The agencies considered proposing the use of a wind averaged drag coefficient in this regulatory program, but ultimately decided to propose using coefficient of drag values which represent zero yaw (*i.e.*, representing wind from directly in front of the vehicle, not from the side) instead. We are taking this approach recognizing that wind tunnels are currently the only tool to accurately assess the influence of wind speed and direction on a truck's aerodynamic performance. The agencies recognize, as NAS did, that the results of using the zero yaw approach may result in fuel consumption predictions that are offset slightly from real world performance levels, not unlike the offset we see today between fuel economy test results in the CAFE program and actual fuel economy performance observed in-use. We believe this approach will not impact technology effectiveness or change the kinds of technology decisions made by the tractor manufacturers in developing equipment to meet our proposed standards. However, the agencies are interested in receiving comment on approaches to develop wind averaged coefficient of drag values using computational fluid dynamics, coastdown, and constant speed test procedures.

The methodologies the agencies are considering for aerodynamic assessment include coastdown testing, wind tunnel testing, computational fluid dynamics, and constant speed testing. The agencies welcome information on a constant speed test procedure and how it could be applied to determine aerodynamic drag. In addition, the agencies seek comment on allowing multiple aerodynamic assessment methodologies and the need for comparison of aerodynamic assessment methods to determine method precision and accuracy.

(i) Coastdown Testing

The coastdown test procedure has been used extensively in the light-duty industry to capture the road load force by coasting a vehicle along a flat straightaway under a set of prescribed conditions. Coast down testing has been used less extensively to obtain road load forces for medium- and heavy-duty vehicles. EPA has conducted a significant amount of test work to demonstrate that coastdown testing per SAE J2263 produces reasonably repeatable test results for Class 7 and 8 tractor/trailer pairings, as described in draft RIA Chapter 3. The agencies propose that a manufacturer which chooses this method would determine a tractor's Cd value through analysis of the road load force equation derived from SAE J2263 Revised 2008–12 test results, as proposed in 40 CFR 1066.210.

(ii) Wind Tunnel Testing

A wind tunnel provides a stable environment yielding a more repeatable test than coastdown. This allows the manufacturer to run multiple baseline vehicle tests and explore configuration modifications for nearly the same effort (*e.g.,* time and cost) as conducting the coastdown procedure. In addition, wind tunnels provide testers with the ability to yaw the vehicle at positive and negative angles relative to the original centerline of the vehicle to accurately capture the influence of non-uniform wind direction on the Cd (*e.g.,* wind averaged Cd).

The agencies propose to allow the use of existing wind tunnel procedures adopted by SAE International with some minor modifications as discussed in Section V of this proposal. The agencies seek comments on the appropriateness of using the existing SAE wind tunnel procedures, and the modifications to these procedures, for this regulatory purpose.

(iii) Computational Fluid Dynamics

Computational fluid dynamics, or CFD, capitalizes on today's computing power by modeling a full size vehicle and simulating the flows around this model to examine the fluid dynamic properties, in a virtual environment. CFD tools are used to solve either the Navier-Stokes equations that relate the physical law of conservation of momentum to the flow relationship around a body in motion or a static body with fluid in motion around it, or the Boltzman equation that examines fluid mechanics and determines the characteristics of discreet, individual particles within a fluid and relates this behavior to the overall dynamics and behavior of the fluid. CFD analysis involves several steps: Defining the model structure or geometry based on provided specifications to define the basic model shape; applying a closed surface around the structure to define the external model shape (wrapping or surface meshing); dividing the control volume, including the model and the surrounding environment, up into smaller, discreet shapes (gridding); defining the flow conditions in and out of the control volume and the flow relationships within the grid (including eddies and turbulence); and solving the flow equations based on the prescribed flow conditions and relationships.

This approach can be beneficial to manufacturers since they can rapidly prototype (*e.g.,* design, research, and model) an entire vehicle without investing in material costs; they can modify and investigate changes easily; and the data files can be re-used and shared within the company or with corporate partners.

The accuracy of the outputs from CFD analysis is highly dependent on the inputs. The CFD modeler decides what method to use for wrapping, how fine the mesh cell and grid size should be, and the physical and flow relationships within the environment. A balance must be achieved between the number of cells, which defines how fine the mesh is, and the computational times for a result (*i.e.,* solution-time-efficiency). All of these decisions affect the results of the CFD aerodynamic assessment.

[44] *See* 2010 NAS Report, Note 19, Finding 2–4 on page 39.

Because CFD modeling is dependent on the quality of the data input and the design of the model, the agencies propose and seek comment on a minimum set of criteria applicable to using CFD for aerodynamic assessment in Section V.

(d) Tire Rolling Resistance Assessment

NHTSA and EPA are proposing that the tractor's tire rolling resistance input to the GEM be determined by either the tire manufacturer or tractor manufacturer using the test method adopted by the International Organization for Standardization, ISO 28580:2009.[45] The agencies believe the ISO test procedure is appropriate to propose for this program because the procedure is the same one used by NHTSA in its fuel efficiency tire labeling program [46] and is consistent with the direction being taken by the tire industry both in the United States and Europe. The rolling resistance from this test would be used to specify the rolling resistance of each tire on the steer and drive axle of the vehicle. The results would be expressed as a rolling resistance coefficient and measured as kilogram per metric ton (kg/metric ton). The agencies are proposing that three tire samples within each tire model be tested three times each to account for some of the production variability and the average of the nine tests would be the rolling resistance coefficient for the tire. The GEM would use a combined tire rolling resistance, where 15 percent of the gross weight of the truck and trailer would be distributed to the steer axle, 42.5 percent to the drive axles, and 42.5 percent to the trailer axles.[47] The trailer tires' rolling resistance would be prescribed by the agencies as part of the standardized trailer used for demonstrating compliance at 6 kg/metric ton, which was the average trailer tire rolling resistance measured during the SmartWay tire testing.[48]

We acknowledge that the useful life of original equipment tires used on tractors is shorter than the tractor's useful life. In this proposal, we are treating the tires as if the owner replaces the tire with tires that match the original equipment. Some owners opt for the original tires under the assumption that this is the best product. However, tractor tires are often retreaded or replaced. Steer tires on a highway tractor might need replacement after 75,000 to 150,000 miles. Drive tires might need retreading or replacement after 150,000 to 300,000 miles. Of course, tire removal miles can be much higher or lower, depending upon a number of factors that affect tire removal miles. These include the original tread depth; desired tread depth at removal to maintain casing integrity; tire material and construction; typical load; tire "scrub" due to urban driving and set back axles; and, tire under-inflation. Since it is common for both medium- and heavy-duty truck tires to be replaced and retreaded, we welcome comments in this area. We are specifically seeking data for the rolling resistance of retread and replacement heavy-duty tires and the typical useful life of tractor tires.

(e) Weight Reduction Assessment

EPA and NHTSA are seeking to account for the emissions and fuel consumption benefits of weight reduction as a control technology in heavy-duty trucks. Weight reduction impacts the emissions and fuel consumption performance of tractors in different ways depending on the truck's operation. For trucks that cube-out, the weight reduction will show a small reduction in grams of CO_2 emitted or fuel consumed per mile travelled. The benefit is small because the weight reduction is minor compared to the overall weight of the combination tractor and payload. However, a weight reduction in tractors which operate at maximum gross vehicle weight rating would result in an increase in payload capacity. Increased vehicle payload without increased GVWR significantly reduces fuel consumption and CO_2 emissions per ton mile of freight delivered. It also leads to fewer vehicle miles driven with a proportional reduction in traffic accidents.

The empty curb weight of tractors varies significantly today. Items as common as fuel tanks can vary between 50 and 300 gallons each for a given truck model. Information provided by truck manufacturers indicates that there may be as much as a 5,000 to 17,000 pound difference in curb weight between the lightest and heaviest tractors within a regulatory subcategory (such as Class 8 sleeper cab with a high roof). Because there is such a large variation in the baseline weight among trucks that perform roughly similar functions with roughly similar configurations, there is not an effective way to quantify the exact CO_2 and fuel consumption benefit of mass reduction using GEM because of the difficulty in establishing a baseline. However, if the weight reduction is limited to tires and wheels, then both the baseline and weight differentials for these are readily quantifiable and well-understood. Therefore, the agencies are proposing that the mass reduction that would be simulated be limited only to reductions in wheel and tire weight. In the context of this heavy-duty vehicle program with only changes to tires and wheels, the agencies do not foresee any related impact on safety.[49] The agencies welcome comments regarding this approach and detailed data to further improve the robustness of the agencies' assumed baseline truck tare/curb weights for each regulatory category used within the model, as outlined in draft RIA Chapter 3.5.

EPA and NHTSA are proposing to specify the baseline vehicle weight for each regulatory category (including the tires and wheels), but allow manufacturers to quantify weight reductions based on the wheel material selection and single wide versus dual tires per Table II–5. The agencies assume the baseline wheel and tire configuration contains dual tires with steel wheels because these represent the vast majority of new vehicle configurations today. The proposed weight reduction due to the wheels and tires would be reflected in the payload tons by increasing the specified payload by the weight reduction amount discounted by two thirds to recognize that approximately one third of the truck miles are travelled at maximum payload, as discussed below in the payload discussion.

[45] ISO, 2009, Passenger Car, Truck, and Bus Tyres—Methods of Measuring Rolling Resistance—Single Point Test and Correlation of Measurement Results: ISO 28580:2009(E), First Edition, 2009–07–01.

[46] NHTSA, 2009. "NHTSA Tire Fuel Efficiency Consumer Information Program Development: Phase 1—Evaluation of Laboratory Test Protocols." DOT HS 811 119. June. (*http://www.regulations.gov,* Docket ID: NHTSA–2008–0121–0019).

[47] This distribution is equivalent to the Federal over-axle weight limits for an 80,000 GVWR 5-axle tractor-trailer: 12,000 Pounds over the steer axle, 34,000 pounds over the tandem drive axles (17,000 pounds per axle) and 34,000 pounds over the tandem trailer axles (17,000 pounds per axle).

[48] U.S. Environmental Protection Agency. *SmartWay Transport Partnership July 2010 e-update* accessed July 16, 2010, from *http://www.epa.gov/smartwaylogistics/newsroom/documents/e-update-july-10.pdf.*

[49] For more information on the estimated safety effects of this proposed rule, *see* Chapter 9 of the draft RIA.

Table II-5: Proposed Weight Reduction Values

Weight Reduction Technology		Weight Reduction (lb per tire/wheel)
Single Wide Drive Tire with ...	Steel Wheel	84
	Aluminum Wheel	139
	Light Weight Aluminum Wheel	147
Steer Tire or Dual Wide Drive Tire with ...	High Strength Steel Wheel	8
	Aluminum Wheel	21
	Light Weight Aluminum Wheel	30

(f) Extended Idle Reduction Technology Assessment

Extended idling from Class 8 heavy-duty long haul combination tractors contributes to significant CO_2 emissions and fuel consumption in the United States. The Federal Motor Carrier Safety Administration regulations require a certain amount of driver rest for a corresponding period of driving hours.[50] Extended idle occurs when Class 8 long haul drivers rest in the sleeper cab compartment during rest periods as drivers find it both convenient and less expensive to rest in the truck cab itself than to pull off the road and find accommodations. During this rest period a driver will idle the truck in order to provide heating or cooling or run on-board appliances. In some cases the engine can idle in excess of 10 hours. During this period, the truck will consume approximately 0.8 gallons of fuel and emit over 8,000 grams of CO_2 per hour. An average truck can consume 8 gallons of fuel and emit over 80,000 grams of CO_2 during overnight idling in such a case.

Idling reduction technologies are available to allow for driver comfort while reducing fuel consumptions and CO_2 emissions. Auxiliary power units, fuel operated heaters, battery supplied air conditioning, and thermal storage systems are among the technologies available today. The agencies are proposing to include extended idle reduction technology as an input to the GEM for Class 8 sleeper cabs. The manufacturer would input the value based on the idle reduction technology installed on the truck. As discussed further in Section III, if a manufacturer chooses to use idle reduction technology to meet the standard, then it would require an automatic main engine shutoff after 5 minutes to help ensure the idle reductions are realized in-use. As with all of the technology inputs discussed in this section, the agencies are not mandating the use of idle reductions or idle shutdown, but rather allowing their use as one part of a suite of technologies feasible for reducing fuel consumption and meeting the proposed standards. The proposed value (5 g CO_2/ton-mile or 0.5 gal/1,000 ton-mile) for the idle reduction technologies was determined using an assumption of 1,800 idling hours per year, 125,000 miles travelled, and a baseline idle fuel consumption of 0.8 gallons per hour. Additional detail on the emission and fuel consumption reduction values are included in draft RIA Chapter 2.

(g) Vehicle Speed Limiters

Fuel consumption and CO_2 emissions increase proportional to the square of vehicle speed.[51] Therefore, lowering vehicle speeds can significantly reduce fuel consumption and GHG emissions. A vehicle speed limiter (VSL), which limits the vehicle's maximum speed, is a simple technology that is utilized today. The feature is electronically programmed and controlled. Manufacturers today sell trucks with vehicle speed limiters and allow the customers to set the limit. However, as proposed the GEM will not provide a fuel consumption reduction for a limiter that can be overridden. In order to obtain a benefit for the program, the manufacturer must preset the limiter in such a way that the setting will not be capable of being easily overridden by the fleet or the owner. As with other engine calibration aspects of emission controls, tampering with a calibration would be considered unlawful by EPA. If the manufacturer installs a vehicle speed limiter into a truck that is not easily overridden, then the manufacturer would input the vehicle speed limit setpoint into GEM.

(h) Defined Vehicle Configurations in the GEM

As discussed above, the agencies are proposing methodologies that manufacturers would use to quantify the values to be input into the GEM for these factors affecting truck efficiency: Coefficient of Drag, Tire Rolling Resistance Coefficient, Weight Reduction, Vehicle Speed Limiter, and Extended Idle Reduction Technology. The other aspects of vehicle performance are fixed within the model and are not varied for the purpose of compliance. The defined inputs being proposed include the drive cycle, tractor-trailer combination curb weight, payload, engine characteristics, and drivetrain for each vehicle type, and others. We are seeking comments accompanied with data on the defined model inputs as described in draft RIA Chapter 4.

(i) Vehicle Drive Cycles

As noted by the 2010 NAS Report,[52] the choice of a drive cycle used in compliance testing has significant consequences on the technology that will be employed to achieve a standard as well as the ability of the technology to achieve real world reductions in emissions and improvements in fuel consumption. Manufacturers naturally will design vehicles to ensure they satisfy regulatory standards. If the agencies propose an ill-suited drive cycle for a regulatory category, it may encourage GHG emissions and fuel consumption technologies which satisfy the test but do not achieve the same benefits in use. For example, requiring all trucks to use a constant speed highway drive cycle will drive significant aerodynamic improvements. However, in the real world a combination tractor used for local

[50] Federal Motor Carrier Safety Administration. Hours of Service Regulations. Last accessed on August 2, 2010 at *http://www.fmcsa.dot.gov/rules-regulations/topics/hos/*.

[51] *See* 2010 NAS Report, Note 19, Page 28. Road Load Force Equation defines the aerodynamic portion of the road load as ½ * Coefficient of Drag * Frontal Area * air density * vehicle speed squared.

[52] *See* 2010 NAS Report, Note 19, Chapters 4 and 8.

delivery may spend little time on the highway, reducing the benefits that would be achieved by this technology. In addition, the extra weight of the aerodynamic fairings will actually penalize the GHG and fuel consumption performance in urban driving and may reduce the freight carrying capability. The unique nature of the kinds of CO_2 emissions control and fuel consumption technology means that the same technology can be of benefit during some operation but cause a reduced benefit under other operation.[53] To maximize the GHG emissions and fuel consumption benefits and avoid unintended reductions in benefits, the drive cycle should focus on promoting technology that produces benefits during the primary operation modes of the application. Consequently, drive cycles used in GHG emissions and fuel consumption compliance testing should reasonably represent the primary actual use, notwithstanding that every truck has a different drive cycle in-use.

The agencies are proposing a modified version of the California ARB Heavy Heavy-duty Truck 5 Mode Cycle,[54] using the basis of three of the cycles which best mirror Class 7 and 8 combination tractor driving patterns, based on information from EPA's MOVES model.[55] The key advantage of the California ARB 5 mode cycle is that it provides the flexibility to use several different modes and weight the modes to fit specific truck application usage patterns. EPA analyzed the five cycles and found that some modifications to the modes appear to be needed to allow sufficient flexibility in weightings. The agencies are proposing the use of the Transient mode, as defined by California ARB, because it broadly covers urban driving. The agencies are also proposing altered versions of the High Speed Cruise and Low Speed Cruise modes which would reflect only constant speed cycles at 65 mph and 55 mph respectively. EPA and NHTSA relied on the EPA MOVES analysis of Federal Highway Administration data to develop the proposed mode weightings to characterize typical operations of heavy-duty trucks, per Table II–6 below.[56] A detailed discussion of drive cycles is included in draft RIA Chapter 3.[57]

Table II-6: Drive Cycle Mode Weightings

	Transient	55 mph Cruise	65 mph Cruise
Day Cabs	19%	17%	64%
Sleeper Cabs	5%	9%	86%

(ii) Empty Weight and Payload

The total weight of the tractor-trailer combination is the sum of the tractor curb weight, the trailer curb weight, and the payload. The total weight of a truck is important because it in part determines the impact of technologies, such as rolling resistance, on GHG emissions and fuel consumption. The agencies are proposing to specify each of these aspects of the vehicle.

The agencies developed the proposed tractor curb weight inputs from actual tractor weights measured in two of EPA's test programs and based on information from the manufacturers. The proposed trailer curb weight inputs were derived from actual trailer weight measurements conducted by EPA and weight data provided to ICF International by the trailer manufacturers.[58] Details of the individual weight inputs by regulatory category are included in draft RIA Chapter 3.

There are several methods that the agencies have considered for evaluating the GHG emissions and fuel consumption of tractors used to carry freight. A key factor in these methods is the weight of the truck that is assumed for purposes of the evaluation. In use, trucks operate at different weights at different times during their operations. The greatest freight transport efficiency (the amount of fuel required to move a ton of payload) would be achieved by operating trucks at the maximum load for which they are designed all of the time. However, logistics such as delivery demands which require that trucks travel without full loads, the density of payload, and the availability of full loads of freight limit the ability of trucks to operate at their highest efficiency all the time. M.J. Bradley analyzed the Truck Inventory and Use Survey and found that approximately 9 percent of combination tractor miles travelled empty, 61 percent are "cubed-out" (the trailer is full before the weight limit is reached), and 30 percent are "weighed out" (operating weight equal 80,000 pounds which is the gross vehicle weight limit on the Federal Interstate Highway System or greater than 80,000 pounds for vehicles traveling on roads outside of the interstate system).[59]

As described above, the amount of payload that a tractor can carry depends on the category (or GVWR) of the vehicle. For example, a typical Class 7 tractor can carry less payload than a Class 8 tractor. The Federal Highway Administration developed Truck Payload Equivalent Factors to inform the development of highway system strategies using Vehicle Inventory and Use Survey (VIUS) and Vehicle Travel Information System data. Their results

[53] This situation does not typically occur for heavy-duty emission control technology designed to control criteria pollutants such as PM and NO_X.

[54] California Air Resources Board. Heavy Heavy-duty Diesel Truck chassis dynamometer schedule, Transient Mode. Last accessed on August 2, 2010 at *http://www.dieselnet.com/standards/cycles/hhddt.html.*

[55] EPA's MOVES (Motor Vehicle Emission Simulator). *See http://www.epa.gov/otaq/models/moves/index.htm* for additional information.

[56] The Environmental Protection Agency. Draft MOVES2009 Highway Vehicle Population and Activity Data. EPA–420–P–09–001, August 2009 *http://www.epa.gov/otaq/models/moves/techdocs/420p09001.pdf.*

[57] In the light-duty vehicle rule, EPA and NHTSA based compliance with tailpipe standards on use of the FTP and HFET, and declined to use alternative tests. *See* 75 FR 25407. NHTSA is mandated to use the FTP and HFET tests for CAFE standards, and all relevant data was obtained by FTP and HFET testing in any case. *Id.* Neither of these constraints exists for Class 7–8 tractors. The little data which exist on current performance are principally measured by the ARB Heavy Heavy-duty Truck 5 Mode Cycle testing, and NHTSA is not mandated to use the FTP to establish heavy-duty fuel economy standards. *See* 49 U.S.C. 32902(k)(2) authorizing NHTSA, among other things, to adopt and implement appropriate "test methods, measurement metrics, * * * and compliance protocols".

[58] ICF International. Investigation of Costs for Strategies to Reduce Greenhouse Gas Emissions for Heavy-Duty On-road Vehicles. July 2010. Pages 4–15. Docket Number EPA–HQ–OAR–2010–0162–0044.

[59] M.J. Bradley & Associates. Setting the Stage for Regulation of Heavy-Duty Vehicle Fuel Economy and GHG Emissions: Issues and Opportunities. February 2009. Page 35. Analysis based on 1992 Truck Inventory and Use Survey data, where the survey data allowed developing the distribution of loads instead of merely the average loads.

found that the average payload of a Class 8 truck ranged from 36,247 to 40,089 pounds, depending on the average distance travelled per day.[60] The same results found that Class 7 trucks carried between 18,674 and 34,210 pounds of payload also depending on average distance travelled per day. Based on this data, the agencies are proposing to prescribe a fixed payload of 25,000 pounds for Class 7 tractors and 38,000 pounds for Class 8 tractors for their respective test procedures. The agencies are proposing a common payload for Class 8 day cabs and sleeper cabs because the data available does not distinguish based on type of Class 8 tractor. These payload values represent a heavily loaded trailer, but not maximum GVWR, since as described above the majority of tractors "cube-out" rather than "weigh-out." Additional details on proposed payloads are included in draft RIA Chapter 3.

(iii) Standardized Trailers

NHTSA and EPA are proposing that the tractor performance in the GEM would be judged by assuming it is pulling a standardized trailer. The agencies believe that an assessment of the tractor aerodynamics should be conducted using a tractor-trailer combination to reflect the impact of aerodynamic technologies in actual use, where tractors are designed and used with a trailer. Assessing the tractor aerodynamics using only the tractor would not be a reasonable way to assess in-use impacts. For example, the in-use aerodynamic drag while pulling a trailer is different than without the trailer and the full impact of an aerodynamic technology on reducing emissions and fuel consumption would not be reflected if the assessment is performed on a tractor without a trailer.

In addition to assessing the tractor with a trailer, it is appropriate to adopt a standardized trailer used for testing, and to vary the standardized trailer by the regulatory category. This is similar to the standardization of payload discussed above, as a way to reasonably reflect in-use operating conditions. High roof tractors are optimally designed to pull box trailers. The roof fairing on a tractor is the feature designed to minimize the height differential between the tractor and typical trailer to reduce the air flow disruption. Low roof tractors are designed to carry flat bed or low-boy trailers. Mid roof tractors are designed to carry tanker and bulk carrier trailers. The agencies conducted a survey of tractor-trailer pairing in-use to evaluate the representativeness of this premise. The survey of over 3,000 tractor-trailer combinations found that in 95 percent of the combination tractors the tractor's roof height was paired appropriately for the type of trailer that it was pulling.[61] The agencies also have evaluated the impact of pairing a low roof tractor with a box trailer in coastdown testing and found that the aerodynamic force increases by 20 percent over a high roof tractor pulling the same box trailer.[62] Therefore, drivers have a large incentive to use the appropriate matching to reduce their fuel costs. However, the agencies recognize that in operation tractors sometimes pull trailers other than the type that it was designed to carry. The agencies are proposing the matching of trailers to roof height for the test procedure. To do otherwise would necessarily result in a standard reflecting substandard aerodynamic performance, and thereby result in standards which are less stringent than would be appropriate based on the reasonable assumption that tractors will generally pair with trailer of appropriate roof height. The other aspects of the test procedure such as empty trailer weight, location of payload, and tractor-trailer gap are being proposed for each regulatory category to provide consistent test procedures.

(iv) Standardized Drivetrain

The agencies' assessment of the current vehicle configuration process at the truck dealer's level is that the truck companies provide tools to specify the proper drivetrain matched to the buyer's specific circumstances. These dealer tools allow a significant amount of customization for drive cycle and payload to provide the best specification for the customer. The agencies are not seeking to disrupt this process. Optimal drivetrain selection is dependent on the engine, drive cycle (including vehicle speed and road grade), and payload. Each combination of engine, drive cycle, and payload has a single optimal transmission and final drive ratio. The agencies are proposing to specify the engine's fuel consumption map, drive cycle, and payload; therefore, it makes sense to also specify the drivetrain that matches.

(v) Engine Input to GEM

As the agencies are proposing separate engine and tractor standards, the GEM will be used to assess the compliance of the tractor with the tractor standard. To maintain the separate assessments, the agencies are proposing to define the engine characteristics used in GEM, including the fuel consumption map which provides the fuel consumption at hundreds of engine speed and torque points. If the agencies did not standardize the fuel map, then a tractor that uses an engine with emissions and fuel consumption better than the standards would require fewer vehicle reductions than those technically feasible reductions being proposed. The agencies are proposing two distinct fuel consumption maps for use in GEM. EPA proposes the first fuel consumption map would be used in GEM for the 2014 through 2016 model years and represents an average engine which meets the 2014 model year engine CO_2 emissions standards being proposed. NHTSA proposes to use the same fuel map for its voluntary standards in the 2014 and 2015 model years, as well as its mandatory program in the 2016 model year. A second fuel consumption map would be used beginning in 2017 model year and represents an engine which meets the 2017 model year CO_2 emissions and fuel consumption standards and accounts for the increased stringency in the proposed MY 2017 standard. Effectively there is no change in stringency of the tractor vehicle (not including the engine) and there is stability in the tractor vehicle (not including engine) standards for the full rulemaking period.[63] These inputs are appropriate given the separate proposed regulatory requirement that Class 7 and 8 combination tractor manufacturers use only certified engines.

(i) Engine Test Procedure

The NAS panel did not specifically discuss or recommend a metric to evaluate the fuel consumption of heavy-duty engines. However, as noted above they did recommend the use of a load-specific fuel consumption metric for the evaluation of vehicles.[64] An analogous metric for engines would be the amount of fuel consumed per unit of work. Thus, EPA is proposing that GHG emission standards for engines under the CAA would be expressed as g/bhp-

[60] The U.S. Federal Highway Administration. Development of Truck Payload Equivalent Factor. Table 11. Last viewed on March 9, 2010 at *http://ops.fhwa.dot.gov/freight/freight_analysis/faf/faf2_reports/reports9/s510_11_12_tables.htm.*

[61] U.S. EPA. Truck and Trailer Roof Height Match Analysis Memorandum from Amy Kopin to the Docket, August 9, 2010. Docket Identification Number EPA–HQ–OAR–2010–0162–0045.

[62] *See* the draft RIA Chapter 2 for additional detail.

[63] As noted earlier, use of the 2017 model year fuel consumption map as a GEM input results in numerically more stringent proposed vehicle standards for MY 2017.

[64] See NAS Report, Note 19, at page 39.

hr; NHTSA's proposed fuel consumption standards under EISA, in turn, would be represented as gal/100 bhp-hr. This metric is also consistent with EPA's current standards for non-GHG emissions for these engines.

EPA's criteria pollutant standards for engines require that manufacturers demonstrate compliance over the transient Heavy-duty FTP test cycle; the steady-state SET test cycle; and the not-to-exceed test (NTE test). EPA created this multi-layered approach to criteria emissions control in response to engine designs that optimized operation for lowest fuel consumption at the expense of very high criteria emissions when operated off the regulatory cycle. EPA's use of multiple test procedures for criteria pollutants helps to ensure that manufacturers calibrate engine systems for compliance under all operating conditions. With regard to GHG and fuel consumption control, the agencies believe it is more appropriate to set standards based on a single test procedure, either the Heavy-duty FTP or SET, depending on the primary expected use of the engine. For engines used primarily in line-haul combination tractor trailer operations, we believe the steady-state SET procedure more appropriately reflects in-use engine operation. By setting standards based on the most representative test cycle, we can have confidence that engine manufacturers will design engines for the best GHG and fuel consumption performance relative to the most common type of expected engine operation. There is no incentive to design the engines to give worse fuel consumption under other types of operation, relative to the most common type of operation, and we are not concerned if manufacturers further calibrate these designs to give better in-use fuel consumption during other operation, while maintaining compliance with the criteria emissions standards as such calibration is entirely consistent with the goals of our joint program.

Further, we are concerned that setting standards based on both transient and steady-state operating conditions for all engines could lead to undesirable outcomes. For example, turbocompounding is one technology that the agencies have identified as a likely approach for compliance against our proposed HHD SET standard described below. Turbocompounding is a very effective approach to lower fuel consumption under steady driving conditions typified by combination tractor trailer operation and is well reflected in testing over the SET test procedure. However, when used in driving typified by transient operation as we expect for vocational vehicles and as is represented by the Heavy-duty FTP, turbocompounding shows very little benefit. Setting an emission standard based on the Heavy-duty FTP only for engines intended for use in combination tractor trailers could lead manufacturers to not apply turbocompounding because the full benefits are not demonstrated on the Heavy-duty FTP even though it can be a highly cost-effective means to reduce GHG emissions and lower fuel consumption in more steady state applications.

The current non-GHG emissions engine test procedures also require the development of regeneration emission rates and frequency factors to account for the emission changes during a regeneration event (40 CFR 86.004–28). EPA and NHTSA are proposing to exclude the CO_2 emissions and fuel consumption increases due to regeneration from the calculation of the compliance levels over the defined test procedures. We considered including regeneration in the estimate of fuel consumption and GHG emissions and have decided not to do so for two reasons. First, EPA's existing criteria emission regulations already provide a strong motivation to engine manufacturers to reduce the frequency and duration of infrequent regeneration events. The very stringent 2010 NO_X emission standards cannot be met by engine designs that lead to frequent and extend regeneration events. Hence, we believe engine manufacturers are already reducing regeneration emissions to the greatest degree possible.

In addition to believing that regenerations are already controlled to the extent technologically possible, we believe that attempting to include regeneration emissions in the standard setting could lead to an inadvertently lax emissions standard. In order to include regeneration and set appropriate standards, EPA and NHTSA would have needed to project the regeneration frequency and duration of future engine designs in the timeframe of this proposal. Such a projection would be inherently difficult to make and quite likely would underestimate the progress engine manufacturers will make in reducing infrequent regenerations. If we underestimated that progress, we would effectively be setting a more lax set of standards than otherwise would be expected. Hence in setting a standard including regeneration emissions we faced the real possibility that we would achieve less effective CO_2 emissions control and fuel consumption reductions than we will achieve by not including regeneration emissions. We are seeking comments regarding regeneration emissions and what approach if any the agencies should use in reflecting regeneration emissions in this program.

In conclusion, for Class 7 and 8 tractors, compliance with the vehicle standard would be determined by establishing values for the variable inputs and using the prescribed inputs in GEM and compliance against the engine standard using the SET engine cycle. The model would produce CO_2 and fuel consumption results that would be compared against EPA's and NHTSA's respective standards.

(j) Chassis-Based Test Procedure

The agencies also considered proposing a chassis-based vehicle test to evaluate Class 7 and 8 tractors based on a laboratory test of the engine and vehicle together. A "chassis dynamometer test" for heavy-duty vehicles would be similar to the Federal Test Procedure used today for light-duty vehicles.

However, the agencies decided not to propose the use of a chassis test procedure to demonstrate compliance for tractor standards due to the significant technical hurdles to implementing such a program by the 2014 model year. The agencies recognize that such testing requires expensive, specialized equipment that is not yet widespread within the industry. The agencies have only identified approximately 11 heavy-duty chassis sites in the United States today and rapid installation of new facilities to comply with model year 2014 is not possible.[65]

In addition, and of equal if not greater importance, because of the enormous numbers of truck configurations that have an impact on fuel consumption, we do not believe that it would be reasonable to require testing of many combinations of tractor model configurations on a chassis dynamometer. The agencies evaluated the options available for one tractor model (provided as confidential business information from a truck manufacturer) and found that the company offered three cab configurations, six axle configurations, five front axles, 12 rear axles, 19 axle ratios, eight engines, 17 transmissions, and six tire sizes—where each of these options could impact the fuel consumption and CO_2 emissions of the

[65] For comparison, engine manufacturers typically own a large number of engine dynamometer test cells for engine development and durability (up to 100 engine dynamometers per manufacturer).

tractor. Even using representative grouping of tractors for purposes of certification, this presents the potential for many different combinations that would need to be tested if a standard was adopted based on a chassis test procedure.

Although the agencies are not proposing the use of a complete chassis based test procedure for Class 7 and 8 tractors, we believe such an approach could be appropriate in the future, if more testing facilities become available and if the agencies are able to address the complexity of tractor configurations issue described above. We request comments on the potential use of chassis based test procedures in the future to augment or replace the model based approach we are proposing.

(3) Summary of Proposed Flexibility and Credit Provisions

EPA and NHTSA are proposing four flexibility provisions specifically for heavy-duty tractor and engine manufacturers, as discussed in Section IV below. These are an averaging, banking and trading program for emissions and fuel consumption credits, as well as provisions for early credits, advanced technology credits, and credits for innovative vehicle or engine technologies which are not included as inputs to the GEM or are not demonstrated on the engine SET test cycle.

The agencies are proposing that credits earned by manufacturers under this ABT program be restricted for use to only within the same regulatory subcategory for two reasons. First, relating credits between categories is tenuous because of the differences in regulatory useful lives. We want to avoid having credits from longer useful life categories flooding shorter useful life categories, adversely impacting compliance with CO_2 or fuel consumption standards in the shorter useful life category, and we have not based the level of the standard on such impact on compliance. In addition, extending the use of credits beyond these designated categories could inadvertently have major impacts on the competitive market place, and we want to avoid such results. For example, a manufacturer which has multiple engine offerings over several regulatory categories could mix credits across engine categories and shift the burden between them, possibly impacting the competitive market place. Similarly, integrated manufacturers which produce both engines and trucks could shift credits between engines and trucks and have a similar effect. We would like to ensure that this proposal reduces the CO_2 emissions and fuel consumption but does not inadvertently have such impacts on the market place. However, we welcome comments on the extension of credits beyond the limitations we are proposing.

The agencies are also proposing to provide provisions to manufacturers for early credits, the use of advanced technologies and innovative technologies which are described in greater detail in Section IV.

(4) Deferral of Standards for Tractor and Engine Manufacturing Companies That Are Small Businesses

EPA and NHTSA are proposing to defer greenhouse gas emissions and fuel consumption standards for small tractor or engine manufacturers meeting the Small Business Administration (SBA) size criteria of a small business as described in 13 CFR 121.201.[66] The agencies will instead consider appropriate GHG and fuel consumption standards for these entities as part of a future regulatory action. This includes both U.S.-based and foreign small volume heavy-duty tractor or engine manufacturers.

The agencies have identified two entities that fit the SBA size criterion of a small business.[67] The agencies estimate that these small entities comprise less than 0.5 percent of the total heavy-duty combination tractors in the United States based on Polk Registration Data from 2003 through 2007,[68] and therefore that the exemption will have a negligible impact on the GHG emissions and fuel consumption improvements from the proposed standards.

To ensure that the agencies are aware of which companies would be exempt, we propose to require that such entities submit a declaration to EPA and NHTSA containing a detailed written description of how that manufacturer qualifies as a small entity under the provisions of 13 CFR 121.201.

C. Heavy-Duty Pickup Trucks and Vans

The primary elements of the EPA and NHTSA programs being proposed for complete HD pickups and vans are presented in this section. These provisions also cover incomplete HD pickups and vans that are sold by vehicle manufacturers as cab-chassis (chassis-cab, box-delete, bed-delete, cut-away van) vehicles, as discussed in detail in Section V.B(1)(e). Section II.C(1) explains the proposed form of the CO_2 and fuel consumption standards, the proposed numerical levels for those standards, and the proposed approach to phasing in the standards over time. The proposed measurement procedure for determining compliance is discussed in Section II.C(2), and the proposed EPA and NHTSA compliance programs are discussed in Section II.C(3). Sections II.C(4) discusses proposed implementation flexibility provisions. Section II.E discusses additional standards and provisions for N_2O and CH_4 emissions, for impacts from vehicle air conditioning, and for ethanol-fueled and electric vehicles.

(1) What Are the Proposed Levels and Timing of HD Pickup and Van Standards?

(a) Vehicle-Based Standards

About 90 percent of Class 2b and 3 vehicles are pickup trucks, passenger vans, and work vans that are sold by the vehicle manufacturers as complete vehicles, ready for use on the road. In addition, most of these complete HD pickups and vans are covered by CAA vehicle emissions standards for criteria pollutants today (*i.e.,* they are chassis tested similar to light-duty), expressed in grams per mile. This distinguishes this category from other, larger heavy-duty vehicles that typically have only the engines covered by CAA engine emission standards, expressed in grams per brake horsepower-hour.[69] As a result, Class 2b and 3 complete vehicles share much more in common with light-duty trucks than with other heavy-duty vehicles.

Three of these commonalities are especially significant: (1) Over 95 percent of the HD pickups and vans sold in the United States are produced by Ford, General Motors, and Chrysler—three companies with large light-duty vehicle and light-duty truck sales in the United States, (2) these companies typically base their HD pickup and van designs on higher sales volume light-duty truck platforms and technologies, often incorporating new light-duty truck design features into HD pickups and vans at their next design cycle, and (3) at this time most complete HD pickups and vans are certified to vehicle-based rather than engine-based EPA standards. There is also the potential for substantial GHG and fuel consumption reductions from vehicle design improvements beyond engine changes (such as through optimizing aerodynamics, weight, tires, and

[66] *See* § 1036.150 and § 1037.150.

[67] The agencies have identified Ottawa Truck, Inc. and Kalmar Industries USA as two potential small tractor manufacturers.

[68] M.J. Bradley. Heavy-duty Vehicle Market Analysis. May 2009.

[69] As discussed briefly in Section I and in more detail in Section V, this regulatory category also covers some incomplete Class 2b/3 vehicles.

brakes), and the manufacturer is generally responsible for both engine and vehicle design. All of these factors together suggest that it is appropriate and reasonable to set standards for the vehicle as a whole, rather than to establish separate engine and vehicle GHG and fuel consumption standards, as is proposed for the other heavy-duty categories. This approach for complete vehicles is consistent with Recommendation 8–1 of the NAS Report, which encourages the regulation of "the final stage vehicle manufacturers since they have the greatest control over the design of the vehicle and its major subsystems that affect fuel consumption."

(b) Weight-Based Attributes

In setting heavy-duty vehicle standards it is important to take into account the great diversity of vehicle sizes, applications, and features. That diversity reflects the variety of functions performed by heavy-duty vehicles, and this in turn can affect the kind of technology that is available to control emissions and reduce fuel consumption, and its effectiveness. EPA has dealt with this diversity in the past by making weight-based distinctions where necessary, for example in setting HD vehicle standards that are different for vehicles above and below 10,000 lb GVWR, and in defining different standards and useful life requirements for light-, medium-, and heavy-heavy-duty engines. Where appropriate, distinctions based on fuel type have also been made, though with an overall goal of remaining fuel-neutral.

The joint EPA GHG and NHTSA fuel economy rules for light-duty vehicles accounted for vehicle diversity in that segment by basing standards on vehicle footprint (the wheelbase times the average track width). Passenger cars and light trucks with larger footprints are assigned numerically higher target levels for GHGs and numerically lower target levels for fuel economy in acknowledgement of the differences in technology as footprint gets larger, such that vehicles with larger footprints have an inherent tendency to burn more fuel and emit more GHGs per mile of travel. Using a footprint-based attribute to assign targets also avoids interfering with the ability of the market to offer a variety of products to maintain consumer choice.

In developing this proposal, the agencies emphasized creating a program structure that would achieve reductions in fuel consumption and GHGs based on how vehicles are used and on the work they perform in the real world, consistent with the NAS report recommendations to be mindful of HD vehicles' unique purposes. Despite the HD pickup and van similarities to light-duty vehicles, we believe that the past practice in EPA's heavy-duty program of using weight-based distinctions in dealing with the diversity of HD pickup and van products is more appropriate than using vehicle footprint. Weight-based measures such as payload and towing capability are key among the things that characterize differences in the design of vehicles, as well as differences in how the vehicles will be used. Vehicles in this category have a wide range of payload and towing capacities. These weight-based differences in design and in-use operation are the key factors in evaluating technological improvements for reducing CO_2 emissions and fuel consumption. Payload has a particularly important impact on the test results for HD pickup and van emissions and fuel consumption, because testing under existing EPA procedures for criteria pollutants is conducted with the vehicle loaded to half of its payload capacity (rather than to a flat 300 lb as in the light-duty program), and the correlation between test weight and fuel use is strong.[70]

Towing, on the other hand, does not directly factor into test weight as nothing is towed during the test. Hence only the higher curb weight caused by heavier truck components would play a role in affecting measured test results. However towing capacity can be a significant factor to consider because HD pickup truck towing capacities can be quite large, with a correspondingly large effect on design.

We note too that, from a purchaser perspective, payload and towing capability typically play a greater role than physical dimensions in influencing purchaser decisions on which heavy-duty vehicle to buy. For passenger vans, seating capacity is of course a major consideration, but this correlates closely with payload weight.

Although heavy-duty vehicles are traditionally classified by their GVWR, we do not believe that GVWR is the best weight-based attribute on which to base GHG and fuel consumption standards for this group of vehicles. GVWR is a function of not only payload capacity but of vehicle curb weight as well; in fact, it is the simple sum of the two. Allowing more GHG emissions from vehicles with higher curb weight tends to penalize lightweighted vehicles with comparable payload capabilities by making them meet more stringent standards than they would have had to meet without the weight reduction. The same would be true for another common weight-based measure, the gross vehicle combined weight, which adds the maximum combined towing and payload weight to the curb weight.

Similar concerns about using weight-based attributes that include vehicle curb weight were raised in the EPA/NHTSA proposal for light-duty GHG and fuel economy standards: "Footprint-based standards provide an incentive to use advanced lightweight materials and structures that would be discouraged by weight-based standards", and "there is less risk of 'gaming' (artificial manipulation of the attribute(s) to achieve a more favorable target) by increasing footprint under footprint-based standards than by increasing vehicle mass under weight-based standards—it is relatively easy for a manufacturer to add enough weight to a vehicle to decrease its applicable fuel economy target a significant amount, as compared to increasing vehicle footprint" (74 FR 49685, September 28, 2009). The agencies believe that using payload and towing capacities as the weight-based attributes would avoid the above-mentioned disincentive for the use of lightweighting technology by taking vehicle curb weight out of the standards determination.

After taking these considerations into account, EPA and NHTSA have decided to propose standards for HD pickups and vans based on a "work factor" attribute that combines vehicle payload capacity and vehicle towing capacity, in pounds, with an additional fixed adjustment for four-wheel drive (4wd) vehicles. This adjustment would account for the fact that 4wd, critical to enabling the many off-road heavy-duty work applications, adds roughly 500 lb to the vehicle weight. Under our proposal, target GHG and fuel consumption standards would be determined for each vehicle with a unique work factor. These targets would then be production weighted and summed to derive a manufacturer's annual fleet average standards.

To ensure consistency and help preclude gaming, we are proposing that payload capacity be defined as GVWR minus curb weight, and towing capacity as GCWR minus GVWR. We are proposing that, for purposes of determining the work factor, GCWR be defined according to SAE Recommended Practice J2807 APR2008, GVWR be defined consistent with EPA's criteria pollutants program, and curb weight be defined as in 40 CFR

[70] Section II.C(2) discusses our decision to propose that GHGs and fuel consumption for HD pickups and vans be measured using the same test conditions as in the existing EPA program for criteria pollutants.

86.1803–01. We request comment on the need to establish additional regulations or guidance to ensure that these terms are determined and applied consistently across the HD pickup and van industry for the purpose of determining standards.

Based on analysis of how CO_2 emissions and fuel consumption correlate to work factor, we believe that a straight line correlation is appropriate across the spectrum of possible HD pickups and vans, and that vehicle distinctions such as Class 2b versus Class 3 need not be made in setting standards levels for these vehicles.[71] We request comment on this proposed approach.

We note that payload/towing-dependent gram per mile and gallon per 100 mile standards for HD pickups and vans parallel the gram per ton-mile and gallon per 1,000 ton-mile standards being proposed for Class 7 and 8 combination tractors and for vocational vehicles. Both approaches account for the fact that more work is done, more fuel is burned, and more CO_2 is emitted in moving heavier loads than in moving lighter loads. Both of these load-based approaches avoid penalizing truck designers wishing to reduce GHG emissions and fuel consumption by reducing the weight of their trucks. However, the sizeable diversity in HD work truck and van applications, which go well beyond simply transporting freight, and the fact that the curb weights of these vehicles are on the order of their payload capacities, suggest that setting simple gram/ton-mile and gallon/ton-mile standards for them is not appropriate. Even so, we believe that our proposal of payload-based standards for HD pickups and vans is consistent with the NAS Report's recommendation in favor of load-specific fuel consumption standards.

These attribute-based CO_2 and fuel consumption standards are meant to be relatively consistent from a stringency perspective. Vehicles across the entire range of the HD pickup and van segment have their respective target values for CO_2 emissions and fuel consumption, and therefore all HD pickups and vans would be affected by the standard. With the proposed attribute-based standards approach, EPA and NHTSA believe there should be no significant effect on the relative distribution of vehicles with differing capabilities in the fleet, which means that buyers should still be able to purchase the vehicle that meets their needs.

(c) Proposed Standards

The agencies are proposing standards based on a technology analysis performed by EPA to determine the appropriate HD pickup and van standards. This analysis, described in detail in draft RIA Chapter 2, considered:

- The level of technology that is incorporated in current new HD pickups and vans,
- The available data on corresponding CO_2 emissions and fuel consumption for these vehicles,
- Technologies that would reduce CO_2 emissions and fuel consumption and that are judged to be feasible and appropriate for these vehicles through the 2018 model year,
- The effectiveness and cost of these technologies for HD pickup and vans,
- Projections of future U.S. sales for HD pickup and vans, and
- Forecasts of manufacturers' product redesign schedules.

Based on this analysis, EPA is proposing the CO_2 attribute-based target standards shown in Figure II–1 and II–2, and NHTSA is proposing the equivalent attribute-based fuel consumption target standards, also shown in Figure II–1 and II–2, applicable in model year 2018. These figures also shows phase-in standards for model years before 2018, and their derivation is explained below, along with alternative implementation schedules to ensure equivalency between the EPA and NHTSA programs while meeting statutory obligations. Also, for reasons discussed below, separate targets are being established for gasoline-fueled (and any other Otto-cycle) vehicles and diesel-fueled (and any other Diesel-cycle) vehicles. The targets would be used to determine the production-weighted standards that apply to the combined diesel and gasoline fleet of HD pickups and vans produced by a manufacturer in each model year.

[71] Memorandum from Anthony Neam and Jeff Cherry, U.S.EPA, to docket EPA–HQ–OAR–2010–0162, October 18, 2010.

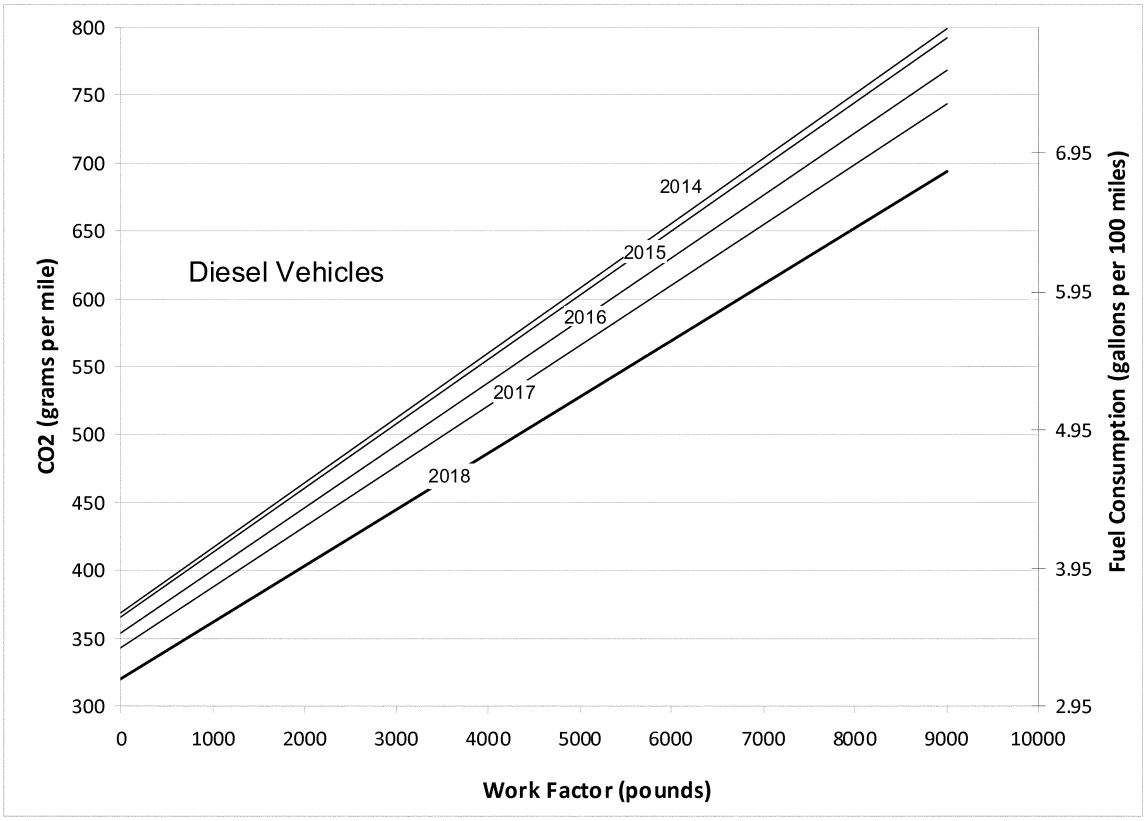


Figure II-1: Proposed EPA CO_2 Target Standards and NHTSA Fuel Consumption Target Standards for Diesel HD Pickups and Vans[72]

[72] The NHTSA proposal provides voluntary standards for model years 2014 and 2015. Target line functions for 2016–2018 are for the second NHTSA alternative described in Section II.C(d)(ii).

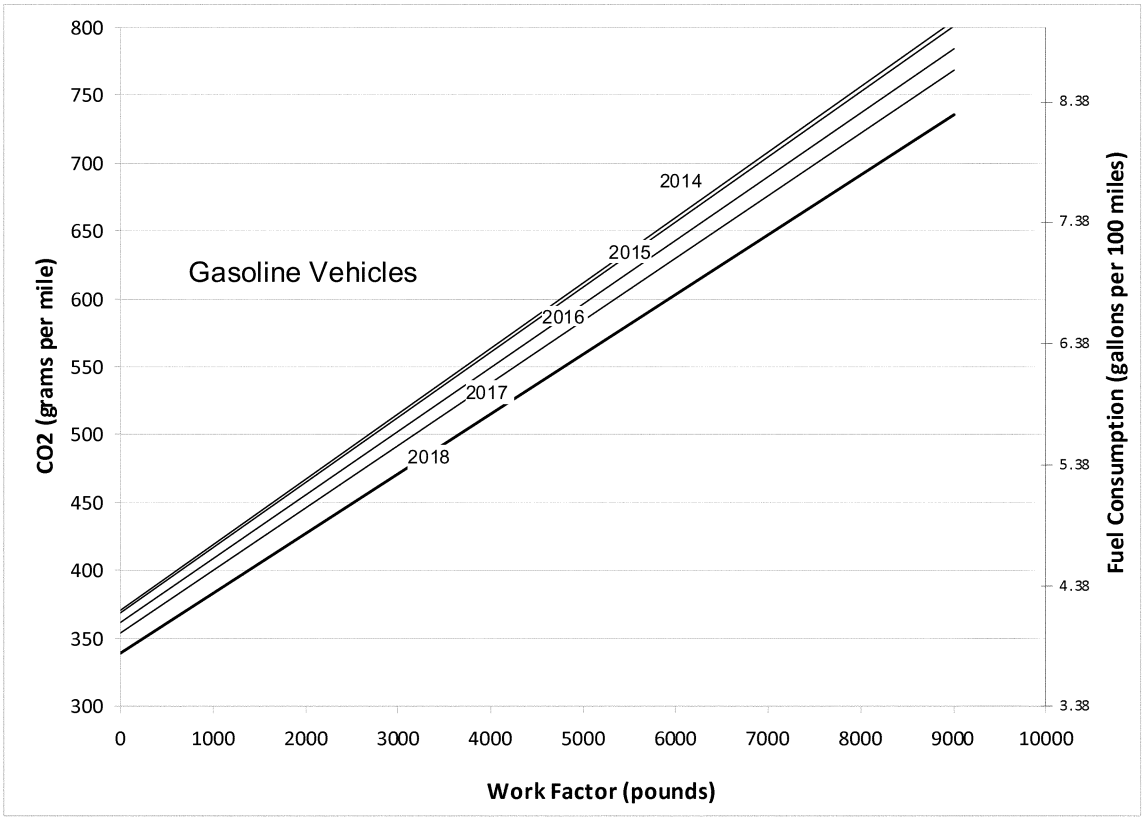


Figure II-2: Proposed EPA CO_2 Target Standards and NHTSA Fuel Consumption Target Standards for Gasoline HD Pickups and Vans[73]

Described [73] mathematically, EPA's and NHTSA's proposed functions are defined by the following formulae:

EPA CO_2 Target (g/mile) = [a × WF] + b

NHTSA Fuel Consumption Target (gallons/100 miles) = [c × WF] + d

Where:

WF = Work Factor = [0.75 × (Payload Capacity + xwd)] + [0.25 × Towing Capacity]

Payload Capacity = GVWR (lb) − Curb Weight (lb)

xwd = 500 lb if the vehicle is equipped with 4wd, otherwise equals 0 lb

Towing Capacity = GCWR (lb) − GVWR (lb)

Coefficients a, b, c, and d are taken from Table II–7 or Table II–8.[74]

[73] The NHTSA proposal provides voluntary standards for model years 2014 and 2015. Target line functions for 2016–2018 are for the second NHTSA alternative described in Section II.C(d)(ii).

[74] The NHTSA proposal provides voluntary standards for model years 2014 and 2015. Target line functions for 2016–2018 are for the second NHTSA alternative described in Section II.C(d)(ii).

Table II-7: Coefficients for Proposed HD Pickup and Van Target Standards [74]

Diesel Vehicles				
Model Year	a	b	c	d
2014	0.0478	368	0.000470	3.62
2015	0.0474	366	0.000466	3.59
2016	0.0460	354	0.000452	3.48
2017	0.0445	343	0.000437	3.37
2018	0.0416	320	0.000408	3.15
Gasoline Vehicles				
Model Year	a	b	c	d
2014	0.0482	371	0.000473	3.65
2015	0.0479	369	0.000471	3.63
2016	0.0469	362	0.000461	3.55
2017	0.0460	354	0.000452	3.48
2018	0.0440	339	0.000432	3.33

Table II-8: Coefficients Proposed for NHTSA's First Alternative and EPA's Alternative HD Pickup and Van Target Standards

Diesel Vehicles				
Model Year	a	b	c	d
2014[a]	0.0478	368	0.000470	3.62
2015[a]	0.0474	366	0.000466	3.59
2016-2018	0.0440	339	0.000432	3.33
2019	0.0416	320	0.000408	3.15
Gasoline Vehicles				
Model Year	a	b	c	d
2014[a]	0.0482	371	0.000473	3.65
2015[a]	0.0479	369	0.000471	3.63
2016-2018	0.0456	352	0.000448	3.45
2019	0.0440	339	0.000432	3.33

Notes:
[a] NHTSA standards would be voluntary in 2014 and 2015

These targets are based on a set of vehicle, engine, and transmission technologies assessed by the agencies and determined to be feasible and appropriate for HD pickups and vans in the 2014–2018 timeframe. Much of the information used to make this technology assessment was developed for the recent 2012–2016 MY light-duty vehicle rule. *See* Section III.B for a detailed analysis of these vehicle, engine and transmission technologies, including their feasibility, costs, and effectiveness in HD pickups and vans.

To calculate a manufacturer's HD pickup and van fleet average standard, the agencies are proposing that separate target curves be used for gasoline and diesel vehicles. The agencies estimate that in 2018 the target curves will achieve 15 and 10 percent reductions in CO_2 and fuel consumption for diesel and gasoline vehicles, respectively, relative to a common baseline for current (model year 2010) vehicles. An additional two percent reduction in GHGs would be achieved by the EPA program from a proposed direct air conditioning leakage standard. These reductions are based on the agencies' assessment of the feasibility of incorporating technologies (which differ significantly for gasoline and diesel powertrains) in the 2014–2018 model years, and on the differences in relative efficiency in the current gasoline and diesel vehicles. The resulting reductions represent roughly equivalent stringency

levels for gasoline and diesel vehicles, which is important in ensuring our proposed program maintains product choices available to vehicle buyers.

The NHTSA fuel consumption target curves and the EPA GHG target curves are equivalent. The agencies established the target curves using the direct relationship between fuel consumption and CO_2 using conversion factors of 8,887 g CO_2/gallon for gasoline and 10,180 g CO_2/gallon for diesel fuel.

It is expected that measured performance values for CO_2 would generally be equivalent to fuel consumption. However, as explained below in Section II. E. (3), EPA is proposing an alternative for manufacturers to demonstrate compliance with N_2O and CH_4 emissions standards through the calculation of a CO_2-equivalent (CO_2eq) emissions level that would be compared to the CO_2-based standards, similar to the recently promulgated light-duty GHG standards for model years 2012–2016. For test families that do not use this compliance alternative, the measured performance values for CO_2 and fuel consumption would be equivalent because the same test runs and measurement data would be used to determine both values, and calculated fuel consumption would be based on the same conversion factors that are used to establish the relationship between the CO_2 and fuel consumption target curves (8887 g CO_2/gallon for gasoline and 10,180 g CO_2/gallon for diesel fuel). In this case, for example, if a manufacturer's fleet average measured compliance value exactly meets the fleet average CO_2 standard, it will also exactly meet the fuel consumption standard. The proposed NHTSA fuel consumption program will not use a CO_2eq metric. Measured performance to standards would be based on the measurement of CO_2 with no adjustment for N_2O and CH_4. For manufacturers that choose to use the EPA CO_2eq approach, compliance with the CO_2 standard would not be directly equivalent to compliance with the NHTSA fuel consumption standard.

(d) Proposed Implementation Plan

(i) EPA Program Phase-In MY 2014–2018

EPA is proposing that the GHG standards be phased in gradually over the 2014–2018 model years, with full implementation effective in the 2018 model year. Therefore, 100 percent of a manufacturer's vehicle fleet would need to meet a fleet-average standard that would become increasingly more stringent each year of the phase-in period. For both gasoline and diesel vehicles, this phase-in would be 15–20–40–60–100 percent in model years 2014–2015–2016–2017–2018, respectively. These percentages reflect stringency increases from a baseline performance level for model year 2010, determined by the agencies based on EPA and manufacturer data. Because these vehicles are not currently regulated for GHG emissions, this phase-in takes the form of target line functions for gasoline and diesel vehicles that become increasingly stringent over the phase-in model years. These year-by-year functions have been derived in the same way as the 2018 function, by taking a percent reduction in CO_2 from a common unregulated baseline. For example, in 2014 the reduction for both diesel and gasoline vehicles would be 15% of the fully-phased-in reductions. Figures II–1 and II–2, and Table II–7, reflect this phase-in approach.

EPA is also proposing to provide manufacturers with an optional alternative implementation schedule in model years 2016 through 2018, equivalent to NHTSA's proposed first alternative for standards that do not change over these model years, described below. Under this option the phase-in would be 15–20–67–67–67–100 percent in model years 2014–2015–2016–2017–2018–2019, respectively. Table II–8, above, provides the coefficients "a" and "b" for this manufacturer's alternative. As explained below, the stringency of this alternative was established by NHTSA such that a manufacturer with a stable production volume and mix over the model year 2016–2018 period could use Averaging, Banking and Trading to comply with either alternative and have a similar credit balance at the end of model year 2018.

Under the above-described alternatives, each manufacturer would need to demonstrate compliance with the applicable fleet average standard using that year's target function over all of its HD pickups and vans starting in 2014. EPA also requests comment on a different regulatory approach to the phase-in, intended to reduce the testing and certification burden on manufacturers during the 2014–2017 phase-in years, while achieving GHG reductions on the same schedule as the proposed phase-in. In this alternative approach, each manufacturer would be required to demonstrate compliance with the final 2018 targets, but only over a predefined percentage of its HD pickup and van production. The remaining vehicles produced each year would not be regulated for GHGs. Thus this approach would have the effect of setting final standards in 2014 that do not vary over time, but with an annually increasing set of regulated vehicles. The percentage of regulated vehicles would increase each year, to 100 percent in 2018. We think it likely that manufacturers would leave the highest emitting vehicles unregulated for as long as possible under this approach, because these vehicles would tend to be the costliest to redesign or may simply be phased out of production. We therefore expect that, to be equivalent, the percentage penetration each year would be higher than the 15–20–40–60 percent penetrations required under the proposed approach. EPA requests comment on this regulatory alternative, and on what percentage penetrations are appropriate to achieve equivalent program benefits.

(ii) NHTSA Program Phase-In 2016 and Later

NHTSA is proposing to allow manufacturers to select one of two fuel consumption standard alternatives for model years 2016 and later. Manufacturers would select an alternative at the same time they submit the model year 2016 Pre-Certification Compliance Report; and, once selected, the alternative would apply for model years 2016 and later, and could not be reversed. To meet the EISA statutory requirement for three years of regulatory stability, the first alternative would define a fuel consumption target line function for gasoline vehicles and a target line function for diesel vehicles that would not change for model years 2016 and later. The proposed target line function coefficients are provided in Table II–8.

The second alternative would be equivalent to the EPA target line functions in each model year starting in 2016 and continuing afterwards. Stringency of fuel consumption standards would increase gradually for the 2016 and later model years. Relative to a model year 2010 unregulated baseline, for both gasoline and diesel vehicles, stringency would be 40, 60, and 100 percent of the 2018 target line function in model years 2016, 2017, and 2018, respectively.

The stringency of the target line functions in the first alternative for model years 2016–2017–2018–2019 is 67–67–67–100 percent, respectively, of the 2018 stringency in the second alternative. The stringency of the first alternative was established so that a manufacturer with a stable production volume and mix over the model year 2016–2018 period, could use Averaging, Banking and Trading to comply with

either alternative and have a similar credit balance at the end of model year 2018 under the EPA and NHTSA programs.

NHTSA also requests comment on a different regulatory approach that would parallel the above-described EPA regulatory alternative involving certification of a pre-defined percentage of a manufacturer's HD pickup and van production.

(iii) NHTSA Voluntary Standards Period

NHTSA is proposing that manufacturers may voluntarily opt into the NHTSA HD pickup and van program in model years 2014 or 2015. If a manufacturer elects to opt into the program, the program would become mandatory and the manufacturer would not be allowed to reverse this decision. To opt into the program, a manufacturer must declare its intent to opt in to the program at the same time it submits the Pre-Certification Compliance Report. *See* proposed regulatory text for 49 CFR 535.8 for information related to the Pre-Certification Compliance Report. If a manufacturer elects to opt into the program in 2014, the program would be mandatory for 2014 and 2015. A manufacturer would begin tracking credits and debits beginning in the model year in which they opt into the program. The handling of credits and debits would be the same as for the mandatory program.

For manufacturers that opt into NHTSA's HD pickup and van fuel consumption program in 2014 or 2015, the stringency would increase gradually each model year. Relative to a model year 2010 unregulated baseline, for both gasoline and diesel vehicles, stringency would be 15–20 percent of the model year 2018 target line function (under the NHTSA second alternative) in model years 2014–2015, respectively. The corresponding absolute standards targets levels are provided in Figure II–1 and II–2, and the accompanying equations.

NHTSA also requests comment on a different regulatory approach that would parallel the above-described EPA regulatory alternative involving certification of a pre-defined percentage of a manufacturer's HD pickup and van production.

(2) What are the proposed HD pickup and van test cycles and procedures?

EPA and NHTSA are proposing that HD pickup and van testing be conducted using the same heavy-duty chassis test procedures currently used by EPA for measuring criteria pollutant emissions from these vehicles, but with the addition of the highway fuel economy test cycle (HFET) currently required only for light-duty vehicle GHG emissions and fuel economy testing. Although the highway cycle driving pattern would be identical to that of the light-duty test, other test parameters for running the HFET, such as test vehicle loaded weight, would be identical to those used in running the current EPA Federal Test Procedure for complete heavy-duty vehicles.

The GHG and fuel consumption results from vehicle testing on the Light-duty FTP and the HFET would be weighted by 55 percent and 45 percent, respectively, and then averaged in calculating a combined cycle result. This result corresponds with the data used to develop the proposed work factor-based CO_2 and fuel consumption standards, since the data on the baseline and technology efficiency was also developed in the context of these test procedures. The addition of the HFET and the 55/45 cycle weightings are the same as for the light-duty CO_2 and CAFE programs, as we believe the real world driving patterns for HD pickups and vans are not too unlike those of light-duty trucks, and we are not aware of data specifically on these patterns that would lead to a different choice of cycles and weightings. More importantly, we believe that the 55/45 weightings will provide for effective reductions of GHG emissions and fuel consumption from these vehicles, and that other weightings, even if they were to more precisely match real world patterns, are not likely to significantly improve the program results.

Another important parameter in ensuring a robust test program is vehicle test weight. Current EPA testing for HD pickup and van criteria pollutants is conducted with the vehicle loaded to its Adjusted Loaded Vehicle Weight (ALVW), that is, its curb weight plus ½ of the payload capacity. This is substantially more challenging than loading to the light-duty vehicle test condition of curb weight plus 300 pounds, but we believe that this loading for HD pickups and vans to ½ payload better fits their usage in the real world and would help ensure that technologies meeting the standards do in fact provide real world reductions. The choice is likewise consistent with use of an attribute based in considerable part on payload for the standard. We see no reason to set test load conditions differently for GHGs and fuel consumption than for criteria pollutants, and we are not aware of any new information (such as real world load patterns) since the ALVW was originally set this way that would support a change in test loading conditions. We are therefore proposing to use ALVW for test vehicle loading in GHG and fuel consumption testing.

EPA and NHTSA request comment on the proposed test cycles, weighting factors, test loading conditions, and other factors that are important for establishing an effective GHG and fuel consumption test program. Additional provisions for our proposed testing and compliance program are provided in Section V.B.

(3) How are the HD pickup and van standards structured?

EPA and NHTSA are proposing fleet average standards for new HD pickups and vans, based on a manufacturer's new vehicle fleet makeup. In addition, EPA is proposing in-use standards that would apply to the individual vehicles in this fleet over their useful lives. The compliance provisions for these proposed fleet average and in-use standards for HD pickups and vans are largely based on the recently promulgated light-duty GHG and fuel economy program, as described below and in greater detail in Section V.B. We request comment on any compliance provisions we have taken from the light-duty program that commenters feel would not be appropriate for HD pickups and vans or that should be adjusted in some way to better regulate HD GHGs and fuel consumption cost-effectively.

(a) Fleet Average Standards

In this proposal we outline how each manufacturer would have a GHG standard and a fuel consumption standard unique to its new HD pickup and van fleet in each model year, depending on the load capacities of the vehicle models produced by that manufacturer, and on the U.S.-directed production volume of each of those models in that model year. Vehicle models with larger payload/towing capacities would have individual targets at numerically higher CO_2 and fuel consumption levels than lower payload/towing vehicles would, as discussed in Section II.C(1). The fleet average standard for a manufacturer would be a production-weighted average of the work factor-based targets assigned to unique vehicle configurations within each model type produced by the manufacturer in a model year.

The fleet average standard with which the manufacturer must comply would be based on its final production figures for the model year, and thus a final assessment of compliance would occur after production for the model year ended. Because compliance with the fleet average standards depends on

actual test group production volumes, it is not possible to determine compliance at the time the manufacturer applies for and receives an EPA certificate of conformity for a test group. Instead, at certification the manufacturer would demonstrate a level of performance for vehicles in the test group, and make a good faith demonstration that its fleet, regrouped by unique vehicle configurations within each model type, is expected to comply with its fleet average standard when the model year is over. EPA would issue a certificate for the vehicles covered by the test group based on this demonstration, and would include a condition in the certificate that if the manufacturer does not comply with the fleet average, then production vehicles from that test group will be treated as not covered by the certificate to the extent needed to bring the manufacturer's fleet average into compliance. As in the light-duty program, additional "model type" testing would be conducted by the manufacturer over the course of the model year to supplement the initial test group data. The emissions and fuel consumption levels of the test vehicles would be used to calculate the production-weighted fleet averages for the manufacturer, after application of the appropriate deterioration factor to each result to obtain a full useful life value. *See* generally 75 FR 25470–25472.

EPA and NHTSA do not currently anticipate notable deterioration of CO_2 emissions and fuel consumption performance, and are therefore proposing that an assigned deterioration factor be applied at the time of certification: an additive assigned deterioration factor of zero, or a multiplicative factor of one would be used. EPA and NHTSA anticipate that the deterioration factor would be updated from time to time, as new data regarding emissions deterioration for CO_2 are obtained and analyzed. Additionally, EPA and NHTSA may consider technology-specific deterioration factors, should data indicate that certain control technologies deteriorate differently than others. *See also* 75 FR 25474.

(b) In-Use Standards

Section 202(a)(1) of the CAA specifies that EPA set emissions standards that are applicable for the useful life of the vehicle. The in-use standards that EPA is proposing would apply to individual vehicles. NHTSA is not proposing to adopt in-use standards because it is not required under EISA, and because it is not currently anticipated that there will be any notable deterioration of fuel consumption. For the EPA proposal, compliance with the in-use standard for individual vehicles and vehicle models will not impact compliance with the fleet average standard, which will be based on the production weighted average of the new vehicles.

EPA is proposing that the in-use standards for HD pickups and vans be established by adding an adjustment factor to the full useful life emissions and fuel consumption results used to calculate the fleet average. EPA is also proposing that the useful life for these vehicles with respect to GHG emissions be set equal to their useful life for criteria pollutants: 11 years or 120,000 miles, whichever occurs first (40 CFR 86.1805–04(a)).

As discussed above, we are proposing that certification test results obtained before and during the model year be used directly to calculate the fleet average emissions for assessing compliance with the fleet average standard. Therefore, this assessment and the fleet average standard itself do not take into account test-to-test variability and production variability that can affect measured in-use levels. For this reason, EPA is proposing an adjustment factor for the in-use standard to provide some margin for production and test-to-test variability that could result in differences between the initial emission test results used to calculate the fleet average and emission results obtained during subsequent in-use testing. EPA is proposing that each model's in-use CO_2 standard would be the model-specific level used in calculating the fleet average, plus 10 percent. This is the same as the approach taken for light-duty vehicle GHG in-use standards (*See* 75 FR 25473–25474).

As it does now for heavy-duty vehicle criteria pollutants, EPA would use a variety of mechanisms to conduct assessments of compliance with the proposed in-use standards, including pre-production certification and in-use monitoring once vehicles enter customer service. The full useful life in-use standards would apply to vehicles that had entered customer service. The same standards would apply to vehicles used in pre-production and production line testing, except that deterioration factors would not be applied.

(4) What HD pickup and van flexibility provisions are being proposed?

This proposal contains substantial flexibility in how manufacturers can choose to implement the EPA and NHTSA standards while preserving their timely benefits for the environment and energy security. Primary among these flexibilities are the gradual phase-in schedule, alternative compliance paths, and corporate fleet average approach described above. Additional flexibility provisions are described briefly here and in more detail in Section IV.

As explained in Section II.C(3), we are proposing that at the end of each model year, when production for the model year is complete, a manufacturer calculate its production-weighted fleet average CO_2 and fuel consumption. Under this proposed approach, a manufacturer's HD pickup and van fleet that achieves a fleet average CO_2 or fuel consumption level better than its standard would be allowed to generate credits. Conversely, if the fleet average CO_2 or fuel consumption level does not meet its standard, the fleet would incur debits (also referred to as a shortfall).

A manufacturer whose fleet generates credits in a given model year would have several options for using those credits to offset emissions from other HD pickups and vans. These options include credit carry-back, credit carry-forward, and credit trading. These provisions exist in the 2012–2016 MY light-duty vehicle National Program, and similar provisions are part of EPA's Tier 2 program for light-duty vehicle criteria pollutant emissions, as well as many other mobile source standards issued by EPA under the CAA. The manufacturer would be able to carry back credits to offset a deficit that had accrued in a prior model year and was subsequently carried over to the current model year, with a limitation on the carry-back of credits to three years, consistent with the light-duty program. We are proposing that, after satisfying any need to offset pre-existing deficits, a manufacturer may bank remaining credits for use in future years. We are also proposing that manufacturers may certify their HD pickup and van fleet a year early, in MY 2013, to generate credits against the MY 2014 standards. This averaging, banking, and trading program for HD pickups and vans is discussed in more detail in Section IV.A. For reasons discussed in detail in that section, we are not proposing any credit transferability to or from other credit programs, such as the light-duty GHG and fuel consumption programs or the proposed heavy-duty engine ABT program.

Consistent with the President's May 21, 2010 directive to promote advanced technology vehicles, we are proposing and seeking comment on flexibility provisions that would parallel similar provisions adopted in the light-duty program. These include credits for advance technology vehicles such as electric vehicles, and credits for

innovative technologies that are shown by the manufacturer to provide GHG and fuel consumption reductions in real world driving, but not on the test cycle. *See* Section IV.B.

We believe that it may also be appropriate to take steps to recognize the benefits of flexible-fueled vehicles (FFVs) and dedicated alternative-fueled vehicles based on the approach taken by EPA in the light-duty vehicle rule for later models years (2016 and later). However, unlike in that rule, we do not believe it is appropriate to create a provision for additional credits similar to the 2012–2015 light-duty program because the HD sector does not have the incentives mandated in EISA for light-duty vehicles. In fact, since heavy-duty vehicles were not included in the EISA incentives for FFVs, manufacturers have not in the past produced FFV heavy-duty vehicles. On the other hand, we do seek comment on how to properly recognize the impact of the use of alternative fuels, and E85 in particular, in HD pickups and vans, including the proper accounting for alternative fuel use in FFVs in the real world.[75] As proposed, FFV performance would be determined in the same way as for light-duty vehicles, with a 50–50 weighting of alternative and conventional fuel test results through MY 2015, and a manufacturer-determined weighting based on demonstrated fuel use in the real world after MY 2015 (defaulting to an assumption of 100 percent conventional fuel use). For dedicated alternative fueled vehicles, NHTSA proposes that vehicles be tested with the alternative fuel, and a petroleum equivalent fuel consumption level be calculated based on the Petroleum Equivalency Factor (PEF) that is determined by the Department of Energy. However, we are accepting comment on whether to provide a flexibility program similar to the program we currently offer for light-duty FFV vehicles.

D. Class 2b–8 Vocational Vehicles

Class 2b–8 vocational vehicles consist of a very wide variety of configurations including delivery, refuse, utility, dump, cement, transit bus, shuttle bus, school bus, emergency vehicle, motor homes,[76] and tow trucks, among others. The agencies are defining that Class 2b–8 vocational vehicles are all heavy-duty vehicles which are not included in the Heavy-duty Pickup Truck and Van or the Class 7 and 8 Tractor categories, with the exception of vehicles for which the agencies are deferring setting of standards, such as small business manufacturers. In addition, recreational vehicles are included under EPA's proposed standards but are not included under NHTSA's proposed standards.

As mentioned in Section I, vocational vehicles undergo a complex build process. Often an incomplete chassis is built by a chassis manufacturer with an engine purchased from an engine manufacturer and a transmission purchased from another manufacturer. A body manufacturer purchases an incomplete chassis which is then completed by attaching the appropriate features to the chassis.

The agencies face difficulties in establishing the baseline CO_2 and fuel consumption performance for the wide variety of vocational vehicles which makes it difficult to try and set different standards for a large number of potential regulatory categories. The diversity in the vocational vehicle segment can be primarily attributed to the variety of vehicle bodies rather than to the chassis. For example, a body builder can build either a Class 6 bucket truck or a Class 6 delivery truck from the same Class 6 chassis. The aerodynamic difference between these two vehicles due to their bodies will lead to different baseline fuel consumption and GHG emissions. However, the baseline fuel consumption and emissions due to the components included in the common chassis (such as the engine, drivetrain, frame, and tires) will be the same between these two types of complete vehicles. Furthermore, the agencies evaluated the aerodynamic improvement opportunities for vocational vehicles. For example, the aerodynamics of a fire truck are impacted significantly by the equipment such as ladders located on the exterior of the truck. The agencies found little opportunity to improve the aerodynamics of the equipment on the truck. The agencies also evaluated the aerodynamic opportunities discussed in the NAS report. The panel found that there was no fuel consumption reduction opportunity through aerodynamic technologies for bucket trucks, transit buses, and refuse trucks[77] primarily due to the low vehicle speed in normal operation. The panel did report that there are opportunities to reduce the fuel consumption of straight trucks by approximately 1 percent for trucks which operate at the average speed typical of a pickup and delivery truck (30 mph), although the opportunity is greater for trucks which operate at higher speeds.[78] To overcome the lack of baseline information from the different vehicle applications without sacrificing much fuel consumption or GHG emission reduction potential, the agencies propose to set standards for the chassis manufacturers of vocational vehicles (instead of the body builders) and the engine manufacturers.

EPA is proposing CO_2 standards and NHTSA is proposing fuel consumption standards for manufacturers of chassis for new vocational vehicles and for manufacturers of heavy-duty engines installed in these vehicles. The proposed heavy-duty engine standards for CO_2 emissions and fuel consumption would focus on potential technological improvements in fuel combustion and overall engine efficiency and those proposed controls would achieve most of the emission reductions. Further reductions from the Class 2b–8 vocational vehicle itself are possible within the timeframe of these proposed regulations. Therefore, the agencies are also proposing separate standards for vocational vehicles that will focus on additional reductions that can be achieved through improvements in vehicle tires. The agencies' analyses, as discussed briefly below and in more detail later in this preamble and in the draft RIA Chapter 2, show that these proposed standards appear appropriate under each agency's respective statutory authorities. Together these standards are estimated to achieve reductions of up to 11 percent from vocational vehicles.

EPA is also proposing standards to control N_2O and CH_4 emissions from Class 2b–8 vocational vehicles. The proposed heavy-duty engine standards for both N_2O and CH_4 and details of the standard are included in the discussion in Section II. EPA is not proposing air conditioning leakage standards applying to chassis manufacturers to address HFC emissions.

As discussed further below, the agencies propose to set CO_2 and fuel consumption standards for these chassis based on tire rolling resistance improvements and for the engines based on engine technologies. The fuel consumption and GHG emissions impact of tire rolling resistance is impacted by the mass of the vehicle. However the impact of mass on rolling resistance is relatively small so the agencies propose to aggregate several vehicle weight categories under a single category for setting the standards. The agencies propose to divide the vocational vehicle segment into three broad regulatory categories—Light

[75] E85 is a blended fuel consisting of nominally 15 percent gasoline and 85 percent ethanol.

[76] *See* above for discussion of applicability of NHTSA's standards to non-commercial vehicles.

[77] *See* 2010 NAS Report, Note 19, page 133.

[78] *See* 2010 NAS Report, Note 19, page 110.

Heavy-Duty (Class 2b through 5), Medium Heavy-Duty (Class 6 and 7), and Heavy Heavy-Duty (Class 8) which is consistent with the nomenclature used in the diesel engine classification. The agencies are interested in comment on this segmentation strategy (subcategorization). As the agencies move towards future heavy-duty fuel consumption and GHG regulations for post-2017 model years, we intend to gather GHG and fuel consumption data for specific vocational applications which could be used to establish application-specific standards in the future.

(1) What are the proposed CO_2 and fuel consumption standards and their timing?

In developing the proposed standards, the agencies have evaluated the current levels of emissions and fuel consumption, the kinds of technologies that could be utilized by manufacturers to reduce emissions and fuel consumption and the associated lead time, the associated costs for the industry, fuel savings for the consumer, and the magnitude of the CO_2 and fuel savings that may be achieved. The technologies that the agencies considered while setting the proposed vehicle-level standards include improvements in lower rolling resistance tires. The technologies that the agencies considered while setting the engine standards include engine friction reduction, aftertreatment optimization, among others. The agencies' evaluation indicates that these technologies are available today in the heavy-duty tractor and light-duty vehicle markets, but have very low application rates in the vocational market. The agencies have analyzed the technical feasibility of achieving the proposed CO_2 and fuel consumption standards, based on projections of what actions manufacturers would be expected to take to reduce emissions and fuel consumption to achieve the standards, and believe that the proposed standards are cost-effective and technologically feasible and appropriate within the rulemaking time frame. EPA and NHTSA also present the estimated costs and benefits of the proposed vocational vehicle standards in Section III.

(a) Proposed Chassis Standards

As shown in Table II–9, EPA is proposing the following CO_2 standards for the 2014 model year for the Class 2b through Class 8 vocational vehicle chassis. Similarly, NHTSA is proposing the following fuel consumption standards for the 2016 model year, with voluntary standards beginning in the 2014 model year. For the EPA GHG program, the proposed standard applies throughout the useful life of the vehicle.

EPA and NHTSA are proposing more stringent vehicle standards for the 2017 model year which reflect the CO_2 emissions reductions required through the 2017 model year engine standards. As explained in Section II. D. (2)(c)(iv) below, engine performance is one of the inputs into the compliance model, and that input will change in 2017 to reflect the 2017 MY engine standards. The 2017 MY vehicle standards are not premised on manufacturers installing additional vehicle technologies.

Table II-9: Proposed Class 2b-8 Vocational Vehicle CO_2 and Fuel Consumption Standards

EPA CO_2 (gram/ton-mile) Standard Effective 2014 Model Year			
	Light Heavy-Duty Class 2b-5	Medium Heavy-Duty Class 6-7	Heavy Heavy-Duty Class 8
CO_2 Emissions	358	212	109
NHTSA Fuel Consumption (gallon per 1,000 ton-mile) Standard Effective 2016 Model Year[79]			
	Light Heavy-Duty Class 2b-5	Medium Heavy-Duty Class 6-7	Heavy Heavy-Duty Class 8
Fuel Consumption	35.2	20.8	10.7
EPA CO_2 (gram/ton-mile) Standard Effective 2017 Model Year			
	Light Heavy-Duty Class 2b-5	Medium Heavy-Duty Class 6-7	Heavy Heavy-Duty Class 8
CO_2 Emissions	344	204	107
NHTSA Fuel Consumption (gallon per ton-mile) Standard Effective 2017 Model Year			
	Light Heavy-Duty Class 2b-5	Medium Heavy-Duty Class 6-7	Heavy Heavy-Duty Class 8
Fuel Consumption	33.8	20.0	10.5

(i) Off-Road Vocational Vehicle Standards

In developing the proposal EPA and NHSTA received comment from manufacturers and owners that certain vocational vehicles sometimes have very limited on-road usage. These trucks are defined to be motor vehicles under 40 CFR 85.1703, but they will spend the majority of their operations off-road. Trucks, such as those used in oil fields, will experience little benefit from low rolling resistance tires. The agencies are therefore proposing to allow a narrow range of these *de facto* off-road trucks to be excluded from the proposed vocational vehicle standards because the trucks require special off-road tires such as lug tires. The trucks must still use a certified engine, which will provide fuel consumption and CO_2 emission reductions to the truck in all

[79] Manufacturers may voluntarily opt-in to the NHTSA fuel consumption program in 2014 or 2015. If a manufacturer opts-in, the program becomes mandatory.

applications. To insure that these trucks are in fact used chiefly off-road, the agencies are proposing requirements that the vehicles have off-road tires, have limited high speed operation, and are designed for specific off-road applications. The agencies are specifically proposing that a truck must meet the following requirements to qualify for an exemption from the vocational vehicle standards:

- Installed tires which are lug tires or contain a speed rating of less than or equal to 60 mph; and
- Include a vehicle speed limiter governed to 55 mph.

EPA and NHTSA have concluded that the on-road performance losses and additional costs to develop a truck which meets these specifications will limit the exemption to trucks built for the desired purposes. The agencies welcome comment on the proposed requirements and exemptions.

(b) Proposed Heavy-duty Engine Standards

EPA is proposing GHG standards [80] and NHTSA is proposing fuel consumption standards for new heavy-duty engines installed in vocational vehicles. The standards will vary depending on whether the engines are diesel or gasoline powered. The agencies' analyses, as discussed briefly below and in more detail later in this preamble and in the draft RIA Chapter 2, show that these standards are appropriate and feasible under each agency's respective statutory authorities.

The agencies have analyzed the feasibility of achieving the GHG and fuel consumption standards, based on projections of what actions manufacturers are expected to take to reduce emissions and fuel consumption. EPA and NHTSA also present the estimated costs and benefits of the heavy-duty engine standards in Section III. In developing the proposed rules, the agencies have evaluated the kinds of technologies that could be utilized by engine manufacturers compared to a baseline engine, as well as the associated costs for the industry and fuel savings for the consumer and the magnitude of the GHG and fuel consumption savings that may be achieved.

With respect to the lead time and cost of incorporating technology improvements that reduce GHG emissions and fuel consumption, the agencies place important weight on the fact that during MYs 2014–2017, engine manufacturers are expected to redesign and upgrade their products only once. Over these four model years there will be an opportunity for manufacturers to evaluate almost every one of their engine models and add technology in a cost-effective way to control GHG emissions and reduce fuel consumption. The time-frame and levels for the standards, as well as the ability to average, bank and trade credits and carry a deficit forward for a limited time, are expected to provide manufacturers the time needed to incorporate technology that will achieve the proposed GHG and fuel consumption reductions, and to do this as part of the normal engine redesign process. This is an important aspect of the proposed rules, as it will avoid the much higher costs that would occur if manufacturers needed to add or change technology at times other than these scheduled redesigns. This time period will also provide manufacturers the opportunity to plan for compliance using a multi-year time frame, again in accord with their normal business practice. Further details on lead time, redesigns and technical feasibility can be found in Section III.

EPA's existing criteria pollutant emissions regulations for heavy-duty highway engines establish four regulatory categories (three for compression-ignition or diesel engines and one for spark ignition or gasoline engines) that represent the engine's intended and primary truck application, as shown in Table II–10 (40 CFR 1036.140). The agencies welcome comments on the existing definition of the regulatory categories (such as typical horsepower levels) as described in 40 CFR 1036.140. All heavy-duty engines are covered either under the heavy-duty pickup truck and van category or under the heavy-duty engine standards.

Table II-10: Engine Regulatory Subcategories

Engine Category	Intended Application
Light Heavy-duty (LHD) Diesel	Class 2b through Class 5 trucks (8,501 through 19,500 pounds GVWR)
Medium Heavy-duty (MHD) Diesel	Class 6 and Class 7 trucks (19,501 through 33,000 pounds GVWR)
Heavy Heavy-duty (HHD) Diesel	Class 8 trucks (33,001 pounds and greater GVWR
Gasoline	Incomplete vehicles less than 14,000 pounds GVWR and all vehicles (complete or incomplete) greater than 14,000 pounds GVWR

For the purposes of the GHG engine emissions and engine fuel consumption standards that EPA and NHTSA are proposing, the agencies intend to maintain these same four regulatory subcategories for GHG engine emissions standards and fuel consumption standards. This category structure would enable the agencies to set standards that appropriately reflect the technology available for engines for use in each type of vehicle.

(i) Diesel Engine Standards

EPA's proposed heavy-duty diesel engine CO_2 emission standards are presented in Table II–11. Similar to EPA's non-GHG standards approach, manufacturers may generate and use credits to show compliance with the standards. The EPA standards become effective in 2014 model year, with more stringent standards becoming effective in model year 2017. Recently, EPA's

[80] Specifically, EPA is proposing CO_2, N_2O, and CH_4 emissions standards for new heavy-duty engines over an EPA specified useful life period (*see* Section II. E. for the N_2O and CH_4 standards).

non-GHG heavy-duty engine program provided new emissions standards for the industry in three year increments. Largely, the heavy-duty engine and truck manufacturer product plans have fallen into three year cycles to reflect this environment. The proposed two-step CO_2 emission standards recognize the opportunity for technology improvements over this timeframe while reflecting the typical diesel truck manufacturer product plan cycles.

NHTSA's fuel consumption standards, also presented in Table II–11, would contain voluntary engine standards starting in 2014 model year, with mandatory engine standards starting in 2017 model year, synchronizing with EPA's 2017 model year standards. A manufacturer may opt-in to NHTSA's voluntary standards in 2014, 2015 or 2016. Once a manufacturer opts-in, the standards become mandatory for the opt-in and subsequent model years, and the manufacturer may not reverse its decision. To opt into the program, a manufacture must declare its intent to opt in to the program with documented communication of the intent, at the same time it submits the Pre-Certification Compliance Report. *See* 49 CFR 535.8 for information related to the Pre-Certification Compliance Report. A manufacturer opting into the program would begin tracking credits and debits beginning in the model year in which they opt into the program.

The agencies are proposing the same standard level for the Light Heavy and Medium Heavy diesel engine categories. The agencies found that there is an overlap in the displacement of engines which are currently certified as LHDD or MHDD. The agencies developed the baseline 2010 model year CO_2 emissions from data provided to EPA by the manufacturers during the non-GHG certification process. Analysis of CO_2 emissions from 2010 model year LHD and MHDD diesel engines showed little difference between LHD and MHD diesel engine baseline CO_2 performance, which overall averaged 630 g CO_2/bhp-hr (6.19 gal/100 bhp-hr),[81] in the 2010 model year. Furthermore, the technologies available to reduce fuel consumption and CO_2 emissions from these two categories of engines are similar. The agencies are proposing to maintain these two separate engine categories with the same standard level (instead of combining them into a single category) to respect the different useful life periods associated with each category. The agencies are proposing to evaluate compliance with the LHD/MHD diesel engine standards based on the Heavy-duty FTP cycle.

The agencies found a difference in the baseline 2010 model year CO_2 and fuel consumption performance between the LHD/MHD diesel engines, which averaged 630 g CO_2/bhp-hr (6.19 gal/100 bhp-hr),[82] and the HHD diesel engines, which averaged 584 g CO_2/bhp-hr (5.74 gal/100 bhp-hr). The HHD diesel engine data is also based on manufacturer submitted CO_2 data for non-GHG emissions certification process. In addition, the agencies believe that there may be some technologies available to reduce fuel consumption and CO_2 emissions that may not be appropriate for both the LHD/MHD diesel and the HHD diesel engines, such as turbocompounding. Therefore, the agencies are proposing a standard level for HHD diesel engines which differs from the LHD/MHD diesel engine standard level likewise to be evaluated on the Heavy-duty FTP cycle.

We are proposing standards based on the Heavy-duty FTP cycle for engines used in vocational vehicles reflecting their primary use in transient operating conditions typified by both frequent accelerations and decelerations as well as some steady cruise conditions as represented on the Heavy-duty FTP. The primary reason the agencies are proposing to set two separate HHD diesel engine standards—one for HHD diesel engines used in tractors and the other for HHD diesel engines used in vocational vehicles—is to encourage engine manufacturers to install technologies appropriate to the intended use of the engine with the vehicle. Tractors spend the majority of their operation at steady state conditions, and will obtain in-use benefit of technologies such as turbocompounding and other waste heat recovery technologies during this kind of typical engine operation. Therefore, the engines installed in line haul tractors would be required to meet the standard based on the SET, which is a steady state test cycle. On the other hand, vocational vehicles such as urban delivery trucks spend more time operating in transient conditions and may not realize the benefit of this type of technology in-use. The use of the Heavy-duty FTP for these engines would focus engine design on technologies that realize in-use benefits during the kind of operation typical for these engines. Therefore, we are proposing that engines installed in vocational vehicles be required to meet the standard and demonstrate compliance over the transient Heavy-duty FTP cycle. The levels of the standards reflect the difference in baseline emissions for the different test procedures.

As noted in Section II.B above, the engine standards that EPA is proposing and the voluntary standards being proposed by NHTSA for the 2014 model year would require diesel engine manufacturers to achieve on average a three percent reduction in fuel consumption and CO_2 emissions over the baseline 2010 model year performance for the HHD diesel engines and a five percent reduction for the LHD and MHD diesel engines. The agencies' assessment of the NAS report and other literature sources indicates that there are technologies available to reduce fuel consumption by this level in the proposed timeframe in a cost-effective manner. These technologies include improved turbochargers, aftertreatment optimization, low temperature exhaust gas recirculation, and engine friction reductions. Additional discussion on technical feasibility is included in Section III below and in draft RIA Chapter 2.

Additionally, the agencies are proposing that diesel engines further reduce fuel consumption and CO_2 emissions in the 2017 model year. The proposed 2017 model year standards for the LHD and MHD diesel engines represent a 9 percent reduction from the 2010 model year. The proposed reductions represent on average a five percent decrease over the 2010 baseline for HHD diesel engines required to test compliance using the Heavy-duty FTP test cycle. The additional reductions may be achieved through the increased development of the technologies evaluated for the 2014 model year standard. *See* draft RIA Chapter 2. The agencies' analysis indicates that this type of advanced engine development will require a longer development time than the 2014 model year and therefore are proposing to provide additional lead time to allow for its introduction.

Similar to EPA's non-GHG standards approach, manufacturers may generate and use credits by the same engine subcategory to show compliance with both agencies' standards.

[81] Calculated using the conversion 10,180 g CO_2/gallon for diesel fuel.

[82] Calculated using the conversion 10,180 g CO_2/gallon for diesel fuel.

Table II-11: Proposed Vocational Diesel Engine Standards Over the Heavy-Duty FTP Cycle

Model Year	Standard	Light Heavy-Duty Diesel	Medium Heavy-Duty Diesel	Heavy Heavy-Duty Diesel
2014-2016	CO_2 Standard (g/bhp-hr)	600	600	567
	Voluntary Fuel Consumption Standard (gallon/100 bhp-hr)	5.89	5.89	5.57
2017 and Later	CO_2 Standard (g/bhp-hr)	576	576	555
	Fuel Consumption (gallon/100 bhp-hr)	5.57	5.57	5.45

In proposing these standards for diesel engines used in vocational vehicles, the agencies have looked primarily at the typical performance levels of the majority of engines in the fleet. As explained above in Section II.B, we also recognize that when regulating a category of products for the first time, there will be individual products that may deviate from this baseline level of performance. Recognizing that for these products a reduction from the industry baseline may be more costly than the agencies have assumed or perhaps even not feasible in the lead time available for these standards, EPA and NHTSA are proposing a regulatory alternative whereby a manufacturer could comply with a unique standard based on a five percent reduction from the products own 2011 baseline level. Our assessment is that this five percent reduction is appropriate and technologically feasible given the manufacturers' ability to apply similar technology packages with similar cost to what we have estimated for the primary program. For this purpose, the agencies do not see that potential obstacles are greater or lesser for engine standards which are based on the SET procedure or Heavy-duty FTP cycle. We do not believe this alternative needs to continue past 2016 since manufacturers will have had ample opportunity to benchmark competitive products and make appropriate changes to bring their product performance into line with the rest of the industry.

However, we are requesting comment on the potential to extend this regulatory alternative for one additional year for a single engine family with performance measured in that year as nine percent beyond the engine's own 2011 model year baseline level. We also request comment on the level of reduction beyond the baseline that is appropriate in this alternative. The five percent level reflects the aggregate improvement beyond the baseline we are requiring of the entire industry. As this provision is intended to address potential issues for legacy products that we would expect to be replaced or significantly improved at the manufacturer's next product change, we request comment if a two percent reduction would be more appropriate. We would consider two percent rather than five percent if we were convinced that making all of the changes we have outlined in our assessment of the technical feasibility of the standards was not possible for some engines due to legacy design issues that will change in the next design cycle. We are proposing that manufacturers making use of these provisions would need to exhaust all credits within this subcategory prior to using this flexibility and would not be able to generate emissions credits from other engines in the same regulatory subcategory as the engines complying using this alternate approach.

(ii) Gasoline Engine Standard

Heavy-duty gasoline engines are also used in vocational vehicle applications. The number of engines certified in the past for this segment of vehicles is very limited and has ranged between three and five engine models. Unlike the purpose-built heavy-duty diesel engines typical of this segment, these gasoline engines are developed for heavy-duty pickup trucks and vans primarily, but are also sold as loose engines to vocational vehicle manufacturers. Therefore, the agencies evaluated these engines in parallel with the heavy-duty pickup truck and van standard development. As with the pickup truck and van segment, the agencies anticipate that the manufacturers will have only one engine re-design within the 2014–18 model years under consideration within this proposal. In our meetings with all three of the major manufacturers in this segment, confidential future product plans were shared with the agencies. Reflecting those plans and our estimates for when engine changes will be made in alignment with those product plans, we have concluded that the 2016 model year reflects the most logical model year start date for the heavy-duty gasoline engine standards. In order to meet the standards we are proposing for heavy-duty pickups and vans, we project that all manufacturers will have redesigned their gasoline engine offerings by the start of the 2016 model year. Given the small volume of loose gasoline engine sales relative to complete heavy-duty pickup sales, we think it is appropriate to set the timing for the heavy-duty gasoline engine standard in line with our projections for engine redesigns to meet the heavy-duty pickup truck standards. Therefore, NHTSA's proposed fuel consumption standard and EPA's proposed CO_2 standard for heavy-duty gasoline engines are first effective in the 2016 model year.

The baseline 2010 model year CO_2 performance of these heavy-duty gasoline engines over the Heavy-duty FTP cycle is 660 g CO_2/bhp-hr (6.48 gal/100 bhp-hr) in 2010 based on non-GHG certification data provided to EPA by the manufacturers. The agencies propose that manufacturers achieve a five percent reduction in CO_2 in the 2016 model year over the 2010 MY baseline through use of technologies such as coupled cam phasing, engine friction reduction, and stoichiometric gasoline direct injection. Additional detail on technology feasibility is included in Section III and in the draft RIA Chapter 2.

NHTSA is proposing a 7.05 gallon/100 bhp-hr standard for fuel consumption while EPA is proposing a 627 g CO_2/bhp-hr standard tested over the Heavy-duty FTP, effective in the 2016 model year. Similar to EPA's non-GHG standards approach, manufacturers may generate and use credits by the same engine subcategory to show compliance with both agencies' standards.

In the preceding section on diesel engines, we describe an alternative compliance approach for diesel engines based on improvements from an engine's own baseline of performance. We are not making a similar proposal for gasoline engines, but we request comment on the need for and appropriateness of such an approach. Comments suggesting the need for a

similar approach should include specific recommendations on how the approach would work and the technical reasons why such an approach would be necessary in order to make the gasoline engine standards feasible.

(c) In-Use Standards

Section 202(a)(1) of the CAA specifies that emissions standards are to be applicable for the useful life of the vehicle. The in-use standards that EPA is proposing would apply to individual vehicles and engines. NHTSA is not proposing to adopt in-use standards that would apply to the vehicles and engines in a similar fashion.

EPA is proposing that the in-use standards for heavy-duty engines installed in vocational vehicles be established by adding an adjustment factor to the full useful life emissions and fuel consumption results. EPA is proposing a 2 percent adjustment factor for the in-use standard to provide some margin for production and test-to-test variability that could result in differences between the initial emission test results and emission results obtained during subsequent in-use testing.

EPA is proposing that the useful life for these engine and vehicles with respect to GHG emissions be set equal to the respective useful life periods for criteria pollutants. EPA proposes that the existing engine useful life periods, as included in Table II–12, be broadened to include CO_2 emissions and fuel consumption for both engines and tractors (*see* 40 CFR 86.004–2). While NHTSA proposes to use useful life considerations for establishing fuel consumption performance for initial compliance and for ABT, NHTSA does not intend to implement an in-use compliance program for fuel consumption, because it is not required under EISA and because it is not currently anticipated there will be notable deterioration of fuel consumption over the engines' useful life.

Table II-12: Proposed Useful Life Periods

	Years	Miles
Class 2b-5 Vocational Vehicles, Spark Ignited, and Light Heavy-Duty Diesel Engines	10	110,000
Class 6-7 Vocational Vehicles and Medium Heavy-Duty Diesel Engines	10	185,000
Class 8 Vocational Vehicles and Heavy Heavy-Duty Diesel Engines	10	435,000

EPA requests comments on the magnitude and need for an in-use adjustment factor for the engine standard and the compliance model GEM, based chassis standard.

(2) Test Procedures and Related Issues

The agencies are proposing test procedures to evaluate fuel consumption and CO2 emissions of vocational vehicles in a manner very similar to Class 7 and Class 8 combination tractors. This section describes a simulation model for demonstrating compliance, engine test procedures, and a test procedure for evaluating hybrid powertrains (a potential means of generating credits, although not part of the technology on which the proposed standard is premised).

(a) Computer Simulation Model

As previously mentioned, to achieve the goal of reducing emissions and fuel consumption for both trucks and engines, we are proposing to set separate engine and vehicle-based emission standards. For the vocational vehicles, engine manufacturers would be subject to the engine standards, and chassis manufacturers would be required to install certified engines in their chassis. The chassis manufacturer would be subject to a separate vehicle-based standard that would use the proposed truck simulation model to evaluate the impact of the tire design to determine compliance with the truck standard.

A simulation model, in general, uses various inputs to characterize a vehicle's properties (such as weight, aerodynamics, and rolling resistance) and predicts how the vehicle would behave on the road when it follows a driving cycle (vehicle speed versus time). On a second-by-second basis, the model determines how much engine power needs to be generated for the vehicle to follow the driving cycle as closely as possible. The engine power is then transmitted to the wheels through transmission, driveline, and axles to move the vehicle according to the driving cycle. The second-by-second fuel consumption of the vehicle, which corresponds to the engine power demand to move the vehicle, is then calculated according to the fuel consumption map embedded in the compliance model. Similar to a chassis dynamometer test, the second-by-second fuel consumption is aggregated over the complete drive cycle to determine the fuel consumption of the vehicle.

NHTSA and EPA are proposing to evaluate fuel consumption and CO_2 emissions respectively through a simulation of whole-vehicle operation, consistent with the NAS recommendation to use a truck model to evaluate truck performance. The agencies developed the GEM for the specific purpose of this proposal to evaluate truck performance. The GEM is similar in concept to a number of vehicle simulation tools developed by commercial and government entities. The model developed by the agencies and proposed here was designed for the express purpose of vehicle compliance demonstration and is therefore simpler and less configurable than similar commercial products. This approach gives a compact and quicker tool for evaluating vehicle compliance without the overhead and costs of a more complicated model. Details of the model are included in Chapter 4 of the draft RIA.

GEM is designed to focus on the inputs most closely associated with fuel consumption and CO_2 emissions—*i.e.*, on those which have the largest impacts such as aerodynamics, rolling resistance, weight, and others.

EPA and NHTSA have validated GEM based on the chassis test results from three SmartWay certified tractors tested at Southwest Research Institute. The validation work conducted on these three vehicles is representative of the other Class 7 and 8 tractors. Many

aspects of one tractor configuration (such as the engine, transmission, axle configuration, tire sizes, and control systems) are similar to those used on the manufacturer's sister models. For example, the powertrain configuration of a sleeper cab is similar to the one used on a straight truck. Details of the validation testing and its representativeness are included in draft RIA Chapter 4. Overall, the GEM predicted the fuel consumption and CO_2 emissions within 4 percent of the chassis test procedure results for three test cycles—the California ARB Transient cycle, the California ARB High Speed Cruise cycle, and the Low Speed Cruise cycle. These cycles are very similar to the ones the agencies are proposing to utilize in compliance testing. Test to test variation for heavy-duty vehicle chassis testing can be higher than 4 percent based on driver variation. The proposed simulation model is described in greater detail in draft RIA Chapter 4 and is available for download by interested parties at (*http://www.epa.gov/otaq/*). We request comment on all aspects of this approach to compliance determination in general and to the use of the GEM in particular.

The agencies are proposing that for demonstrating compliance, a chassis manufacturer would measure the performance of tires, input the values into GEM, and compare the model's output to the standard. Tires are the only technology on which the agencies' own feasibility analysis for these vehicles is predicated. An example of the GEM input screen is included in Figure II–3. The input values for the simulation model would be derived by the manufacturer from tire test procedure proposed by the agencies in this proposal. The agencies are proposing that the remaining model inputs would be fixed values that are pre-defined by the agencies and are detailed in the draft RIA Chapter 4, including the engine fuel consumption map to be used in the simulation.

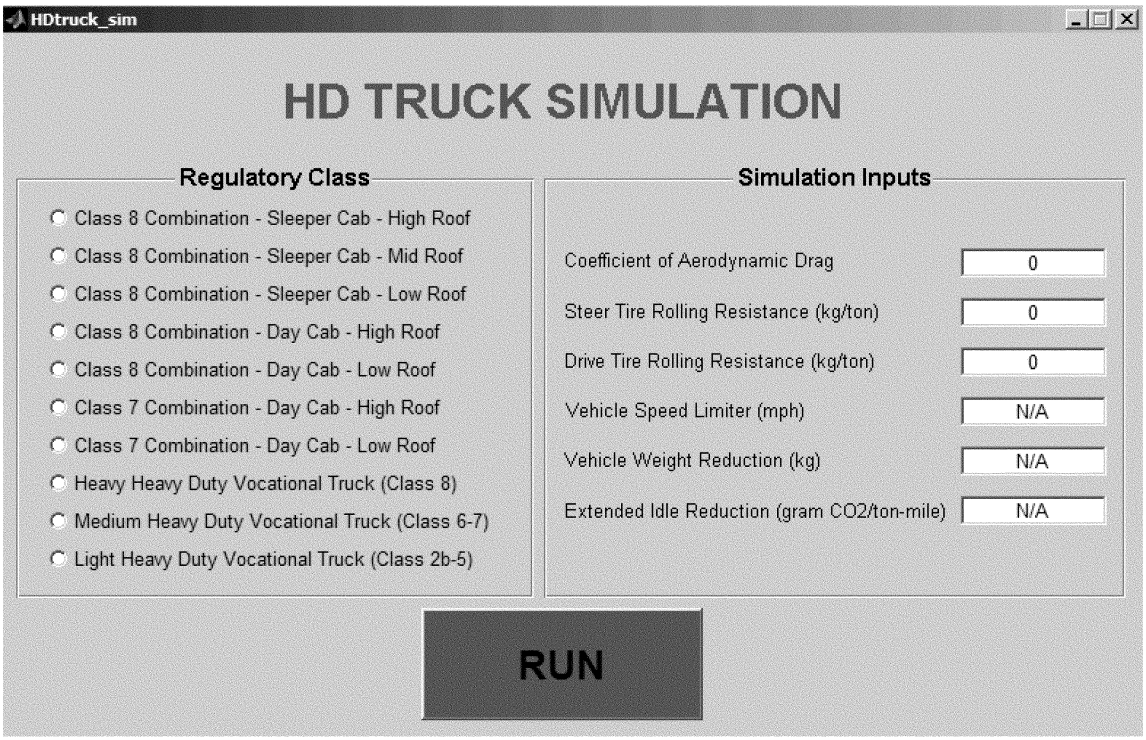


Figure II-3: Example GEM Input Screen

(b)Tire Rolling Resistance Assessment

As with the Class 7 and 8 combination tractors, NHTSA and EPA are proposing that the vocational vehicle's tire rolling resistance input to the GEM be determined using the ISO 28580:2009 test method.[83] The agencies believe the ISO test procedure is appropriate to propose for this program because the procedure is the same one used by the NHTSA tire fuel efficiency labeling program[84] and is consistent with the direction being taken by the tire industry both in the United States and Europe, and with the EPA SmartWay program. The rolling resistance from this test would be used to specify the rolling resistance of each tire on the steer and drive axle of the vehicle. The results would be expressed as a rolling resistance coefficient and measured as kilogram per ton (kg/metric ton). The agencies are proposing that three tire samples within each tire model be tested three times each to account for some of the production variability and the average of the three tests would be the rolling resistance coefficient for the tire.

(c)Defined Vehicle Configurations in the GEM

As discussed above, the agencies are proposing a methodology that chassis manufacturers would use to quantify the tire rolling resistance values to be input into the GEM. Moreover, the agencies are proposing to define the remaining

[83] ISO, 2009, Passenger Car, Truck, and Bus Tyres—Methods of Measuring Rolling Resistance—Single Point Test and Correlation of Measurement Results: ISO 28580:2009(E), First Edition, 2009–07–01.

[84] NHTSA, 2009. "NHTSA Tire Fuel Efficiency Consumer Information Program Development: Phase 1—Evaluation of Laboratory Test Protocols." DOT HS 811 119. June. (*http://www.regulations.gov*, Docket ID: NHTSA–2008–0121–0019).

GEM inputs (*i.e.,* specify them by rule), which may differ by the regulatory subcategory (for reasons described in the draft RIA). The defined inputs being proposed include the drive cycle, aerodynamics, truck curb weight, payload, engine characteristics, and drivetrain for each vehicle type, among others.

(i) Metric

Based on NAS's recommendation and feedback from the heavy-duty truck industry, NHTSA and EPA are proposing standards for vocational vehicles that would be expressed in terms of moving a ton of payload over one mile. Thus, NHTSA's proposed fuel consumption standards for these trucks would be represented as gallons of fuel used to move one ton of payload one thousand miles, or gal/1,000 ton-mile. EPA's proposed CO_2 vehicle standards would be represented as grams of CO_2 per ton-mile.

(ii) Drive cycle

The drive cycle being proposed for the vocational vehicles consists of the same three modes proposed for the Class 7–8 combination tractors. The agencies are thus proposing the use of the Transient mode, as defined by California ARB in the HHDDT cycle, a constant speed cycle at 65 mph and a 55 mph constant speed mode. However, we are proposing different weightings for each mode than proposed for Class 7 and 87 and 8 combination tractors, given the known difference in driving patterns between these two categories of vehicles. (The same reasoning underlies the agencies' proposal to use the Heavy-duty FTP cycle to evaluate compliance with the standards for diesel engines used in vocational vehicles.)

The variety of vocational vehicle applications makes it challenging to establish a single cycle which is representative of all such trucks. However, in aggregate, the vocational vehicles typically operate over shorter distances and spend less time cruising at highway speeds than combination tractors. The agencies evaluated two sources for mode weightings, as detailed in draft RIA Chapter 3. The agencies are proposing the mode weightings based on the vehicle speed characteristics of single unit trucks used in EPA's MOVES model which were developed using Federal Highway Administration data to distribute vehicle miles traveled by road type.[85] The proposed weighted CO_2 and fuel consumption value consists of 37 percent of 65 mph Cruise, 21 percent of 55 mph Cruise, and 42 percent of Transient performance, which are reflected in the GEM.

(iii) Empty Weight and Payload

The total weight of the vehicle is the sum of the tractor curb weight and the payload. The agencies are proposing to specify each of these aspects of the vehicle. The agencies developed the truck curb weight inputs based on industry information developed by ICF.[86] The proposed curb weights are 10,300 pounds for the LH trucks, 13,950 pounds for the MH trucks, and 29,000 pounds for the HH trucks.

NHTSA and EPA are also proposing the following payload requirement for each regulatory category. The payloads were developed from Federal Highway statistics based on averaging the payloads for the weight categories represented within each vehicle subcategory.[87] The proposed payload requirement is 5,700 pounds for the Light Heavy-Duty trucks, 11,200 pounds for Medium Heavy-Duty trucks, and 38,000 pounds for Heavy Heavy-Duty trucks. Additional information is available in draft RIA Chapter 3.

(iv) Engine

As the agencies are proposing separate engine and truck standards, the GEM will be used to assess the compliance of the chassis with the vehicle standard. To maintain the separate assessments, the agencies are proposing to use fixed values that are pre-defined by the agencies for the engine characteristics used in GEM, including the fuel consumption map which provides the fuel consumption at hundreds of engine speed and torque points. If the agencies did not standardize the fuel map, then a truck that uses an engine with emissions and fuel consumption better than the standards would require fewer vehicle reductions than those being proposed. The agencies are proposing that the engine characteristics used in GEM be representative of a diesel engine, because it represents the largest fraction of engines in this market.

The agencies are proposing two distinct sets of fuel consumption maps for use in GEM. The first fuel consumption map would be used in GEM for the 2014 through 2016 model years and represent a diesel engine which meets the 2014 model year engine CO_2 emissions standards. A second fuel consumption map would be used beginning in the 2017 model year and represents a diesel engine which meets the 2017 model year CO_2 emissions and fuel consumption standards and accounts for the increased stringency in the proposed MY 2017 standard). Effectively there is no change in stringency of the vocational vehicle standard (not including the engine) so that there is stability in the vocational vehicle (not including engine) standards for the full rulemaking period. These inputs are reasonable (indeed, seemingly necessitated) given the separate proposed regulatory requirement that vocational vehicle chassis manufacturers use only certified engines.

(v) Drivetrain

The agencies' assessment of the current vehicle configuration process at the truck dealer's level is that the truck companies provide software tools to specify the proper drivetrain matched to the buyer's specific circumstances. These dealer tools allow a significant amount of customization for drive cycle and payload to provide the best specification for the customer. The agencies are not seeking to disrupt this process. Optimal drivetrain selection is dependent on the engine, drive cycle (including vehicle speed and road grade), and payload. Each combination of engine, drive cycle, and payload has a single optimal transmission and final drive ratio. The agencies are proposing to specify the engine's fuel consumption map, drive cycle, and payload; therefore, it makes sense to specify the drivetrain that matches.

In conclusion, for vocational vehicles, compliance would be determined by establishing values for the tire rolling resistance and using the prescribed inputs in GEM. The model would produce CO_2 and fuel consumption results that would be compared against EPA's and NHTSA's respective standards.

(d) Engine Test Procedures

The NAS panel did not specifically discuss or recommend a metric to evaluate the fuel consumption of heavy-duty engines. However, as noted above they did recommend the use of a load-specific fuel consumption metric for the

[85] The Environmental Protection Agency. Draft MOVES2009 Highway Vehicle Population and Activity Data. EPA–420–P–09–001, August 2009 *http://www.epa.gov/otaq/models/moves/techdocs/420p09001.pdf.*

[86] ICF International. "Investigation of Costs for Strategies to Reduce Greenhouse Gas Emissions for Heavy-Duty On-Road Vehicles." July 2010. Pages 16–20. Docket ID# EPA–HQ–OAR–2010–0162–0044.

[87] The U.S. Federal Highway Administration. Development of Truck Payload Equivalent Factor. Table 11. Last viewed on March 9, 2010 at *http://ops.fhwa.dot.gov/freight/freight_analysis/faf/faf2_reports/reports9/s510_11_12_tables.htm.*

evaluation of vehicles.[88] An analogous metric for engines would be the amount of fuel consumed per unit of work. Thus, EPA is proposing that GHG emission standards for engines under the CAA would be expressed as g/bhp-hr: similarly, NHTSA's proposed fuel consumption standards under EISA would be represented as gallons of fuel per 100 horsepower-hour (gal/100 bhp-hr). EPA's metric is also consistent with EPA's current standards for non-GHG emissions for these engines.

EPA's criteria pollutant standards for engines currently require that manufacturers demonstrate compliance over the transient FTP cycle; over the steady-state SET procedure; and during not-to-exceed testing. EPA created this multi-layered approach to criteria emissions control in response to engine designs that optimized operation for lowest fuel consumption at the expense of very high criteria emissions when operated off the regulatory cycle. EPA's use of multiple test procedures for criteria pollutants helps to ensure that manufacturers calibrate engine systems for compliance under all operating conditions. With regard to GHG and fuel consumption control, the agencies believe it is more appropriate to set standards based on a single test procedure, either the Heavy-duty FTP or SET, depending on the primary expected use of the engine.

As discussed above, it is critical to set standards based on the most representative test cycles in order for performance in-use to obtain the intended (and feasible) air quality benefits. We further explained why the Heavy-duty FTP is the appropriate test cycle for engines used in vocational vehicles, and the steady-state SET procedure the most appropriate for engines used in combination tractors. We are not concerned if off-cycle manufacturers further calibrate these designs to give better in-use fuel consumption while maintaining compliance with the criteria emissions standards as such calibration is entirely consistent with the goals of our joint program. Further, we believe that setting standards based on both transient and steady-state operating conditions for all engines could lead to undesirable outcomes. For example, as noted earlier, turbocompounding is one technology that the agencies have identified as a likely approach for compliance with our proposed HHD SET standard described below. Turbocompounding is a very effective approach to lower fuel consumption under steady driving conditions typified by combination tractor trailer operation and is well reflected in testing over the SET test procedure. However, when used in driving typified by transient operation as we expect for vocational vehicles and as is represented by the Heavy-duty FTP, turbocompounding shows very little benefit. Setting an emission standard based on the Heavy-duty FTP for engines intended for use in combination tractor trailers could lead manufacturers to not apply turbocompounding even though it can be a highly cost effective means to reduce GHG emissions and lower fuel consumption.

The current non-GHG emissions engine test procedures also require the development of regeneration emission rates and frequency factors to account for the emission changes during a regeneration event (40 CFR 86.004–28). EPA and NHTSA are proposing to exclude the CO_2 emissions and fuel consumption increases due to regeneration from the calculation of the compliance levels over the defined test procedures. We considered including regeneration in the estimate of fuel consumption and GHG emissions and have decided not to do so for two reasons. First, EPA's existing criteria emission regulations already provide a strong motivation to engine manufacturers to reduce the frequency and duration of infrequent regeneration events. The very stringent 2010 NO_X emission standards cannot be met by engine designs that lead to frequent and extended regeneration events. Hence, we believe engine manufacturers are already reducing regeneration emissions to the greatest degree possible. In addition to believing that regenerations are already controlled to the extent technologically possible, we believe that attempting to include regeneration emissions in the standard setting could lead to an inadvertently lax emissions standard. In order to include regeneration and set appropriate standards, EPA and NHTSA would have needed to project the regeneration frequency and duration of future engine designs in the timeframe of this proposal. Such a projection would be inherently difficult to make and quite likely would underestimate the progress engine manufacturers will make in reducing infrequent regenerations. If we underestimated that progress, we would effectively be setting a more lax set of standards than otherwise would be expected. Hence in setting a standard including regeneration emissions we faced the real possibility that we would achieve less effective CO_2 emissions control and fuel consumption reductions than we will achieve by not including regeneration emissions. We are seeking comments regarding regeneration emissions and what approach if any the agencies should use in reflecting regeneration emissions in this program.

(e) Hybrid Powertrain Technology

Although the proposed vocational vehicle standards are not premised on use of hybrid powertrains, certain vocational vehicle applications may be suitable candidates for use of hybrids due to the greater frequency of stop-and-go urban operation and their use of power take-off (PTO) systems. Examples are vocational vehicles used predominantly in stop-start urban driving (*e.g.,* delivery trucks). As an incentive, the agencies are proposing to provide credits for the use of hybrid powertrain technology as described in Section IV. The agencies are proposing that any credits generated using such technologies could be applied to any heavy-duty vehicle or engine, and not be limited to the vehicle category generating the credit. Section IV below also details the proposed approach to account for the use of a hybrid powertrain when evaluating compliance with the truck standard. In general, manufacturers can derive the fuel consumption and CO_2 emissions reductions based on comparative test results using the proposed chassis testing procedures. We are proposing the same three drive cycles and cycle weightings discussed for the vocational vehicles to evaluate trucks that use hybrid powertrains to power the vehicle during motive operation (such as pickup and delivery trucks and transit buses). However, we are proposing an additional PTO test cycle for trucks which use a PTO to power equipment while the vehicle is either idling or moving (such as bucket or refuse trucks). The reductions due to the hybrid technology would be calculated relative to the same type of vehicle with a conventional powertrain tested using the same protocol.

(3) Summary of Proposed Flexibility and Credit Provisions

EPA and NHTSA are proposing a number of flexibility provisions for vocational vehicle chassis manufacturers and engine manufacturers, as discussed in Section IV below. These provisions are all based on an averaging, banking and trading program for emissions and fuel consumption credits. They include provisions to encourage the introduction of advanced technologies such as hybrid drivetrains, provisions to

[88] *See* 2010 NAS Report, Note 19, page 39.

incentivize early compliance with the proposed standards, and provisions to allow compliance using innovative technologies unanticipated by the agencies in developing this proposal.

(4) Deferral of Standards for Small Chassis Manufacturing and Small Engine Companies

EPA and NHTSA are proposing to defer greenhouse gas emissions and fuel consumption standards from small vocational vehicle chassis manufacturers meeting the SBA size criteria of a small business as described in 13 CFR 121.201 (*see* 40 CFR 1036.150 and 1037.150). The agencies will instead consider appropriate GHG and fuel consumption standards for these entities as part of a future regulatory action. This includes both U.S.-based and foreign small volume heavy-duty truck and engine manufacturers.

The agencies have identified ten chassis entities that appear to fit the SBA size criterion of a small business.[89] The agencies estimate that these small entities comprise less than 0.5 percent of the total heavy-duty vocational vehicle market in the United States based on Polk Registration Data from 2003 through 2007,[90] and therefore that the exemption will have a negligible impact on the GHG emissions and fuel consumption improvements from the proposed standards.

EPA and NHTSA have also identified three engine manufacturing entities that appear to fit the SBA size criteria of a small business based on company information included in Hoover's.[91] Based on 2008 and 2009 model year engine certification data submitted to EPA for non-GHG emissions standards, the agencies estimate that these small entities comprise less than 0.1 percent of the total heavy-duty engine sales in the United States. The proposed exemption from the standards established under this proposal would have a negligible impact on the GHG emissions and fuel consumption reductions otherwise due to the standards.

To ensure that the agencies are aware of which companies would be exempt, we propose to require that such entities submit a declaration to EPA and NHTSA containing a detailed written description of how that manufacturer qualifies as a small entity under the provisions of 13 CFR 121.201.

E. Other Standards Provisions

In addition to proposing CO_2 emission standards for heavy-duty vehicles and engines, EPA is also proposing separate standards for N_2O and CH_4 emissions.[92] NHTSA is not proposing comparable separate standards for these GHGs because they are not directly related to fuel consumption in the same way that CO_2 is, and NHTSA's authority under EISA exclusively relates to fuel efficiency. N_2O and CH_4 are important GHGs that contribute to global warming, more so than CO_2 for the same amount of emissions due to their high Global Warming Potential (GWP).[93] EPA is proposing N_2O and CH_4 standards which apply to HD pickup trucks and vans as well as to all heavy-duty engines. EPA is not proposing N_2O and CH_4 standards for the Class 7 and 8 tractor or Class 2b–8 chassis manufacturers because these emissions would be controlled through the engine program.

EPA is requesting comment in Section II.E.4 below on possible alternative CO_2 equivalent approaches to provide near-term flexibility for 2012–14 MY light-duty vehicles.

Almost universally across current engine designs, both gasoline- and diesel-fueled, N_2O and CH_4 emissions are relatively low today and EPA does not believe it would be appropriate or feasible to require reductions from the levels of current gasoline and diesel engines. This is because for the most part, the same hardware and controls used by heavy-duty engines and vehicles that have been optimized for nonmethane hydrocarbon (NMHC) and NO_X control indirectly result in highly effective control of N_2O and CH_4. Additionally, unlike criteria pollutants, specific technologies beyond those presently implemented in heavy-duty vehicles to meet existing emission requirements have not surfaced that specifically target reductions in N_2O or CH_4. Because of this, reductions in N_2O or CH_4 beyond current levels in most heavy-duty applications would occur through the same mechanisms that result in NMHC and NO_X reductions and would likely result in an increase in the overall stringency of the criteria pollutant emission standards. Nevertheless, it is important that future engine technologies or fuels not currently researched do not result in increases in these emissions, and this is the intent of the proposed "cap" standards. The proposed standards would act to cap emissions at today's levels to ensure that manufacturers maintain effective N_2O and CH_4 emissions controls currently used should they choose a different technology path from what is currently used to control NMHC and NO_X but also largely successful methods for controlling N_2O and CH_4. As discussed below, some technologies that manufacturers may adopt for reasons other than reducing fuel consumption or GHG emissions could increase N_2O and CH_4 emissions if manufacturers do not address these emissions in their overall engine and aftertreatment design and development plans. Manufacturers will be able to design and develop the engines and aftertreatment to avoid such emissions increases through appropriate emission control technology selections like those already used and available today. Because EPA believes that these standards can be capped at the same level, regardless of type of HD engine involved, the following discussion relates to all types of HD engines regardless of the vehicles in which such engines are ultimately used. In addition, since these standards are designed to cap current emissions, EPA is proposing the same standards for all of the model years to which the rules apply.

EPA believes that the proposed N_2O and CH_4 cap standards would accomplish the primary goal of deterring increases in these emissions as engine and aftertreatment technologies evolve because manufacturers will continue to target current or lower N_2O and CH_4 levels in order to maintain typical compliance margins. While the cap standards are set at levels that are higher than current average emission levels, the control technologies used today are highly effective and there is no reason to believe that emissions will slip to levels close to the cap, particularly considering compliance margin targets. The caps will protect against significant increases in emissions due to new or poorly implemented technologies. However, we also believe that an alternative compliance approach that allows manufacturers to convert these emissions to CO_2eq emission values and combine them with CO_2 into a single compliance value would also be appropriate, so long as it did not undermine the stringency of the CO_2 standard. As described below, EPA is proposing that such an alternative

[89] The agencies have identified Lodal, Indiana Phoenix, Autocar LLC, HME, Giradin, Azure Dynamics, DesignLine International, Ebus, Krystal Koach, and Millenium Transit Services LLC as potential small business chassis manufacturers.

[90] M.J. Bradley. Heavy-duty Vehicle Market Analysis. May 2009.

[91] The agencies have identified Baytech Corporation, Clean Fuels USA, and BAF Technologies, Inc. as three potential small businesses.

[92] NHTSA's statutory responsibilities relating to reducing fuel consumption are directly related to reducing CO_2 emissions, but not to the control of other GHGs.

[93] N_2O has a GWP of 298 and CH_4 has a GWP of 25 according to the IPCC Fourth Assessment Report.

compliance approach be available to manufacturers to provide certain flexibilities for different technologies.

EPA requests comments on the approach to regulating N_2O and CH_4 emissions including the appropriateness of "cap" standards, the technical bases for the levels of the proposed N_2O and CH_4 standards, the proposed test procedures, and the proposed timing for the standards. In addition, EPA seeks any additional emissions data on N_2O and CH_4 from current technology engines.

EPA is basing its proposed N_2O and CH_4 standards on available test data. We are soliciting additional data, and especially data for in-use vehicles and engines that would help to better characterize changes in emissions of these pollutants throughout their useful lives, for both gasoline and diesel applications. As is typical for EPA emissions standards, we are proposing that manufacturers should establish deterioration factors to ensure compliance throughout the useful life. We are not at this time aware of deterioration mechanisms for N_2O and CH_4 that would result in large deterioration factors, but neither do we believe enough is known about these mechanisms to justify proposing assigned factors corresponding to no deterioration, as we are proposing for CO_2, or for that matter to any predetermined level. We are therefore asking for comment on this subject.

In addition to N_2O and CH_4 standards, this section also discusses air conditioning-related provisions and EPA's proposal to extend certification requirements to all-electric HD vehicles and vehicles and engines designed to run on ethanol fuel.

(1) What is EPA's proposed approach to controlling N_2O?

N_2O is a global warming gas with a GWP of 298. It accounts for about 0.3% of the current greenhouse gas emissions from heavy-duty trucks.[94]

N_2O is emitted from gasoline and diesel vehicles mainly during specific catalyst temperature conditions conducive to N_2O formation. Specifically, N_2O can be generated during periods of emission hardware warm-up when rising catalyst temperatures pass through the temperature window when N_2O formation potential is possible. For current heavy-duty gasoline engines with conventional three-way catalyst technology, N_2O is not generally produced in significant amounts because the time the catalyst spends at the critical temperatures during warm-up is short. This is largely due to the need to quickly reach the higher temperatures necessary for high catalyst efficiency to achieve emission compliance of criteria pollutants. N_2O formation is generally only a concern with diesel and potentially with future gasoline lean-burn engines with compromised NO_X emissions control systems. If the risk for N_2O formation is not factored into the design of the controls, these systems can but need not be designed in a way that emphasizes efficient NO_X control while allowing the formation of significant quantities of N_2O. However, these future advanced gasoline and diesel technologies do not inherently require N_2O formation to properly control NO_X. Pathways exist today that meet criteria emission standards that would not compromise N_2O emissions in future systems as observed in current production engine and vehicle testing [95] which would also work for future diesel and gasoline technologies. Manufacturers would need to use appropriate technologies and temperature controls during future development programs with the objective to optimize for both NO_X and N_2O control. Therefore, future designs and controls at reducing criteria emissions would need to take into account the balance of reducing these emissions with the different control approaches while also preventing inadvertent N_2O formation, much like the path taken in current heavy-duty compliant engines and vehicles. Alternatively, manufacturers who find technologies that reduce criteria or CO_2 emissions but see increases N_2O emissions beyond the cap could choose to offset N_2O emissions with reduction in CO_2 as allowed in the proposed CO_2eq option discussed in Section II.E.3.

EPA is proposing an N_2O emission standard that we believe would be met by current-technology gasoline and diesel vehicles at essentially no cost. EPA believes that heavy-duty emission standards since 2008 model year, specifically the very stringent NO_X standards for both engine and chassis certified engines, directly result in stringent N_2O control. It is believed that the current emission control technologies used to meet the stringent NO_X standards achieve the maximum feasible reductions and that no additional technologies are recognized that would result in additional N_2O reductions. As noted, N_2O formation in current catalyst systems occurs, but their emission levels are inherently low, because the time the catalyst spends at the critical temperatures during warm-up when N_2O can form is short. At the same time, we believe that the proposed standard would ensure that the design of advanced NO_X control systems for future diesel and lean-burn gasoline vehicles would control N_2O emission levels. While current NO_X control approaches used on current heavy-duty diesel vehicles do not compromise N_2O emissions and actually result in N_2O control, we believe that the proposed standards would discourage any new emission control designs for diesels or lean-burn gasoline vehicles that achieve criteria emissions compliance at the cost of increased N_2O emissions. Thus, the proposed standard would cap N_2O emission levels, with the expectation that current gasoline and diesel vehicle control approaches that comply with heavy-duty vehicle emission standards for NO_X would not increase their emission levels, and that the cap would ensure that future diesel and lean-burn gasoline vehicles with advanced NO_X controls would appropriately control their emissions of N_2O.

(a) Heavy-Duty Pickup Truck and Van N_2O Exhaust Emission Standard

EPA is proposing a per-vehicle N_2O emission standard of 0.05 g/mi, measured over the Light-duty FTP and HFET drive cycles. Similar to the CO_2 standard approach, the N_2O emission level of a vehicle would be a composite of the Light-duty FTP and HFET cycles with the same 55 percent city weighting and 45 percent highway weighting. The standard would become effective in model year 2014 for all HD pickups and vans that are subject to the proposed CO_2 emission requirements. Averaging between vehicles would not be allowed. The standard is designed to prevent increases in N_2O emissions from current levels, *i.e.,* a no-backsliding standard.

The proposed N_2O level is approximately two times the average N_2O level of current gasoline and diesel heavy-duty trucks that meet the NO_X standards effective since 2008 model year.[96] Manufacturers typically use design targets for NO_X emission levels at approximately 50% of the standard, to account for in-use emissions deterioration and normal testing and production variability, and we expect manufacturers to utilize a similar approach for N_2O emission compliance. We are not proposing a more stringent

[94] Value adapted from "Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2007. April 2009.

[95] Memorandum "N_2O Data from EPA Heavy-Duty Testing".

[96] Memorandum "N_2O Data from EPA Heavy-Duty Testing".

standard for current gasoline and diesel vehicles because the stringent heavy-duty NO_X standards already result in significant N_2O control, and we do not expect current N2O levels to rise for these vehicles particularly with expected manufacturer compliance margins.

Diesel heavy-duty pickup trucks and vans with advanced emission control technology are in the early stages of development and commercialization. As this segment of the vehicle market develops, the proposed N_2O standard would require manufacturers to incorporate control strategies that minimize N_2O formation. Available approaches include using electronic controls to limit catalyst conditions that might favor N_2O formation and considering different catalyst formulations. While some of these approaches may have associated costs, EPA believes that they will be small compared to the overall costs of the advanced NO_X control technologies already required to meet heavy-duty standards.

The light-duty GHG rule requires that manufacturers begin testing for N_2O by 2015 model year. The manufacturers of complete pickup trucks and vans (Ford, General Motors, and Chrysler) are already impacted by the light-duty GHG rule and will therefore have this equipment and capability in place for the timing of this proposal.

Overall, we believe that manufacturers of HD pickups and vans (both gasoline and diesel) would meet the proposed standard without implementing any significantly new technologies, only further refinement of their existing controls, and we do not expect there to be any significant costs associated with this standard.

(b) Heavy-Duty Engine N_2O Exhaust Emission Standard

EPA is also proposing a per engine N_2O emissions standard of 0.05 g/bhp-hr for heavy-duty engines which become effective in 2014 model year. These standards remain the same over the useful life of the engine. The N_2O emissions would be measured over the Heavy-duty FTP cycle because it is believed that this cycle poses the highest risk for N_2O formation versus the additional heavy-duty compliance cycles. Averaging between vehicles would not be allowed. The standard is designed to prevent increases in N_2O emissions from current levels, *i.e.,* a no-backsliding standard.

The proposed N_2O level is twice the average N_2O level of current diesel engines as demonstrated in the ACES Study and in EPA's testing of two additional engines with selective catalytic reduction aftertreatement systems.[97] Manufacturers typically use design targets for NO_X emission levels of about 50% of the standard, to account for in-use emissions deterioration and normal testing and production variability, and manufacturers are expected to utilize a similar approach for N_2O emission compliance. EPA requests comment on the agency's technical assessment of current and potential future N_2O formation in heavy-duty engines, as presented here.

Engine emissions regulations do not currently require testing for N_2O. The Mandatory GHG Reporting final rule requires reporting of N_2O and requires that manufacturers either measure N_2O or use a compliance statement based on good engineering judgment in lieu of direct N_2O measurement (74 FR 56260, October 30, 2009). The light-duty GHG final rule allows manufacturers to provide a compliance statement based on good engineering judgment through the 2014 model year, but requires measurement beginning in 2015 model year (75 FR 25324, May 7, 2010). EPA is proposing a consistent approach for heavy-duty engine manufacturers which allows them to delay direct measurement of N_2O until the 2015 model year. EPA welcomes comments on whether there are differences in the heavy-duty market which would warrant a different approach.

Manufacturers without the capability to measure N_2O by the 2015 model year would need to acquire and install appropriate measurement equipment in response to this proposed program. EPA has established four separate N_2O measurement methods, all of which are commercially available today. EPA expects that most manufacturers would use photo-acoustic measurement equipment, which EPA estimates would result in a one-time cost of about $50,000 for each test cell that would need to be upgraded.

Overall, EPA believes that manufacturers of heavy-duty engines, both gasoline and diesel, would meet the proposed standard without implementing any new technologies, and beyond relatively small facilities costs for any companies that still need to acquire and install N_2O measurement equipment, EPA does not project that manufacturers would incur significant costs associated with this proposed N_2O standard.

EPA is not proposing any vehicle-level N_2O standards for heavy-duty trucks (combination and vocational) in this proposal. The N_2O emissions would be controlled through the heavy-duty engine portion of the program. The only requirement of those truck manufacturers to comply with the N_2O requirements is to install a certified engine.

(2) What is EPA's proposed approach to controlling CH_4?

CH_4 is greenhouse gas with a GWP of 25. It accounts for about 0.03% of the greenhouse gases from heavy-duty trucks.[98]

EPA is proposing a standard that would cap CH_4 emission levels, with the expectation that current heavy-duty vehicles and engines meeting the heavy-duty emission standards would not increase their levels as explained earlier due to robust current controls and manufacturer compliance margin targets. It would ensure that emissions would be addressed if in the future there are increases in the use of natural gas or any other alternative fuel. EPA believes that current heavy-duty emission standards, specifically the NMHC standards for both engine and chassis certified engines directly result in stringent CH_4 control. It is believed that the current emission control technologies used to meet the stringent NMHC standards achieve the maximum feasible reductions and that no additional technologies are recognized that would result in additional CH_4 reductions. The level of the standard would generally be achievable through normal emission control methods already required to meet heavy-duty emission standards for hydrocarbons and EPA is therefore not attributing any cost to this part of the proposal. Since CH_4 is produced in gasoline and diesel engines similar to other hydrocarbon components, controls targeted at reducing overall NMHC levels generally also work at reducing CH_4 emissions. Therefore, for gasoline and diesel vehicles, the heavy-duty hydrocarbon standards will generally prevent increases in CH_4 emissions levels. CH_4 from heavy-duty vehicles is relatively low compared to other GHGs largely due to the high effectiveness of the current heavy-duty standards in controlling overall HC emissions.

EPA believes that this level for the standard would be met by current gasoline and diesel trucks and vans, and would prevent increases in future CH_4

[97] Coordinating Research Council Report: ACES Phase 1 of the Advanced Collaborative Emissions Study, 2009. (This study included detailed chemical characterization of exhaust species emitted from four 2007 model year heavy heavy diesel engines.)

[98] Value adapted from "Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2007. April 2009.

emissions in the event that alternative fueled vehicles with high methane emissions, like some past dedicated compressed natural gas vehicles, become a significant part of the vehicle fleet. Currently EPA does not have separate CH_4 standards because, unlike other hydrocarbons, CH_4 does not contribute significantly to ozone formation.[99] However, CH_4 emissions levels in the gasoline and diesel heavy-duty truck fleet have nevertheless generally been controlled by the heavy-duty HC emission standards. Even so, without an emission standard for CH_4, future emission levels of CH_4 cannot be guaranteed to remain at current levels as vehicle technologies and fuels evolve.

In recent model years, a small number of heavy-duty trucks and engines were sold that were designed for dedicated use of natural gas. While emission control designs on these recent dedicated natural gas-fueled vehicles demonstrate CH_4 control can be as effective as gasoline or diesel equivalent vehicles, natural gas-fueled vehicles have historically produced significantly higher CH_4 emissions than gasoline or diesel vehicles. This is because the fuel is predominantly methane, and most of the unburned fuel that escapes combustion without being oxidized by the catalyst is emitted as methane. However, even if these vehicles meet the heavy-duty hydrocarbon standard and appear to have effective CH_4 control by nature of the hydrocarbon controls, the heavy-duty standards do not require CH_4 control and therefore some natural gas vehicle manufacturers have invested very little effort into methane control. While the proposed CH_4 cap standard should not require any different emission control designs beyond what is already required to meet heavy-duty hydrocarbon standards on a dedicated natural gas vehicle (*i.e.*, feedback controlled 3-way catalyst), the cap will ensure that systems provide robust control of methane much like a gasoline-fueled engine. We are not proposing more stringent CH_4 standards because we believe that the controls used to meet current heavy-duty hydrocarbon standards should result in effective CH_4 control when properly implemented. Since CH_4 is already measured under the current heavy-duty emissions regulations (so that it may be subtracted to calculate NMHC), the proposed standard would not result in additional testing costs. EPA requests comment on whether the proposed cap standard would result in any significant technological challenges for manufacturers of natural gas vehicles.

(a) Heavy-Duty Pickup Truck and Van CH_4 Standard

EPA is proposing a CH_4 emission standard of 0. 05 g/mi as measured on the Light-duty FTP and HFET drive cycles, to apply beginning with model year 2014 for HD pickups and vans subject to the proposed CO_2 standards. Similar to the CO_2 standard approach, the CH_4 emission level of a vehicle would be a composite of the Light-duty FTP and HFET cycles with the same 55% city weighting and 45% highway weighting.

The level of the proposed standard is approximately two times the average heavy-duty gasoline and diesel truck and van levels.[100] As with N_2O, this proposed level recognizes that manufacturers typically set emissions design targets with a compliance margin of approximately 50% of the standard. Thus, we believe that the proposed standard should be met by current gasoline vehicles with no increase from today's CH_4 levels. Similarly, since current diesel vehicles generally have even lower CH_4 emissions than gasoline vehicles, we believe that diesels would also meet the proposed standard with a larger compliance margin resulting in no change in today's CH_4 levels.

(b) Heavy-Duty Engine CH_4 Exhaust Emission Standard

EPA is proposing a heavy-duty engine CH_4 emission standard of 0.05 g/hp-hr as measured on the Heavy-duty FTP, to apply beginning in model year 2014. The proposed standard would cap CH_4 emissions at a level currently achieved by diesel and gasoline heavy-duty engines. The level of the standard would generally be achievable through normal emission control methods already required to meet 2007 emission standards for NMHC and EPA is therefore not attributing any cost to this part of this proposal (*see* 40 CFR 86.007–11).

The level of the proposed CH_4 standard is twice the average CH_4 emissions from the four diesel engines in the ACES study.[101] As with N_2O, this proposed level recognizes that manufacturers typically set emission design targets at about 50% of the standard. Thus, EPA believes the proposed standard would be met by current diesel and gasoline engines with little if any technological improvements. The agency believes a more stringent CH_4 standard is not necessary due to effective CH_4 controls in current heavy-duty technologies, since, as discussed above for N_2O, EPA believes that the challenge of complying with the CO_2 standards should be the primary focus of the manufacturers.

CH_4 is measured under the current 2007 regulations so that it may be subtracted to calculate NMHC. Therefore EPA expects that the proposed standard would not result in additional testing costs.

EPA is not proposing any vehicle-level CH_4 standards for heavy-duty trucks (combination or vocational) in this proposal. The CH_4 emissions would be controlled through the heavy-duty engine portion of the program. The only requirement of these truck manufacturers to comply with the CH_4 requirements is to install a certified engine.

(3) Alternative CO_2 Equivalent Option

If a manufacturer is unable to meet the N_2O or CH_4 cap standards, EPA is proposing that the manufacturer may choose to comply using CO_2 credits. In other words, a manufacturer could offset any N_2O emissions or any CH_4 emissions by taking steps to further reduce CO_2. A manufacturer choosing this option would convert its measured N_2O and CH_4 test results in excess of the applicable standards into CO_2eq to determine the amount of CO_2 credits required. For example, a manufacturer would use 25 Mg of positive CO_2 credits to offset 1 Mg of negative CH_4 credits or use 298 Mg of positive CO_2 credits to offset 1 Mg of negative N_2O credits.[102] By using the Global Warming Potential of N_2O and CH_4, the proposed approach recognizes the inter-correlation of these elements in impacting global warming and is environmentally neutral to meeting the proposed individual emissions caps.

The proposed NHTSA fuel consumption program will not use CO_2eq, as suggested above. Measured performance to the NHTSA fuel consumption standards will be based on the measurement of CO_2 with no adjustment for N_2O and/or CH_4. For manufacturers that use the EPA alternative CO_2eq credit, compliance to the EPA CO_2 standard will not be directly equivalent to compliance to the NHTSA fuel consumption standard.

[99] But *see Ford Motor Co.* v. *EPA*, 604 F. 2d 685 (DC Cir. 1979) (permissible for EPA to regulate CH_4 under CAA section 202(b)).

[100] Memorandum "CH_4 Data from 2010 and 2011 Heavy-Duty Vehicle Certification Tests".

[101] Coordinating Researth Council Report: ACES Phase 1 of the Advanced Collaborative Emissions Study, 2009.

[102] N_2O has a GWP of 298 and CH_4 has a GWP of 25 according to the IPCC Fourth Assessment Report.

(4) Light-Duty Vehicle N_2O and CH_4 Standards

For light-duty vehicles, as part of the MY 2012–2016 rulemaking, EPA finalized standards for N_2O and CH_4 which take effect with MY 2012. 75 FR at 25421–24. Similar to the heavy-duty standards discussed in Section II.E above, the light-duty vehicle standards for N_2O and CH_4 were established to cap emissions and prevent future emissions increases, and were generally not expected to result in the application of new technologies for current vehicle designs or significant costs for the manufacturers. EPA also finalized an alternative CO_2 equivalent standard option, which manufacturers may choose to use in lieu of complying with the otherwise-applicable N_2O and CH_4 standards. The CO_2-equivalent standard option allows manufacturers to fold all N_2O and CH_4 emissions, on a CO_2-equivalent basis, along with CO_2 into their otherwise applicable CO_2 emissions standard level. For flexible-fueled vehicles, the N_2O and CH_4 standards must be met on both fuels (*e.g.*, both gasoline and E–85).

EPA has learned since the standards were finalized that some manufacturers may have difficulty meeting the N_2O and/or CH_4 standards in the early years of the program for a few of the vehicle models in their existing fleet. This is problematic in the near-term because there is little lead time to implement unplanned redesigns of vehicles to meet the standards. In such cases, manufacturers may need to either drop vehicle models from their fleet or to comply using the CO_2 equivalent alternative. On a CO_2 equivalent basis, folding in all N_2O and CH_4 emissions would add 3–4 g/mile or more to a manufacturer's overall fleet-average CO_2 emissions level because the alternative standard must be used for the entire fleet, not just for the problem vehicles. This could be especially challenging in the early years of the program for manufacturers with little compliance margin because there is very limited lead time to develop strategies to address these additional emissions. EPA believes this poses a legitimate issue of sufficiency of lead time in the short term (as well as an issue of cost, since EPA assumed that the N_2O and CH_4 standards were essentially cost free) but expects that manufacturers would be able to make technology changes (e.g., calibration or catalyst changes) to the few vehicle models not currently meeting the N_2O and/or CH_4 standards in the course of their planned vehicle redesign schedules in order to meet the standards.

Because EPA intended for these standards to be caps with little anticipated near-term impact on manufacturer's current product lines, EPA believes that it would be appropriate to provide additional flexibility in the near-term to allow manufacturers to meet the N_2O and CH_4 standards. EPA requests comments on the option of allowing manufacturers to use the CO_2 equivalent approach for one pollutant but not the other for their fleet—that is, allowing a manufacturer to fold in either CH_4 or N_2O as part of the CO_2-equivalent standard. For example, if a manufacturer is having trouble complying with the CH_4 standard but not the N_2O standard, the manufacturer could use the N_2O equivalent option including CH_4, but choose to comply separately with the applicable N_2O cap standard. EPA requests comments on allowing this approach in the light-duty program for MYs 2012–2014 as an additional flexibility to help manufacturers address any near-term issues that they may have with the N_2O and CH_4 standards.

EPA also requests comments on possible alternative approaches of providing additional near-term flexibility. For example, as discussed in Section II.E above, EPA is proposing for HD vehicles and engines to allow manufacturers to use CO_2 credits, on a CO_2 equivalent basis, to offset N_2O and CH_4 emissions above the applicable standard. EPA requests comment on whether this approach would be appropriate for the light-duty program as an additional flexibility. Again, the additional flexibility would be limited to MYs 2012–2014 for the reasons discussed above. EPA notes that, after considering all relevant comments, provisions to address this issue may be finalized in an action independent of the heavy-duty rulemaking process in the interest of finalizing the provisions as soon as possible to provide manufacturers with certainty for MY 2012 light-duty vehicles.

(5) EPA's Proposed Standards for Direct Emissions From Air Conditioning

Air conditioning systems contribute to GHG emissions in two ways—direct emissions through refrigerant leakage and indirect exhaust emissions due to the extra load on the vehicle's engine to provide power to the air conditioning system. HFC refrigerants, which are powerful GHG pollutants, can leak from the A/C system.[103] This includes the direct leakage of refrigerant as well as the subsequent leakage associate with maintenance and servicing, and with disposal at the end of the vehicle's life.[104] The most commonly used refrigerant in automotive applications—R134a, has a high GWP of 1430.[105] Due to the high GWP of R134a, a small leakage of the refrigerant has a much greater global warming impact than a similar amount of emissions of CO_2 or other mobile source GHGs.

Heavy-duty air conditioning systems today are similar to those used in light-duty applications. However, differences may exist in terms of cooling capacity (such that sleeper cabs have larger cabin volumes than day cabs), system layout (such as the number of evaporators), and the durability requirements due to longer truck life. However, the component technologies and costs to reduce direct HFC emissions are similar between the two types of vehicles.

The quantity of GHG refrigerant emissions from heavy-duty trucks relative to the CO_2 emissions from driving the vehicle and moving freight is very small. Therefore, a credit approach is not appropriate for this segment of vehicles because the value of the credit is too small to provide sufficient incentive to utilize feasible and cost-effective air conditioning leakage improvements. For the same reason, including air conditioning leakage improvements within the main standard would in many instances result in lost control opportunities. Therefore, EPA is proposing that truck manufacturers be required to meet a low leakage requirement for all air conditioning systems installed in 2014 model year and later trucks, with one exception. The agency is not proposing leakage standards for Class 2b–8 Vocational Vehicles at this time due to the complexity in the build process and the potential for different entities besides the chassis manufacturer to be involved in the air conditioning system production and installation, with consequent difficulties in developing a regulatory system.

EPA is proposing a leakage standard which is a "percent refrigerant leakage

[103] The United States has submitted a proposal to the Montreal Protocol which, if adopted, would phase-out production and consumption of HFCs.

[104] The U.S. EPA has reclamation requirements for refrigerants in place under Title VI of the Clean Air Act.

[105] The global warming potentials used in the NPRM analysis are consistent with Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report. At this time, the global warming potential values from the IPCC Second Assessment Report have been agreed upon as the official U.S. framework for addressing climate change. The global warming potential values from the IPCC Second Assessment Report are used in the official U.S. greenhouse gas inventory submission to the climate change framework. When inventories are recalculated for the final rule, changes in global warming potential may lead to adjustments.

per year" to assure that high-quality, low-leakage components are used in each air conditioning system design. The agency believes that a single "gram of refrigerant leakage per year" would not fairly address the variety of air conditioning system designs and layouts found in the heavy-duty truck sector. EPA is proposing a standard of 1.50 percent leakage per year for Heavy-duty Pickup Trucks and Vans and Class 7 and 87 and 8 Tractors. The proposed standard was derived from the vehicles with the largest system refrigerant capacity based on the Minnesota GHG Reporting database.[106] The average percent leakage per year of the 2010 model year vehicles is 2.7 percent. This proposed level of reduction is roughly comparable to that necessary to generate credits under the light-duty vehicle program. *See* 75 FR 25426–25427. Since refrigerant leakage past the compressor shaft seal is the dominant source of leakage in belt-driven air conditioning systems, the agency is seeking comment on whether the stringency of a single "percent refrigerant leakage per year" standard fairly addresses the range of system refrigerant capacities likely to be used in heavy-duty trucks.[107] Since systems with less refrigerant may have a larger percentage of their annual leakage from the compressor shaft seal than systems with more refrigerant capacity, their relative percent refrigerant leakage per year could be higher, and a more extensive application of leakage reducing technologies could be needed to meet the standard). EPA welcomes comments relative to the stringency of the standard, and on whether manufacturers who adopt measures that improve the global warming impact of leakage emissions substantially beyond that achieved by the proposed standard should in some way be credited for this improvement.

Manufacturers can choose to reduce A/C leakage emissions in two ways. First, they can utilize leak-tight components. Second, manufacturers can largely eliminate the global warming impact of leakage emissions by adopting systems that use an alternative, low-GWP refrigerant. EPA believes that reducing A/C system leakage is both highly cost-effective and technologically feasible. The availability of low leakage components is being driven by the air conditioning program in the light-duty GHG rule which apply to 2012 model year and later vehicles. The cooperative industry and government Improved Mobile Air Conditioning program has demonstrated that new-vehicle leakage emissions can be reduced by 50 percent by reducing the number and improving the quality of the components, fittings, seals, and hoses of the A/C system.[108] All of these technologies are already in commercial use and exist on some of today's systems, and EPA does not anticipate any significant improvements in sealing technologies for model years beyond 2014. However, EPA does anticipate that updates to the SAE J2727 standard will be forthcoming (to address new materials and components which perform better than those originally used in the SAE analysis), and that it will be appropriate to include these updates in the regulations concerning refrigerant leakage.

Consistent with the 2012–2016 light-duty GHG rule, we are estimating costs for leakage control at $18 (2008$) in direct manufacturing costs. Including a low complexity indirect cost multiplier (ICM) of 1.14 results in costs of $21 in the 2014 model year. Time based learning is considered appropriate for A/C leakage control, so costs in the 2017 model year would be $19. These costs are applied to all heavy-duty pickups and vans, and to all combination tractors. EPA views these costs as minimal and the reductions of potent GHGs to be easily feasible and reasonable in the lead times provided by the proposed rules.

EPA proposes that manufacturers demonstrate improvements in their A/C system designs and components through a design-based method. The proposed method for calculating A/C leakage is based closely on an industry-consensus leakage scoring method, described below. This leakage scoring method is correlated to experimentally-measured leakage rates from a number of vehicles using the different available A/C components. Under the proposed approach, manufacturers would choose from a menu of A/C equipment and components used in their vehicles in order to establish leakage scores, which would characterize their A/C system leakage performance and calculate the percent leakage per year as this score divided by the system refrigerant capacity.

Consistent with the light-duty GHG rule, EPA is proposing that a manufacturer would compare the components of its A/C system with a set of leakage-reduction technologies and actions that is based closely on that being developed through the Improved Mobile Air Conditioning program and SAE International (as SAE Surface Vehicle Standard J2727, "HFC–134a, Mobile Air Conditioning System Refrigerant Emission Chart," August 2008 version). *See generally* 75 FR 25426. The SAE J2727 approach was developed from laboratory testing of a variety of A/C related components, and EPA believes that the J2727 leakage scoring system generally represents a reasonable correlation with average real-world leakage in new vehicles. Like the cooperative industry-government program, our proposed approach would associate each component with a specific leakage rate in grams per year that is identical to the values in J2727 and then sum together the component leakage values to develop the total A/C system leakage. However, in the heavy-duty truck program, the total A/C leakage score would then be divided by the value of the total refrigerant system capacity to develop a percent leakage per year.

EPA believes that the design-based approach would result in estimates of likely leakage emissions reductions that would be comparable to those that would eventually result from performance-based testing. At the same time, comments are encouraged on all developments that may lead to a robust, practical, performance-based test for measuring A/C refrigerant leakage emissions.

CO_2 emissions are also associated with air conditioner efficiency, since air conditioners create load on the engine. *See* 74 FR 49529. However, EPA is not proposing to set air conditioning efficiency standards for vocational vehicles and combination tractors. The CO_2 emissions due to air conditioning systems in these heavy-duty trucks are minimal compared to their overall emissions of CO_2. For example, EPA conducted modeling of a Class 8 sleeper cab using GEM to evaluate the impact of air conditioning and found that it leads to approximately 1 gram of CO_2/ton-mile. Therefore, a projected 24% improvement of the air conditioning system (the level projected in the light-duty GHG rulemaking), would only reduce CO_2 emissions by less than 0.3 g CO_2/ton-mile, or approximately 0.3 percent of the baseline Class 8 sleeper cab CO_2 emissions.

EPA is not specifying a specific in-use standard for leakage, as neither test procedures nor facilities exist to measure refrigerant leakage from a vehicle's air conditioning system. However, consistent with the light-duty GHG rule, where we require that manufacturers attest to the durability of

[106] The Minnesota refrigerant leakage data can be found at *http://www.pca.state.mn.us/climatechange/mobileair.html#leakdata*.

[107] Society of Automotive Engineers Surface Vehicle Standard J2727, issued August 2008, *http://www.sae.org*.

[108] Team 1—Refrigerant Leakage Reduction: Final Report to Sponsors, SAE, 2007.

components and systems used to meet the CO_2 standards (*see* 75 FR 25689), we will require that manufacturers of heavy-duty vehicles attest to the durability of these systems, and provide an engineering analysis which demonstrates component and system durability.

(6) Indirect Emissions From Air Conditioning

As just noted, in addition to direct emissions from refrigerant leakage, air conditioning systems also create indirect exhaust emissions due to the extra load on the vehicle's engine to provide power to the air conditioning system. These indirect emissions are in the form of the additional CO_2 emitted from the engine when A/C is being used due to the added loads. Unlike direct emissions which tend to be a set annual leak rate not directly tied to usage, indirect emissions are fully a function of A/C usage.

Due to the complexity of the heavy-duty market, it is difficult to estimate with any degree of precision what the actual impact of indirect emissions are across the vastly different applications and duty cycles of heavy-duty trucks. Depending on application, geographic location and even seasonal usage relationships, A/C systems usage will vary differently across the heavy-duty fleet and therefore efficiency improvements will also result in different indirect emission reductions. Moreover, as just stated, indirect A/C emissions from vocational vehicles and combination tractors are very small relative to total GHG emissions from these vehicles. For these reasons, EPA is not proposing an indirect emission standard like we have proposed for direct emissions from heavy-duty vehicles.

Instead, EPA is seeking comment on the applicability of an indirect emissions credit for A/C system efficiency improvements specifically in the heavy-duty pickup trucks and vans (*i.e.*, Class 2b and 3). These vehicles are most closely related to their light-duty counterparts that have an indirect emissions credit program established under the 2012–2016 MY Light-duty Vehicle Rule. It is likely that the light-duty and heavy-duty vehicles can share components used to improve the A/C system efficiency and reduce indirect A/C emissions. EPA also seeks comment on the level of the credit and if the fleet CO_2 target standards should be adjusted accordingly to reflect expected A/C efficiency improvements similar to the approach used in the light-duty rule.

(7) Ethanol-Fueled and Electric Vehicles

Current EPA emissions control regulations explicitly apply to heavy-duty engines and vehicles fueled by gasoline, methanol, natural gas and liquefied petroleum gas. For multi-fueled vehicles they call for compliance with requirements established for each consumed fuel. This contrasts with EPA's light-duty vehicle regulations that apply to all vehicles generally, regardless of fuel type. We are proposing to revise the heavy-duty vehicle and engine regulations to make them consistent with the light-duty vehicle approach, applying standards for all regulated criteria pollutants and GHGs regardless of fuel type, including application to all-electric vehicles (EVs). This provision would take effect in the 2014 model year, and be optional for manufacturers in earlier model years. However, to satisfy the CAA section 202(a)(3) lead time constraints, the provision would remain optional for all criteria pollutants through the 2015 model year.

This change would primarily affect manufacturers of ethanol-fueled vehicles (designed to operate on fuels containing at least 50 percent ethanol) and EVs. Flex-fueled vehicles (FFVs) designed to run on both gasoline and fuel blends with high ethanol content would also be impacted, as they would need to comply with requirements for operation both on gasoline and ethanol.

We are proposing that the specific regulatory requirements for certification on ethanol follow those already established for methanol, such as certification to NMHC equivalent standards and waiver of certain requirements. We would expect testing to be done using the same E85 test fuel as is used today for light-duty vehicle testing, an 85/15 blend of commercially-available ethanol and gasoline vehicle test fuel. EV certification would also follow light-duty precedents, primarily calling on manufacturers to exercise good engineering judgment in applying the regulatory requirements, but would not be allowed to generate NO_X or PM credits.

This proposed provision is not expected to result in any significant added burden or cost. It is already the practice of HD FFV manufacturers to voluntarily conduct emissions testing for these vehicles on E85 and submit the results as part of their certification application, along with gasoline test fuel results. No changes in certification fees are being proposed in connection with this proposed provision. We expect that there would be strong incentives for any manufacturers seeking to market these vehicles to also want them to be certified: (1) Uncertified vehicles would carry a disincentive to potential purchasers who typically have the benefit to the environment as one of their reasons for considering alternative fuels, (2) uncertified vehicles would not be eligible for the substantial credits they could likely otherwise generate, (3) EVs have no tailpipe or evaporative emissions and thus need no added hardware to put them in a certifiable configuration, and (4) emissions controls for gasoline vehicles and FFVs are also effective on dedicated ethanol-fueled vehicles, and thus costly development programs and specialized components would not be needed; in fact the highly integrated nature of modern automotive products make the emission control systems essential to reliable vehicle performance.

Regarding technological feasibility, as mentioned above, HD FFV manufacturers already test on E85 and the resulting data shows that they can meet emissions standards on this fuel. Furthermore, there is a substantial body of certification data on light-duty FFVs (for which testing on ethanol is already a requirement), showing existing emission control technology is capable of meeting even the more stringent Tier 2 standards in place for light-duty vehicles. EPA requests comment on this proposed application of its emission standards to HD vehicles and engines, regardless of the fuels they operate on.

III. Feasibility Assessments and Conclusions

In this section, NHTSA and EPA discuss several aspects of our joint technical analyses. These analyses are common to the development of each agency's proposed standards. Specifically we discuss: the development of the baseline used by each agency for assessing costs, benefits, and other impacts of the standards, the technologies the agencies evaluated and their costs and effectiveness, and the development of the proposed standards based on application of technology in light of the attribute based distinctions and related compliance measurement procedures. We also discuss consideration of standards that are either more or less stringent than those proposed.

This proposal is based on the need to obtain significant oil savings and GHG emissions reductions from the transportation sector, and the recognition that there are appropriate and cost-effective technologies to achieve such reductions feasibly. The decision on what standard to set is guided by each agency's statutory

requirements, and is largely based on the need for reductions, the effectiveness of the emissions control technology, the cost and other impacts of implementing the technology, and the lead time needed for manufacturers to employ the control technology. The availability of technology to achieve reductions and the cost and other aspects of this technology are therefore a central focus of this proposed rulemaking.

Here, the focus of the standards is on applying fuel efficiency and emissions control technology to reduce fuel consumption, CO_2 and other greenhouse gases. Vehicles combust fuel to generate power that is used to perform two basic functions: (1) Transport the truck and its payload, and (2) operate various accessories during the operation of the truck such as the PTO units. Engine-based technology can reduce fuel consumption and CO_2 emissions by improving engine efficiency, which increases the amount of power produced per unit of fuel consumed. Vehicle-based technology can reduce fuel consumption and CO_2 emissions by increasing the vehicle efficiency, which reduces the amount of power demanded from the engine to perform the truck's primary functions.

Our technical work has therefore focused on both engine efficiency improvements and vehicle efficiency improvements. In addition to fuel delivery, combustion, and aftertreatment technology, any aspect of the truck that affects the need for the engine to produce power must also be considered. For example, the drag due to aerodynamics and the resistance of the tires to rolling both have major impacts on the amount of power demanded of the engine while operating the vehicle.

The large number of possible technologies to consider and the breadth of vehicle systems that are affected mean that consideration of the manufacturer's design and production process plays a major role in developing the proposed standards. Engine and vehicle manufacturers typically develop many different models based on a limited number of platforms. The platform typically consists of a common engine or truck model architecture. For example, a common engine platform may contain the same configuration (such as inline), number of cylinders, valvetrain architecture (such as overhead valve), cylinder head design, piston design, among other attributes. An engine platform may have different calibrations, such as different power ratings, and different aftertreatment control strategies, such as exhaust gas recirculation (EGR) or selective catalytic reduction (SCR). On the other hand, a common vehicle platform has different meanings depending on the market. In the heavy-duty pickup truck market, each truck manufacturer usually has only a single pickup truck platform (for example the F series by Ford) with common chassis designs and shared body panels, but with variations on load capacity of the axles, the cab configuration, tire offerings, and powertrain options. Lastly, the combination tractor market has several different platforms and the trucks within each platform (such as LoneStar by Navistar) have less commonality. Tractor manufacturers will offer several different options for bumpers, mirrors, aerodynamic fairing, wheels, and tires, among others. However, some areas such as the overall basic aerodynamic design (such as the grill, hood, windshield, and doors) of the tractor are tied to tractor platform.

The platform approach allows for efficient use of design and manufacturing resources. Given the very large investment put into designing and producing each truck model, manufacturers of heavy-duty pickup trucks and vans typically plan on a major redesign for the models every 5 years or more. Recently, EPA's non-GHG heavy-duty engine program provided new emissions standards every three model years. Heavy-duty engine and truck manufacturer product plans typically have fallen into three year cycles to reflect this regime. While the recent non-GHG emissions standards can be handled generally with redesigns of engines and trucks, a complete redesign of a new heavy-duty engine or truck typically occurs on a slower cycle and often does not align in time due to the fact that the manufacturer of engines differs from the truck manufacturer. At the redesign stage, the manufacturer will upgrade or add all of the technology and make most other changes supporting the manufacturer's plans for the next several years, including plans related to emissions, fuel efficiency, and safety regulations.

A redesign of either engine or truck platforms often involves a package of changes designed to work together to meet the various requirements and plans for the model for several model years after the redesign. This often involves significant engineering, development, manufacturing, and marketing resources to create a new product with multiple new features. In order to leverage this significant upfront investment, manufacturers plan vehicle redesigns with several model years of production in mind. Vehicle models are not completely static between redesigns as limited changes are often incorporated for each model year. This interim process is called a refresh of the vehicle and it generally does not allow for major technology changes although more minor ones can be done (*e.g.,* small aerodynamic improvements, *etc*). More major technology upgrades that affect multiple systems of the vehicle thus occur at the vehicle redesign stage and not in the time period between redesigns.

As discussed below, there are a wide variety of CO_2 and fuel consumption reducing technologies involving several different systems in the engine and vehicle that are available for consideration. Many can involve major changes to the engine or vehicle, such as changes to the engine block and cylinder heads or changes in vehicle shape to improve aerodynamic efficiency. Incorporation of such technologies during the periodic engine, transmission or vehicle redesign process would allow manufacturers to develop appropriate packages of technology upgrades that combine technologies in ways that work together and fit with the overall goals of the redesign. By synchronizing with their multi-year planning process, manufacturers can avoid the large increase in resources and costs that would occur if technology had to be added outside of the redesign process. We considered redesign cycles both in our costing and in assessing the lead time required.

As described below, the vast majority of technology required by this proposal is commercially available and already being utilized to a limited extent across the fleet. Therefore the majority of the emission and fuel consumption reductions which would result from these proposed rules would result from the increased use of these technologies. EPA and NHTSA also believe that these proposed rules would encourage the development and limited use of more advanced technologies, such as advanced aerodynamics and hybrid powertrains in some vocational vehicle applications.

In evaluating truck efficiency, NHTSA and EPA have excluded fundamental changes in the engine or trucks' performance. Put another way, none of the technology pathways underlying the proposed standards involve any alteration in vehicle utility. For example, the agencies did not consider approaches that would necessitate reductions in engine power or otherwise limit truck performance. The agencies have thus limited the assessment of technical feasibility and resultant

vehicle cost to technologies which maintain freight utility.

The agencies worked together to determine component costs for each of the technologies and build up the costs accordingly. For costs, the agencies considered both the direct or "piece" costs and indirect costs of individual components of technologies. For the direct costs, the agencies followed a bill of materials approach utilized by the agencies in the light-duty fuel economy and GHG final rule. A bill of materials, in a general sense, is a list of components or sub-systems that make up a system—in this case, an item of technology which reduces GHG emissions and fuel consumption. In order to determine what a system costs, one of the first steps is to determine its components and what they cost. NHTSA and EPA estimated these components and their costs based on a number of sources for cost-related information. In general, the direct costs of fuel consumption-improving technologies for heavy-duty pickups and vans are consistent with those used in the 2012–2016 MY light-duty GHG rule, except that the agencies have scaled up certain costs where appropriate to accommodate the larger size and/or loads placed on parts and systems in the heavy-duty classes relative to the light-duty classes. For loose heavy-duty engines, the agencies have consulted various studies and have exercised engineering judgment when estimating direct costs. For technologies expected to be added to vocational vehicles and combination tractors, the agencies have again consulted various studies and have used engineering judgment to arrive at direct cost estimates. Once costs were determined, they were adjusted to ensure that they were all expressed in 2008 dollars using a ratio of gross domestic product deflators for the associated calendar years.

Indirect costs were accounted for using the ICM approach explained in Chapter 2 of the draft RIA, rather than using the traditional Retail Price Equivalent (RPE) multiplier approach. For the heavy-duty pickup truck and van cost projections in this proposal, the agencies have used ICMs developed for light-duty vehicles (with the exception that here return on capital has been incorporated into the ICMs, where it had not been in the light-duty rule) primarily because the manufacturers involved in this segment of the heavy-duty market are the same manufacturers that build light-duty trucks. For the Class 7 and 8 tractor, vocational vehicle, and heavy-duty engine cost projections in this proposal, EPA contracted with RTI International to update EPA's methodology for accounting for indirect costs associated with changes in direct manufacturing costs for heavy-duty engine and truck manufacturers.[109] In addition to the indirect cost multipliers varying by complexity and time frame, there is no reason to expect that the multipliers would be the same for engine manufacturers as for truck manufacturers. The report from RTI provides a description of the methodology, as well as calculations of new indirect cost multipliers. The multipliers used here include a factor of 5 percent of direct costs representing the return on capital for heavy-duty engines and truck manufacturers. These indirect cost multipliers are intended to be used, along with calculations of direct manufacturing costs, to provide improved estimates of the full additional costs associated with new technologies.

Details of the direct and indirect costs, and all applicable ICMs, are presented in Chapter 2 of the draft RIA. In addition, for details on the ICMs, please refer to the RTI report that has been placed in the docket. The agencies request comment on all aspects of the cost analysis, including the adjustment factors used in the RTI analysis—the levels associated with R&D, warranty, *etc.*—and whether those are appropriate or should be revised. If commenters suggest revisions, the agencies request supporting arguments and/or documentation.

EPA and NHTSA believe that the emissions reductions called for by the proposed standards are technologically feasible at reasonable costs within the lead time provided by the proposed standards, reflecting our projections of widespread use of commercially available technology. Manufacturers may also find additional means to reduce emissions and lower fuel consumption beyond the technical approaches we describe here. We encourage such innovation through provisions in our flexibility program as discussed in Section IV.

The agencies request comment on the methods and assumptions used to estimate costs, benefits, and technology cost-effectiveness for the main proposal and all of the alternatives. The agencies also seek comment on whether finalizing a different alternative stringency level for certain regulatory categories would be appropriate given agency estimates of costs and benefits.

[109] RTI International. Heavy-duty Truck Retail Price Equivalent and Indirect Cost Multipliers. July 2010.

The remainder of this section describes the technical feasibility and cost analysis in greater detail. Further detail on all of these issues can be found in the joint draft RIA Chapter 2.

A. Class 7–8 Combination Tractor

Class 7 and 8 tractors are used in combination with trailers to transport freight.[110] The variation in the design of these tractors and their typical uses drive different technology solutions for each regulatory subcategory.

EPA and NHTSA collected information on the cost and effectiveness of fuel consumption and CO_2 emission reducing technologies from several sources. The primary sources of information were the recent National Academy of Sciences report of Technologies and Approaches to Reducing the Fuel Consumption of Medium- and Heavy-Duty Vehicles,[111] TIAX's assessment of technologies to support the NAS panel report,[112] EPA's Heavy-duty Lumped Parameter Model,[113] the analysis conducted by the Northeast States Center for a Clean Air Future, International Council on Clean Transport, Southwest Research Institute and TIAX for reducing fuel consumption of heavy-duty long haul combination tractors (the NESCCAF/ICCT study),[114] and the technology cost analysis conducted by ICF for EPA.[115] Following on the EISA of 2007, the National Research Council appointed a NAS committee to assess technologies for improving fuel efficiency of heavy-duty vehicles to support NHTSA's rulemaking. The 2010 NAS report assessed current and future technologies for reducing fuel consumption, how the technologies could be implemented, and

[110] "Tractor" is defined in proposed section 1037.801 to mean "a vehicle capable of pulling trailers that is not intended to carry significant cargo other than cargo in the trailer, or any other vehicle intended for the primary purpose of pulling a trailer."

[111] Committee to Assess Fuel Economy Technologies for Medium- and Heavy-Duty Vehicles; National Research Council; Transportation Research Board (2010). Technologies and Approaches to Reducing the Fuel Consumption of Medium- and Heavy-Duty Vehicles. ("The NAS Report") Washington, DC, The National Academies Press. Available electronically from the National Academy Press Web site at *http://www.nap.edu/catalog.*

[112] TIAX, LLC. Assessment of Fuel Economy Technologies for Medium- and Heavy-Duty Vehicles. November 2009.

[113] U.S. EPA. Heavy-duty Lumped Parameter Model.

[114] NESCCAF, ICCT, Southwest Research Institute, and TIAX. Reducing Heavy-Duty Long Haul Combination Truck Fuel Consumption and CO_2 Emissions. October 2009.

[115] ICF International. "Investigation of Costs for Strategies to Reduce Greenhouse Gas Emissions for Heavy-Duty On-Road Vehicles." July 2010. Docket Number EPA–HQ–OAR–2010–0162–0044.

identified the potential cost of such technologies. The NAS panel contracted TIAX to perform an assessment of technologies and their associated capital costs which provide potential fuel consumption reductions in heavy-duty trucks and engines. Similar to the Lumped Parameter model which EPA developed to assess the impact and interactions of GHG and fuel consumption reducing technologies for light-duty vehicles, EPA developed a new version to specifically address the effectiveness and interactions of the proposed pickup truck and light heavy-duty engine technologies. The NESCAFF/ICCT study assessed technologies available in the 2012 through 2017 to reduce CO_2 emissions and fuel consumption of line haul combination tractors and trailers. Lastly, the ICF report focused on the capital, maintenance, and operating costs of technologies currently available to reduce CO_2 emissions and fuel consumption in heavy-duty engines, combination tractors, and vocational vehicles.

(1) What technologies did the agencies consider to reduce the CO_2 emissions and fuel consumption of tractors?

Manufacturers can reduce CO_2 emissions and fuel consumption of combination tractors through use of, among others, engine, aerodynamic, tire, extended idle, and weight reduction technologies. The standards are premised on use of these technologies. The agencies note that SmartWay trucks are available today which incorporate the technologies that the agencies are considering as the basis for the standards in this proposal. We will also discuss other technologies that could potentially be used, such as vehicle speed limiters, although we are not basing the proposed standards on their use for the model years covered by this proposal, for various reasons discussed below.

In this section we discuss the baseline tractor and engine technologies for the 2010 model year, and then discuss the kinds of technologies that could be used to improve performance relative to this baseline.

(a) Baseline Tractor & Tractor Technologies

Baseline tractor: The agencies developed the baseline tractor to represent the average 2010 model year tractor. Today there is a large spread in aerodynamics in the new tractor fleet. Trucks sold may reflect classic styling, or may be sold with conventional or SmartWay aerodynamic packages. Based on our review of current truck model configurations and Polk data provided through MJ Bradley,[116] we believe the aerodynamic configuration of the baseline new truck fleet is approximately 25 percent classic, 70 percent conventional, and 5 percent SmartWay (as these configurations are explained above in Section II.B. (2)(c)). The baseline Class 7 and 8 day cab tractor consists of an aerodynamic package which closely resembles the "conventional" package described in Section II.B. (2)(c), baseline tire rolling resistance of 7.8 kg/metric ton for the steer tire and 8.2 kg/metric ton,[117] dual tires with steel wheels on the drive axles, and no vehicle speed limiter. The baseline tractor for the Class 8 sleeper cabs contains the same aerodynamic and tire rolling resistance technologies as the baseline day cab, does not include vehicle speed limiters, and does not include an idle reduction technology. The agencies assume the baseline transmission is a 10 speed manual.

Performance from this baseline can be improved by the use of the following technologies:

Aerodynamic technologies: There are opportunities to reduce aerodynamic drag from the tractor, but it is difficult to assess the benefit of individual aerodynamic features. Therefore, reducing aerodynamic drag requires optimizing of the entire system. The potential areas to reduce drag include all sides of the truck—front, sides, top, rear and bottom. The grill, bumper, and hood can be designed to minimize the pressure created by the front of the truck. Technologies such as aerodynamic mirrors and fuel tank fairings can reduce the surface area perpendicular to the wind and provide a smooth surface to minimize disruptions of the air flow. Roof fairings provide a transition to move the air smoothly over the tractor and trailer. Side extenders can minimize the air entrapped in the gap between the tractor and trailer. Lastly, underbelly treatments can manage the flow of air underneath the tractor. As discussed in the TIAX report, the coefficient of drag (Cd) of a SmartWay sleeper cab high roof tractor is approximately 0.60, which is a significant improvement over a truck with no aerodynamic features which has a Cd value of approximately 0.80.[118] The GEM demonstrates that an aerodynamic improvement of a Class 8 high roof sleeper cab with a Cd value from 0.60 (which represents a SmartWay tractor) provides a 5% reduction in fuel consumption and CO_2 emissions over a truck with a Cd of 0.68.

Lower Rolling Resistance Tires: A tire's rolling resistance results from the tread compound material, the architecture and materials of the casing, tread design, the tire manufacturing process, and its operating conditions (surface, inflation pressure, speed, temperature, *etc.*). Differences in rolling resistance of up to 50% have been identified for tires designed to equip the same vehicle. The baseline rolling resistance coefficient for today's fleet is 7.8 kg/metric ton for the steer tire and 8.2 kg/metric ton for the drive tire, based on sales weighting of the top three manufacturers based on market share.[119] Since 2007, SmartWay trucks have had steer tires with rolling resistance coefficients of less than 6.6 kg/metric ton for the steer tire and less than 7.0 kg/metric ton for the drive tire.[120] Low rolling resistance (LRR) drive tires are currently offered in both dual assembly and single wide-base configurations. Single wide tires can offer both the rolling resistance reduction along with improved aerodynamics and weight reduction. The GEM demonstrates that replacing baseline tractor tires with tires which meet the SmartWay level provides a 4% reduction in fuel consumption and CO_2 emissions over the prescribed test cycle.

Weight Reduction: Reductions in vehicle mass reduce fuel consumption and GHGs by reducing the overall vehicle mass to be accelerated and also through increased vehicle payloads which can allow additional tons to be carried by fewer trucks consuming less fuel and producing lower emissions on a ton-mile basis. Initially, the agencies considered evaluating vehicle mass reductions on a total vehicle basis for tractors and vocational trucks.[121] The agencies considered defining a baseline vehicle curb weight and the GEM model would have used the vehicle's actual curb weight to calculate the increase or decrease in fuel consumption related to the overall vehicle mass relative to that baseline. After considerable evaluation

[116] MJ Bradley. Heavy-duty Market Analysis. May 2009. Page 10.

[117] US Environmental Protection Agency. *SmartWay Transport Partnership July 2010 e-update* accessed July 16, 2010, from *http://www.epa.gov/smartwaylogistics/newsroom/documents/e-update-july-10.pdf.*

[118] TIAX. "Assessment of Fuel Economy Technologies for Medium- and Heavy-Duty Vehicles", TIAX LLC, November 19, 2009. Page 4–50.

[119] *See* SmartWay, Note 117, above.

[120] *Ibid.*

[121] The agencies are using the approach of evaluating total vehicle mass for heavy-duty pickups and vans. where we have more data on the current fleet vehicle mass.

of this issue, including discussions with the industry, we decided it would not be possible to define a single vehicle baseline mass for the tractors and for vocational trucks that would be appropriate and representative. Actual vehicle curb weights for these classes of vehicles vary by thousands of pounds dependent on customer features added to vehicles and critical to the function of the vehicle in the particular vocation in which it is used. This is true of vehicles such as Class 8 tractors considered in this section that may appear to be relatively homogenous but which in fact are quite heterogeneous.

This reality led us to the solution we are proposing. We reflect mass reductions for specific technology substitutions (*e.g.,* installing aluminum wheels instead of steel wheels) where we can with confidence verify the mass reduction information provided by the manufacturer even though we cannot estimate the actual curb weight of the vehicle. In this way, we are accounting for mass reductions where we can accurately account for its benefits. In the future, if we are able to develop an appropriate vehicle mass baseline for the diversity of vehicles within a segment and therefore could reasonable project overall mass reductions that would not inadvertently reduce customer utility, we would consider setting standards that take into account overall vehicle mass reductions. The agencies' baseline tire and wheel package consists of dual tires with steel wheels. A tractor's empty curb weight can be reduced from the replacement of dual tires with single wide tires and with the replacement of steel wheels with high strength steel or aluminum. Analysis of literature indicates that there is opportunity to reduce typical tractor curb weights by 80 to 670 pounds, or up to roughly 3 percent, through the use of lighter weight wheels and single wide tires, as described in draft RIA Chapter 2. High strength steel, aluminum, and light weight aluminum alloys provide opportunities to reduce the truck's mass relative to steel wheels. In addition, single wide tires (a single wide-based tire which replaces two standard tires in each wheel position) provide the opportunity to reduce the overall mass of wheels and tires due to the replacement of dual tires with singles. On average, these technologies together can reduce weight by over 400 pounds. A weight reduction of this magnitude applied to a truck which travels at 70,000 pounds will have a minimal impact on fuel consumption. However, for trucks which operate at the maximum GVWR which occurs approximately for one third of truck miles travelled, a reduced tare weight will allow for additional payload to be carried. The GEM demonstrates that a weight reduction of 400 pounds applied to the payload tons for one third of the trips provides a 0.3 percent reduction in fuel consumption and CO_2 emissions over the prescribed test cycle.

Extended Idle Reduction: Auxiliary power units (APU)s, fuel operated heaters, battery supplied air conditioning, and thermal storage systems are among the technologies available today to reduce main engine extended idling from sleeper cabs. Each of these technologies reduces the baseline fuel consumption during idling from a truck without this equipment (the baseline) from approximately 0.8 gallons per hour (main engine idling fuel consumption rate) to approximately 0.2 gallons per hour for an APU.[122] EPA and NHTSA agree with the TIAX assessment of a 6 percent reduction in overall fuel consumption reduction.[123]

Vehicle Speed Limiters: Fuel consumption and GHG emissions increase proportional to the square of vehicle speed. Therefore, lowering vehicle speeds can significantly reduce fuel consumption and GHG emissions. A vehicle speed limiter, which limits the vehicle's maximum speed, is a simple technology that is utilized today by some fleets (though the typical maximum speed setting is often higher than 65 mph). The GEM shows that using a vehicle speed limiter set at 62 mph will provide a 4 percent reduction in fuel consumption and CO_2 emissions over the prescribed test cycles over a baseline vehicle without a VSL or one set above 65 mph.

Transmission: As discussed in the 2010 NAS report, automatic and automated manual transmissions may offer the ability to improve vehicle fuel consumption by optimizing gear selection compared to an average driver. However, as also noted in the report and in the supporting TIAX report, the improvement is very dependent on the driver of the truck, such that reductions ranged from 0 to 8 percent.[124] Well-trained drivers would be expected to perform as well or even better than an automatic transmission since the driver can see the road ahead and anticipate a changing stoplight or other road condition that an automatic transmission can not anticipate. However, poorly-trained drivers that shift too frequently or not frequently enough to maintain optimum engine operating conditions could be expected to realize improved in-use fuel consumption by switching from a manual transmission to an automatic or automated manual transmission. While we believe there may be real benefits in reduced fuel consumption and GHG emissions through the application of automatic or automated manual transmission technology, we are not proposing to reflect that potential improvement in our standard setting nor in our compliance model. We have taken this approach because we cannot say with confidence what level of performance improvement to expect. However, we welcome comments on this decision supported where possible with data. If a clear measure of performance improvement can be defined for the use of automatic or automated manual transmission technologies, we will consider reflecting the technology in setting the stringency of the standards and in determining compliance with the standards.

Low Friction Transmission, Axle, and Wheel Bearing Lubricants: The 2010 NAS report assessed low friction lubricants for the drivetrain as a 1 percent improvement in fuel consumption based on fleet testing.[125] The light-duty fuel economy and GHG final rule and the pickup truck portion of this program estimate that low friction lubricants can have an effectiveness value between 0 and 1 percent compared to traditional lubricants. However, it is not clear if in many heavy-duty applications these low friction lubricants could have competing requirements like component durability issues requiring specific lubricants with different properties than low friction. The agencies are interested in comments on whether low friction lubricants should be included in the technologies modeled in GEM to obtain certification values for fuel consumption and CO_2 emissions and how manufacturers could ensure the use of these lubricants for the full useful life of the truck.

Hybrid: Hybrid powertrain development in Class 7 and 8 tractors has been limited to a few manufacturer demonstration vehicles to date. One of the key benefit opportunities for fuel consumption reduction with hybrids is less fuel consumption when a vehicle is idling, which are already included as a separate technology in the agencies' technology assessment. NAS estimated that hybrid systems would cost approximately $25,000 per truck in the 2015 through 2020 timeframe and

[122] *See* the draft RIA Chapter 2 for details.

[123] *See* the 2010 NAS Report, Note 111, above, at 128.

[124] *See* TIAX, Note 112, above at 4–70.

[125] *See* the 2010 NAS Report, Note 111, page 67.

provide a potential fuel consumption reduction of 10 percent, of which 6 percent is idle reduction which can be achieved through other idle reduction technologies.[126] The limited reduction potential outside of idle reduction for Class 8 sleeper cab tractors is due to the mostly highway operation and limited start-stop operation. Due to the high cost and limited benefit during the model years at issue in this proposal, the agencies are not including hybrids in assessing standard stringency (or as an input to GEM). However as discussed in Section IV, the agencies are providing incentives to encourage the introduction of advanced technologies including hybrid powertrains in appropriate applications.

Management: The 2010 NAS report noted many operational opportunities to reduce fuel consumption, such as driver training and route optimization. The agencies have included discussion of several of these strategies in draft RIA Chapter 2, but are not using these approaches or technologies in the standard setting process. The agencies are looking to other resources, such as EPA's SmartWay Transport Partnership and regulations that could potentially be promulgated by the Federal Highway Administration and the Federal Motor Carrier Safety Administration, to continue to encourage the development and utilization of these approaches.

(b) Baseline Engine & Engine Technologies

The baseline engine for the Class 8 tractors is a Heavy Heavy-Duty Diesel engine with 15 liters of displacement which produces 455 horsepower. The agencies are using a smaller baseline engine for the Class 7 tractors because of the lower combined weights of this class of vehicles require less power, thus the baseline is an 11L engine with 350 horsepower. The agencies developed the baseline diesel engine as a 2010 model year engine with an aftertreatment system which meets EPA's 0.2 grams of NOX/bhp-hr standard with an SCR system along with EGR and meets the PM emissions standard with a diesel particulate filter with active regeneration. The baseline engine is turbocharged with a variable geometry turbocharger. The following discussion of technologies describes improvements over the 2010 model year baseline engine performance, unless otherwise noted. Further discussion of the baseline engine and its performance can be found in Section III.A.2.6 below.

Engine performance for CO2 emissions and fuel consumption can be improved by use of the following technologies:

Turbochargers: Improved efficiency of a turbocharger compressor or turbine could reduce fuel consumption by approximately 1 to 2 percent over variable geometry turbochargers in the market today.[127] The 2010 NAS report identified technologies such as higher pressure ratio radial compressors, axial compressors, and dual stage turbochargers as design paths to improve turbocharger efficiency.

Low Temperature Exhaust Gas Recirculation: Most medium- and heavy-duty vehicle diesel engines sold in the U.S. market today use cooled EGR, in which part of the exhaust gas is routed through a cooler (rejecting energy to the engine coolant) before being returned to the engine intake manifold. EGR is a technology employed to reduce peak combustion temperatures and thus NOX. Low-temperature EGR uses a larger or secondary EGR cooler to achieve lower intake charge temperatures, which tend to further reduce NOX formation. If the NOX requirement is unchanged, low-temperature EGR can allow changes such as more advanced injection timing that will increase engine efficiency slightly more than 1 percent.[128] Because low-temperature EGR reduces the engine's exhaust temperature, it may not be compatible with exhaust energy recovery systems such as turbocompounding or a bottoming cycle.

Engine Friction Reduction: Reduced friction in bearings, valve trains, and the piston-to-liner interface will improve efficiency. Any friction reduction must be carefully developed to avoid issues with durability or performance capability. Estimates of fuel consumption improvements due to reduced friction range from 0.5 to 1.5 percent.[129]

Selective catalytic reduction: This technology is common on 2010 the medium- and heavy-duty diesel engines used in Class 7 and 8 tractors (and the agencies therefore are considering it as part of the baseline engine, as noted above). Because SCR is a highly effective NO_X aftertreatment approach, it enables engines to be optimized to maximize fuel efficiency, rather than minimize engine-out NO_X. 2010 SCR systems are estimated to result in improved engine efficiency of approximately 3 to 5 percent compared to a 2007 in-cylinder EGR-based emissions system and by an even greater percentage compared to 2010 in-cylinder approaches.[130] As more effective low-temperature catalysts are developed, the NOX conversion efficiency of the SCR system will increase. Next-generation SCR systems could then enable additional efficiency improvements; alternatively, these advances could be used to maintain efficiency while down-sizing the aftertreatment. We estimate that continued optimization of the catalyst could offer 1 to 2 percent reduction in fuel use over 2010 model year systems in the 2014 model year.[131] The agencies estimate an additional 1 to 2 percent reduction may be feasible in the 2017 model year through additional refinement.

Improved Combustion Process: Fuel consumption reductions in the range of 1 to 3 percent over the baseline diesel engine are identified in the 2010 NAS report through improved combustion chamber design, higher fuel injection pressure, improved injection shaping and timing, and higher peak cylinder pressures.[132]

Reduced Parasitic Loads: Accessories that are traditionally gear or belt driven by a vehicle's engine can be optimized and/or converted to electric power. Examples include the engine water pump, oil pump, fuel injection pump, air compressor, power-steering pump, cooling fans, and the vehicle's air-conditioning system. Optimization and improved pressure regulation may significantly reduce the parasitic load of the water, air and fuel pumps. Electrification may result in a reduction in power demand, because electrically powered accessories (such as the air compressor or power steering) operate only when needed if they are electrically powered, but they impose a parasitic demand all the time if they are engine driven. In other cases, such as cooling fans or an engine's water pump, electric power allows the accessory to run at speeds independent of engine

[126] *See* the 2010 NAS Report, Note 111, page 128.

[127] TIAX Assessment of Fuel Economy Technologies for Medium and Heavy-duty Vehicles, Report to National Academy of Sciences, Nov 19, 2009, Page 4–2.

[128] TIAX Assessment of Fuel Economy Technologies for Medium and Heavy-duty Vehicles, Report to National Academy of Sciences, Nov 19, 2009, Page 4–13.

[129] TIAX, Assessment of Fuel Economy Technologies for Medium- and Heavy-duty Vehicles, Final Report, Nov. 19, 2009, pg 4–15.

[130] Stanton, D. "Advanced Diesel Engine Technology Development for High Efficiency, Clean Combustion." Cummins, Inc. Annual Progress Report 2008 Vehicle Technologies Program: Advanced Combustion Engine Technologies, US Department of Energy. Pp 113–116. December 2008.

[131] TIAX Assessment of Fuel Economy Technologies for Medium and Heavy-duty Vehicles, Report to National Academy of Sciences, Nov 19, 2009, pg. 4–9.

[132] TIAX. Assessment of Fuel Economy Technologies for Medium- and Heavy-Duty Vehicles. November 2009. Page 4–13.

speed, which can reduce power consumption. The TIAX study used 2 to 4 percent fuel consumption improvement for accessory electrification, with the understanding that electrification of accessories will have more effect in short-haul/urban applications and less benefit in line-haul applications.[133]

Mechanical Turbocompounding: Mechanical turbocompounding adds a low pressure power turbine to the exhaust stream in order to extract additional energy, which is then delivered to the crankshaft. Published information on the fuel consumption reduction from mechanical turbocompounding varies between 2.5 and 5 percent.[134] Some of these differences may depend on the operating condition or duty cycle that was considered by the different researchers. The performance of a turbocompounding system tends to be highest at full load and much less or even zero at light load.

Electric Turbocompounding: This approach is similar in concept to mechanical turbocompounding, except that the power turbine drives an electrical generator. The electricity produced can be used to power an electrical motor supplementing the engine output, to power electrified accessories, or to charge a hybrid system battery. None of these systems have been demonstrated commercially, but modeled results by industry and DOE have shown improvements of 3 to 5 percent.[135]

Bottoming Cycle: An engine with bottoming cycle uses exhaust or other heat energy from the engine to create power without the use of additional fuel. The sources of energy include the exhaust, EGR, charge air, and coolant. The estimates for fuel consumption reduction range up to 10 percent as documented in the 2010 NAS report.[136] However, none of the bottoming cycle or Rankine engine systems has been demonstrated commercially and are currently in only the research stage.

(2) Projected Technology Package Effectiveness and Cost

(a) Class 7 and 8 Combination Tractors

EPA and NHTSA project that CO_2 emissions and fuel consumption reductions can be feasibly and cost-effectively achieved in these rules' timeframes through the increased application of aerodynamic technologies, LRR tires, weight reduction, extended idle reduction technologies, vehicle speed limiters, and engine improvements. As discussed above, the agencies believe that hybrid powertrains in tractors will not be cost-effective in the time frame of the rules. The agencies also are not proposing to include drivetrain technologies in the standard setting process, as discussed in Section II.

The agencies evaluated each technology and estimated the most appropriate application rate of technology into each tractor subcategory. The next sections describe the effectiveness of the individual technologies, the costs of the technologies, the projected application rates of the technologies into the regulatory subcategories, and finally the derivation of the proposed standards.

(i) Baseline Tractor Performance

The agencies developed the baseline tractor for each subcategory to represent an average 2010 model year tractor configured as noted earlier. The approach taken by the agencies was to define the individual inputs to GEM. For example, the agencies evaluated the industry's tractor offerings and concluded that the average tractor contains a generally aerodynamic shape (such as roof fairings) and avoids classic features such as exhaust stacks at the B-pillar, which increase drag. The agencies consider a baseline truck as having "conventional" aerodynamic package, though today there is a large spread in aerodynamics in the new tractor fleet. As noted earlier, our assessment of the baseline new truck fleet aerodynamics represents approximately 25 percent classic, 70 percent conventional, and 5 percent SmartWay. This mix of vehicle aerodynamics provides a Cd performance level slightly greater than the "conventional aerodynamic package" Cd value (for example the baseline high roof tractor has a Cd of 0.69 while the same tractor category with a conventional aerodynamic package has a Cd of 0.68). The baseline rolling resistance coefficient for today's fleet is 7.8 kg/metric ton for the steer tire and 8.2 kg/metric ton for the drive tire, based on sales weighting of the top three manufacturers based on market share.[137] The agencies use the inputs described in GEM to derive the baseline CO_2 emissions and fuel consumption of Class 7 and 8 tractors. The results are included in Table III–2.

[133] TIAX. November 2009. Page 3–5.

[134] NESCCAF/ICCT study (p. 54) and TIAX (2009, pp. 3–5).

[135] K. G. Duleep of Energy and Environmental Analysis, R. Kruiswyk, 2008, pp. 212–214, NESCCAF/ICCT, 2009, p. 54.

[136] *See* 2010 NAS Report, Note 111, page 57.

[137] U.S. Environmental Protection Agency. SmartWay Transport Partnership July 2010 e-update accessed July 16, 2010, from *http://www.epa.gov/smartwaylogistics/newsroom/documents/e-update-july-10.pdf.*

Table III-1: Baseline Tractor Definitions

	Class 7		Class 8				
	Day Cab		Day Cab		Sleeper Cab		
	Low/Mid Roof	High Roof	Low/Mid Roof	High Roof	Low Roof	Mid Roof	High Roof
Aerodynamics (Cd)							
Frontal Area (m^2)	6.0	9.8	6.0	9.8	6.0	7.7	9.8
Baseline	0.81	0.69	0.81	0.69	0.81	0.76	0.69
Steer Tires (Crr kg/metric ton)							
Baseline	7.8	7.8	7.8	7.8	7.8	7.8	7.8
Drive Tires (Crr kg/metric ton)							
Baseline	8.2	8.2	8.2	8.2	8.2	8.2	8.2
Weight Reduction (lb)							
Baseline	0	0	0	0	0	0	0
Extended Idle Reduction (gram CO_2/ton-mile reduction)							
Baseline	N/A	N/A	N/A	N/A	0	0	0
Vehicle Speed Limiter							
Baseline	--	--	--	--	--	--	--
Engine							
Baseline	2010 MY 11 L Engine	2010 MY 11 L Engine	2010 MY 15 L Engine	2010 MY 15 L Engine	2010 MY 15 L Engine	2010 MY 15 L Engine	2010 MY 15 L Engine

Table III-2: Class 7 and 8 Tractor Baseline CO_2 Emissions and Fuel Consumption

	Class 7		Class 8				
	Day Cab		Day Cab		Sleeper Cab		
	Low/Mid Roof	High Roof	Low/Mid Roof	High Roof	Low Roof	Mid Roof	High Roof
CO_2 (grams CO_2/ton-mile)	111	130	84	96	76	81	89
Fuel Consumption (gal/1,000 ton-mile)	11.0	12.8	8.3	9.4	7.4	8.0	8.7

(ii) Tractor Technology Package Effectiveness

The agencies' assessment of the proposed technology effectiveness was developed through the use of the GEM in coordination with chassis testing of three SmartWay certified Class 8 sleeper cabs. The agencies developed technology performance characteristics for each subcategory, described below. Each technology consists of an input parameter which is in turn modeled in GEM. Table III–3 describes our proposed model inputs for the range of Class 7 and 8 tractor aerodynamic packages and vehicle technologies. This was combined with a projected technology application rate to determine the stringency of the proposed standard.

The aerodynamic packages are categorized as Classic, Conventional, SmartWay, Advanced SmartWay, and Advanced SmartWay II. The Classic aerodynamic package refers to traditional styling such as a flat front, exposed air cleaners and exhaust stacks, among others. The conventional package refers to an overall aerodynamic appearance and best represents the aerodynamics of the majority of new tractor sales. The SmartWay aerodynamic package includes technologies such as roof fairings, aerodynamic hoods, aerodynamic mirrors, chassis fairings, and cab extenders. The Advanced SmartWay and Advanced SmartWay II packages reflect different degrees of new aerodynamic technology development such as active air management. A more complete description of these aerodynamic packages is included in Chapter 2 of the draft RIA. In general, the coefficient of drag values for each package and tractor subcategory were developed from EPA's coastdown testing of tractor-trailer combinations, the 2010 NAS report, and SAE papers.

The rolling resistance coefficient for the tires was developed from SmartWay's tire testing to develop the SmartWay certification. The benefits for the extended idle reductions were developed from literature, SmartWay work, and the 2010 NAS report. The weight reductions were developed from manufacturer information.

Table III-3: Class 7 and 8 Tractor Technology Values

	Class 7		Class 8				
	Day Cab		Day Cab		Sleeper Cab		
	Low/Mid Roof	High Roof	Low/Mid Roof	High Roof	Low Roof	Mid Roof	High Roof
Aerodynamics (Cd)							
Frontal Area (m^2)	6.0	9.8	6.0	9.8	6.0	7.7	9.8
Classic	0.85	0.75	0.85	0.75	0.85	0.80	0.75
Conventional	0.80	0.68	0.80	0.68	0.80	0.75	0.68
SmartWay	0.75	0.60	0.75	0.60	0.75	0.70	0.60
Advanced SmartWay	0.70	0.55	0.70	0.55	0.70	0.65	0.55
Advanced SmartWay II	0.65	0.50	0.65	0.50	0.65	0.60	0.50
Steer Tires (Crr kg/metric ton)							
Baseline	7.8	7.8	7.8	7.8	7.8	7.8	7.8
SmartWay	6.6	6.6	6.6	6.6	6.6	6.6	6.6
Advanced SmartWay	5.7	5.7	5.7	5.7	5.7	5.7	5.7
Drive Tires (Crr kg/metric ton)							
Baseline	8.2	8.2	8.2	8.2	8.2	8.2	8.2
SmartWay	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Advanced SmartWay	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Weight Reduction (lb)							
Control	400	400	400	400	400	400	400
Extended Idle Reduction (gram CO_2/ton-mile reduction)							
Control	N/A	N/A	N/A	N/A	5	5	5
Vehicle Speed Limiter[138]							
Control	N/A	N/A	N/A	N/A	N/A	N/A	N/A

(iii) Tractor Technology Application Rates

As explained above, vehicle manufacturers often introduce major product changes together, as a package. In this manner the manufacturers can optimize their available resources, including engineering, development, manufacturing and marketing activities to create a product with multiple new features. In addition, manufacturers recognize that a truck design will need to remain competitive over the intended life of the design and meet future regulatory requirements. In some limited cases, manufacturers may implement an individual technology outside of a vehicle's redesign cycle.

With respect to the levels of technology application used to develop the proposed standards, NHTSA and EPA established technology application constraints. The first type of constraint was established based on the application of fuel consumption and CO_2 emission reduction technologies into the different types of tractors. For example, idle reduction technologies are limited to Class 8 sleeper cabs using the assumption that day cabs are not used for overnight hoteling. A second type of constraint was applied to most other technologies and limited their application based on factors reflecting the real world operating conditions that some combination tractors encounter. This second type of constraint was applied to the aerodynamic, tire, and vehicle speed limiter technologies. Table III–4 specifies the application rates that EPA and NHTSA used to develop the proposed standards.

The impact of aerodynamics on a truck's efficiency increases with vehicle speed. Therefore, the usage pattern of the truck will determine the benefit of various aerodynamic technologies. Sleeper cabs are often used in line haul applications and drive the majority of their miles on the highway travelling at speeds greater than 55 mph. The industry has focused aerodynamic technology development, including SmartWay tractors, on these types of trucks. Therefore the agencies are proposing the most aggressive aerodynamic technology application to this regulatory subcategory. All of the major manufacturers today offer at least one SmartWay truck model. The 2010 NAS Report on heavy-duty trucks found that manufacturers indicated that aerodynamic improvements which yield 3 to 4 percent fuel consumption reduction or 6 to 8 percent reduction in Cd values, beyond technologies used in today's SmartWay trucks are achievable.[139] EPA and NHTSA are proposing that the aerodynamic application rate for Class 8 sleeper cab high roof cabs (i.e., the degree of technology application on which the stringency of the proposed standard is premised) to consist of 20 percent of Advanced SmartWay, 70 percent SmartWay, and 10 percent conventional reflecting our assessment of the fraction of tractors in this segment that can

[138] Vehicle speed limiters are an applicable technology or all Class 7 and 8 tractors, however the standards are not premised on the use of this technology.

[139] TIAX. Assessment of Fuel Economy Technologies for Medium- and Heavy-Duty Vehicles. November 2009. Page 4–40.

successfully apply these aerodynamic packages. The small percentage of conventional truck aerodynamics reflects applications including tractors serving as refuse haulers which spend a portion of their time off-road at the landfill and generally operate at lower speeds with frequent stops—further reducing the benefit of aggressive aerodynamic technologies. Features such as chassis skirts are prone to damage in off-road applications; therefore we are not proposing standards that are based on all trucks having chassis skirts or achieving GHG reductions premised on use of such technology. The 90 percent of tractors that we project can either be SmartWay or Advanced SmartWay equipped reflects the bulk of Class 8 high roof sleeper cab applications. We are not projecting a higher fraction of Advanced SmartWay aerodynamic systems because of the limited lead time for the program and the need for these more advanced technologies to be developed and demonstrated before being applied across a wider fraction of the fleet. Our averaging, banking and trading provisions provide manufacturers with the flexibility to implement these technologies over time even though the standard changes in a single step. We request comment on our assessment of the potential for use of Advanced SmartWay technologies and the need for a fraction of these vehicles to continue to remain configured as conventional cabs due to their occasional use off-road.

The proposed aerodynamic application for the other tractor regulatory categories is less aggressive than for the Class 8 sleeper cab high roof. The agencies recognize that there are truck applications which require on/off-road capability and other truck functions which restrict the type of aerodynamic equipment applicable. We also recognize that these types of trucks spend less time at highway speeds where aerodynamic technologies have the greatest benefit. The 2002 VIUS data ranks trucks by major use.[140] The heavy trucks usage indicates that up to 35 percent of the trucks may be used in on/off-road applications or heavier applications. The uses include construction (16 percent), agriculture (12 percent), waste management (5 percent), and mining (2 percent). Therefore, the agencies analyzed the technologies to evaluate the potential restrictions that would prevent 100 percent application of SmartWay technologies for all of the tractor regulatory subcategories.

Trucks designed for on/off-road application may be restricted in the ability to improve the aerodynamic design of the bumper, chassis skirts, air cleaners, and other aspects of the truck which would typically be needed to move a conventional truck into the SmartWay bin. First, off-road applications may require the use of steel bumpers which tend to be less aerodynamic than plastic designs. Second, ground clearance may be an issue for some off road applications due to poor road surface quality. This may pose a greater likelihood that those items such as chassis skirts would incur damage in use and therefore would not be a technology desirable in these applications. Third, the trucks used in off-road applications may also experience dust which requires an additional air cleaner to manage the dirt. Fourth, some trucks are used in applications which require heavier load capacity, such as those with gross combined weights of greater than 80,000 pounds, which is today's Federal highway limit. Often these trucks are configured with different axle combinations than those traditionally used on-road. These trucks may contain either a lift axle or spread axle which allows for greater carrying capability. Both of these configurations limit the design and effectiveness of chassis skirts. Lastly, some work trucks require the use of PTO operation or access to equipment which may limit the application of side extenders and chassis skirts.

The agencies considered the on/off-road restriction to aerodynamic technology application, used VIUS estimate of approximately 35 percent of tractors may be used in this type of application, and used confidential data provided by truck manufacturers regarding the fraction of their current sales which go into the various applications, to project the aerodynamic application rates for each tractor category. For example, the agencies project that day cabs with low roofs will be used more often in these on/off-road applications than day cabs with high roof. Therefore, the agencies project technology application rate for conventional aerodynamics in day cab low roof as 40 percent while it would be 30 percent in day cab high roofs tractors. The agencies have also estimated that the development of advanced aerodynamic technologies would be applied first to high roof sleeper cabs and then follow with the other tractor categories. Therefore, the agencies propose to use a 10 percent application rate of the Advanced SmartWay aerodynamic technology package to the other tractor categories. The agencies welcome comment on our assessment of application rates and are interested in data that provide estimates on truck sales to the various applications where aerodynamics are less effective or restricted.

At least one LRR tire model is available today that meets the rolling resistance requirements of the SmartWay and Advanced SmartWay tire packages so the 2014 MY should afford manufacturers sufficient lead time to install these packages. However, tire rolling resistance is only one of several performance criteria that affect tire selection. The characteristics of a tire also influence durability, traction control, vehicle handling, comfort, and retreadability. A single performance parameter can easily be enhanced, but an optimal balance of all the criteria will require improvements in materials and tread design at a higher cost, as estimated by the agencies. Tire design requires balancing performance, since changes in design may change different performance characteristics in opposing directions. Similar to the discussion regarding lesser aerodynamic technology application in tractor segments other than sleeper cab high roof, the agencies believe that the proposed standards should not be premised on 100 percent application of LRR tires in all tractor segments. The agencies are proposing to base their analyses on application rates that vary by category and match the application rates used for the aerodynamic packages to reflect the on/off-road application of some tractors which require a different balancing of traction versus rolling resistance. We believe on- versus off-road traction (primarily tread pattern) is the only tire performance parameter which trades off with tire rolling resistance so significantly that tire manufacturers would be unable to develop tires meeting both the assumed lower rolling resistance performance while maintaining or improving other characteristics of tire performance. We seek comment on our assessment.

Weight reductions can be achieved through single wide tires replacing dual tires and lighter weight wheel material. Single wide tires can reduce weight by over 160 pounds per axle. Aluminum wheels used in lieu of steel wheels will reduce weight by over 80 pounds for a dual wheel axle. Light weight aluminum steer wheels and aluminum single wide drive wheels and tires package available today would provide a 670 pound weight reduction over the baseline steel steer and dual drive wheels. The

[140] U.S. Department of Energy. *Transportation Energy Data Book,* Edition 28–2009. Table 5.7.

agencies recognize that not all tractors can or will use single wide tires, and therefore are proposing a weight reduction package of 400 pounds. The agencies are proposing to use a 100 percent application rate for this weight reduction package. The agencies are unaware of reasons why a combination of lower weight wheels or tires cannot be applied to all combination tractors, but welcome comments.

Idle reduction technologies provide significant reductions in fuel consumption and CO_2 emissions for Class 8 sleeper cabs and are available on the market today, and therefore will be available in the 2014 model year. There are several different technologies available to reduce idling. These include APUs, diesel fired heaters, and battery powered units. Our discussions with manufacturers indicate that idle technologies are sometimes installed in the factory, but it is also a common practice to have the units installed after the sale of the truck. We would like to continue to incentivize this practice while providing certainty that the overnight idle operations will be eliminated. Therefore, we are allowing the installation of only an automatic engine shutoff, without override capability, to qualify for idle emission reductions in GEM to allow for aftermarket installations of idle reduction technology. We are proposing a 100 percent application rate for this technology for Class 8 sleeper cabs (note that the current fleet is estimated to have a 30 percent application rate). The agencies are unaware of reasons why extended idle reduction technologies could not be applied to all tractors with a sleeper cab, but welcome comments.

Vehicle speed limiters may be used as a technology to meet the standard, but in setting the standard we assumed a 0 percent application rate of vehicles speed limiters. Although we believe vehicles speed limiters are a simple, easy to implement, and inexpensive technology, we want to leave the use of vehicles speed limiters to the truck purchaser. Since truck fleets purchase trucks today with owner set vehicle speed limiters, we considered not including VSLs in our compliance model. However, we have concluded that we should allow the use of VSLs that cannot be overridden by the operator as a means of compliance for vehicle manufacturers that wish to offer it and truck purchasers that wish to purchase the technology. In doing so, we are providing another means of meeting that standard that can lower compliance cost and provide a more optimal vehicle solution for some truck fleets. For example, a local beverage distributor may operate trucks in a distribution network of primarily local roads. Under those conditions, aerodynamic fairings used to reduce aerodynamic drag provide little benefit due to the low vehicle speed while adding additional mass to the vehicle. A vehicle manufacturer could choose to install a VSL set at 55 mph for this customer. The resulting truck modeled in GEM could meet our proposed emission standard without the use of any specialized aerodynamic fairings. The resulting truck would be optimized for its intended application and would be fully compliant with our program all at a lower cost to the ultimate truck purchaser. We are seeking comment on the use of VSLs that cannot be overridden by the end-user as a means of compliance with our proposed standards.

We have chosen not to assume the use of a mandatory vehicle speed limiter in our proposal because of concerns about how to set a realistic application rate that avoids unintended adverse impacts. Although we expect there will be some use of VSL, currently it is used when the fleet involved decides it is feasible and practicable and increases the overall efficiency of the freight system for that fleet operator. However, at this point the agencies are not in a position to determine in how many additional situations use of a VSL would result in similar benefits to overall efficiency. Setting a mandatory expected use of such VSL carries the risk of requiring VSL in situations that are not appropriate from an efficiency perspective. To avoid such possibility, the agencies are not premising the proposed standards on use of VSL, and instead will rely on the industry to select VSL when circumstances are appropriate for its use. Implementation of this program may provide greater information for using this technology in standard setting in the future. Many stakeholders including the American Trucking Association have advocated for more widespread use of vehicle speed limits to address fuel efficiency and greenhouse gas emissions. We welcome comments on our decision not to premise the emission standards on the use of VSLs.

Table III–4 provides the proposed application rates of each technology broken down by weight class, cab configuration, and roof height.

Table III-4: Proposed Technology Application Rates for Class 7 and 8 Tractors

	Class 7		Class 8				
	Day Cab		Day Cab		Sleeper Cab		
	Low/Mid Roof	High Roof	Low/Mid Roof	High Roof	Low Roof	Mid Roof	High Roof
Aerodynamics (Cd)							
Classic	0%	0%	0%	0%	0%	10%	0%
Conventional	40%	30%	40%	30%	30%	20%	10%
SmartWay	50%	60%	50%	60%	60%	60%	70%
Advanced SmartWay	10%	10%	10%	10%	10%	10%	20%
Advanced SmartWay II	0%	0%	0%	0%	0%	0%	0%
Steer Tires (Crr kg/metric ton)							
Baseline	40%	30%	40%	30%	30%	30%	10%
SmartWay	50%	60%	50%	60%	60%	60%	70%
Advanced SmartWay	10%	10%	10%	10%	10%	10%	20%
Drive Tires (Crr kg/metric ton)							
Baseline	40%	30%	40%	30%	30%	30%	10%
SmartWay	50%	60%	50%	60%	60%	60%	70%
Advanced SmartWay	10%	10%	10%	10%	10%	10%	20%
Weight Reduction (lb)							
Control	100%	100%	100%	100%	100%	100%	100%
Extended Idle Reduction (gram CO_2/ton-mile reduction)							
Control	N/A	N/A	N/A	N/A	100%	100%	100%
Vehicle Speed Limiter							
Control	0%	0%	0%	0%	0%	0%	0%

(iv) Derivation of the Proposed Tractor Standards

The agencies used the technology inputs and proposed technology application rates in GEM to develop the proposed fuel consumption and CO_2 emissions standards for each subcategory of Class 7 and 8 combination tractors. The agencies derived a scenario truck for each subcategory by weighting the individual GEM input parameters included in Table III–3 by the application rates in Table III–4. For example, the Cd value for a Class 8 Sleeper Cab High Roof scenario case was derived as 10 percent times 0.68 plus 70 percent times 0.60 plus 20 percent times 0.55, which is equal to a Cd of 0.60. Similar calculations were done for tire rolling resistance, weight reduction, idle reduction, and vehicle speed limiters. To account for the two proposed engine standards, the agencies assumed a compliant engine in GEM. In other words, EPA is proposing the use of a 2014 model year fuel consumption map in GEM to derive the 2014 model year tractor standard and a 2017 model year fuel consumption map to derive the 2017 model year tractor standard.[141] The agencies then ran GEM with a single set of vehicle inputs, as shown in Table III–5, to derive the proposed standards for each subcategory. Additional detail is provided in the draft RIA Chapter 2.

[141] As explained further in Section V below, EPA would use these inputs in GEM even for engines electing to use the alternative engine standard.

Table III-5: GEM Inputs for the Class 7 and 8 Tractor Standard Setting

	Class 7		Class 8				
	Day Cab		Day Cab		Sleeper Cab		
	Low/Mid Roof	High Roof	Low/Mid Roof	High Roof	Low Roof	Mid Roof	High Roof
Aerodynamics (Cd)	0.77	0.62	0.77	0.62	0.76	0.72	0.60
Steer Tire CRR (kg/metric ton)	6.99	6.87	6.99	6.87	6.87	6.87	6.54
Drive Tire CRR (kg/metric ton)	7.38	7.26	7.38	7.26	7.26	7.26	6.92
Weight Reduction (lb)	400	400	400	400	400	400	400
Extended Idle Reduction (g/ton-mile)	--	--	--	--	5	5	5
Vehicle Speed Limiter	--	--	--	--	--	--	--
2014 MY Proposed Standard							
Engine	2014 MY 11L	2014 MY 11L	2014 MY 15L	2014 MY 15L	2014 MY 15L	2014 MY 15L	2014 MY 15L
2017 MY Proposed Standard							
Engine	2017 MY 11L	2017 MY 11L	2017 MY 15L	2017 MY 15L	2017 MY 15L	2017 MY 15L	2017 MY 15L

The level of the 2014 and 2017 model year proposed standards and percent reduction from the baseline for each subcategory is included in Table III–6.

Table III-6: Proposed 2014 and 2017 Model Year Tractor Reductions

	Class 7		Class 8				
	Day Cab		Day Cab		Sleeper Cab		
	Low/Mid Roof	High Roof	Low/Mid Roof	High Roof	Low Roof	Mid Roof	High Roof
2014 Model Year							
2014 MY Voluntary Fuel Consumption Standard (gallon/1,000 ton-mile)	10.3	11.6	7.8	8.6	6.3	6.9	7.1
2014 MY CO_2 Standard (grams CO_2/ton-mile)	104	118	79	87	65	70	73
Percent Reduction	6%	9%	6%	9%	15%	14%	18%
2017 Model Year							
2017 MY Fuel Consumption Standard (gallon/1,000 ton-mile)	10.1	11.4	7.7	8.5	6.3	6.8	7.0
2017 MY CO_2 Standard (grams CO_2/ton-mile)	103	116	78	86	64	69	71
Percent Reduction	7%	11%	7%	10%	16%	15%	20%

A summary of the proposed technology package costs is included in Table III–7 with additional details available in the draft RIA Chapter 2.

Table III-7: Class 7 and 8 Tractor Technology Costs inclusive of Indirect Cost Markups in the 2014 Model Year[a] (2008$)

	Class 7		Class 8				
	Day Cab		Day Cab		Sleeper Cab		
	Low/Mid Roof	High Roof	Low/ Mid Roof	High Roof	Low Roof	Mid Roof	High Roof
Aerodynamics	$975	$1,216	$647	$1,215	$1,025	$1,151	$1,527
Steer Tires	$65	$65	$65	$65	$65	$65	$65
Drive Tires	$60	$60	$121	$121	$121	$121	$121
Weight Reduction	$1,472	$1,472	$2,421	$2,421	$2,421	$2,421	$2,421
Auxiliary Power Unit	N/A	N/A	N/A	N/A	$3,660	$3,660	$3,660
Air Conditioning	$21	$21	$21	$21	$21	$21	$21
Total	$2,593	$2,835	$3,275	$3,842	$7,312	$7,438	$7,814

Notes:

[a] Costs shown are for the 2014 model year so do not reflect learning impacts which would result in lower costs for later model years. For a description of the learning impacts considered in this analysis and how it impacts technology costs for other years, refer to Chapter 2 of the draft RIA.

[b] Note that values in this table include penetration rates. Therefore, the technology costs shown reflect the average cost expected for each of the indicated classes. To see the actual estimated technology costs exclusive of penetration rates, refer to Chapter 2 of the draft RIA.

(v) Reasonableness of the Proposed Standards

The proposed standards are based on aggressive application rates for control technologies which the agencies regard as the maximum feasible for the reasons given in Section (iii) above; *see also* draft RIA Chapter 2.5.8.2. These technologies, at the estimated application rates, are available within the lead time provided, as discussed in draft RIA Chapter 2.5. Use of these technologies would add only a small amount to the cost of the vehicle, and the associated reductions are highly cost effective, an estimated $10 per ton of CO_2eq per vehicle in 2030 without consideration of the substantial fuel savings.[142] This is even more cost effective than the estimated cost effectiveness for CO_2eq removal and fuel economy improvements under the light-duty vehicle rule, already considered by the agencies to be a highly cost effective reduction.[143] Moreover, the cost of controls is recovered due to the associated fuel savings, as shown in the payback analysis included in Table VIII–8 located in Section VIII below. Thus, overall cost per ton of the rule, considering fuel savings, is negative—fuel savings associated with the rule more than offset projected costs by a wide margin. *See* Table VIII–5 in Section VIII below. Given that the standards are technically feasible within the lead time afforded by the 2014 model year, are inexpensive and highly cost effective even without accounting for the fuel savings, and have no apparent adverse potential impacts (*e.g.,* there are no projected negative impacts on safety or vehicle utility), the proposed standards represent a reasonable choice under section 202(a) of the CAA and under NHTSA's EISA authority at 49 U.S.C. 32902(k)(2).

(vi) Alternative Tractor Standards Considered

The agencies are not proposing tractor standards less stringent than the proposed standards because the agencies believe these standards are appropriate, highly cost effective, and technologically feasible within the rulemaking time frame. We welcome comments supplemented with data on each aspect of this determination most importantly on individual technology efficacy to reduce fuel consumption and GHGs as well was our estimates of individual technology cost and lead-time.

The agencies considered proposing tractor standards which are more stringent than those proposed reflecting increased application rates of the technologies discussed. We also considered setting more stringent standards based on the inclusion of hybrid powertrains in tractors. We stopped short of proposing more stringent standards based on higher application rates of improved aerodynamic controls and tire rolling resistance because we concluded that the technologies would not be compatible with the use profile of a subset of tractors which operate in offroad conditions. The agencies welcome comment on the application rates for each type of technology and for each tractor category. We have not proposed more stringent standards for tractors based on the use of hybrid vehicle technologies, believing that additional development and therefore lead-time is needed to develop hybrid systems and battery technology for tractors that operate primarily in highway cruise operations. We know,

[142] *See* Section VIII.D below.

[143] The light-duty rule had an estimated cost per ton of $50 when considering the vehicle program costs only and a cost of −$210 per ton considering the vehicle program costs along with fuel savings in 2030. *See* 75 FR 25515, Table III.H.3–1.

for example, that hybrid systems are being researched to capture and return energy for tractors that operate in gently rolling hills. However, it is not clear to us today that these systems will be generally applicable to tractors in the timeframe of this regulation. We seek comment on our assessment on the appropriateness of setting standards based on the use of hybrid technologies. Further, the agencies request comment supported by data regarding additional technologies not considered by the agencies in proposing these standards.

(b) Tractor Engines

(i) Baseline Engine Performance

As noted above, EPA and NHTSA developed the baseline medium and heavy heavy-duty diesel engine to represent a 2010 model year engine compliant with the 0.2 g/bhp-hr NO_X standard for on-highway heavy-duty engines.

The agencies developed baseline SET values for medium and heavy heavy-duty diesel engines based on 2009 model year confidential manufacturer data and from testing conducted by EPA. The agencies adjusted the pre-2010 data to represent 2010 model year engine maps by using predefined technologies including SCR and other systems that are being used in current 2010 model year production. If an engine utilized did not meet the 0.2 g/bhp-hr NO_X level, then the individual engine's CO_2 result was adjusted to accommodate aftertreatment strategies that would result in a 0.2 g/bhp-hr NO_X emission level as described in draft RIA Chapter 2.4.2.1. The engine CO_2 results were then sales weighted within each regulatory subcategory to develop an industry average 2010 model year reference engine. While most of the engines fell within a few percent of this baseline at least one engine was more than six percent above this average baseline.

Table III-8: 2010 Model Year Baseline Diesel Engine Performance

	CO_2 Emissions (g/bhp-hr)	Fuel Consumption (gallon/100 bhp-hr)
Medium Heavy Diesel - SET	518	5.09
Heavy Heavy Diesel - SET	490	4.81

(ii) Engine Technology Package Effectiveness

The MHD and HHD diesel engine technology package for the 2014 model year includes engine friction reduction, improved aftertreatment effectiveness, improved combustion processes, and low temperature EGR system optimization. The agencies considered improvements in parasitic and friction losses through piston designs to reduce friction, improved lubrication, and improved water pump and oil pump designs to reduce parasitic losses. The aftertreatment improvements are available through lower backpressure of the systems and optimization of the engine-out NO_X levels. Improvements to the EGR system and air flow through the intake and exhaust systems, along with turbochargers can also produce engine efficiency improvements. We note that individual technology improvements are not additive due to the interaction of technologies. The agencies assessed the impact of each technology over each of the 13 SET modes to project an overall weighted SET cycle improvement in the 2014 model year of 3 percent, as detailed in draft RIA Chapter 2.4.2.9 through 2.4.2.14. All of these technologies represent engine enhancements already developed beyond the research phase and are available as "off the shelf" technologies for manufacturers to add to their engines during the engine's next design cycle. We have estimated that manufacturers will be able to implement these technologies on or before the 2014 engine model year. The agencies proposal therefore reflects a 100 percent application rate of this technology package. The agencies gave consideration to proposing a more stringent standard based on the application of turbocompounding, a mechanical means of waste heat recovery, but concluded that manufacturers would have insufficient lead-time to complete the necessary product development and validation work necessary to include this technology across the industry by model year 2014.

As explained earlier, EPA's heavy-duty highway engine standards for criteria pollutants apply in three year increments. The heavy-duty engine manufacturer product plans have fallen into three year cycles to reflect these requirements. The agencies are proposing to set fuel consumption and CO_2 emission standards recognizing the opportunity for technology improvements over this timeframe while reflecting the typical heavy-duty engine manufacturer product plan redesign and refresh cycles. Thus, the agencies are proposing to set a more stringent standard for heavy-duty engines beginning in the 2017 model year.

The MHDD and HHDD engine technology package for the 2017 model year includes the continued development of the 2014 model year technology package including refinement of the aftertreatment system plus turbocompounding. The agencies calculated overall reductions in the same manner as for the 2014 model year package. The weighted SET cycle improvements lead to a 6 percent reduction on the SET cycle, as detailed in draft RIA Chapter 2.4.2.12. The agencies' proposal is premised on a 100 percent application rate of this technology package. We gave consideration to proposing an even more stringent standard based on the use of advanced Rankine cycle (also called bottoming cycle) engine technology but concluded that there is insufficient lead-time between now and 2017 for this promising technology to be developed and applied generally to all heavy-duty engines.[144] Therefore, these technologies were not included in determining the stringency of the proposed standards. However, we do believe the bottoming cycle approach represents a significant opportunity to reduce fuel consumption and GHG emissions in the future. EPA and NHTSA are therefore both proposing provisions described in Section IV to create incentives for manufacturers to

[144] TIAX noted in their report to the NAS committee that the engine improvements beyond 2015 model year included in their report are highly uncertain, though they include Rankine cycle type waste heat recovery as applicable sometime between 2016 and 2020 (page 4–29).

continue to invest to develop this technology.

(iii) Derivation of Engine Standards

EPA developed the proposed 2014 model year CO_2 emissions standards (based on the SET cycle) for diesel engines by applying the three percent reduction from the technology package (just explained above) to the 2010 model year baseline values determined using the SET cycle. EPA developed the 2017 model year CO_2 emissions standards for diesel engines while NHTSA similarly developed the 2017 model year diesel engine fuel consumption standards by applying the 6 percent reduction from the 2017 model year technology package (reflecting performance of turbocompounding plus the 2014 MY technology package) to the 2010 model year baseline values. The proposed standards are included in Table III–9.

Table III-9: Proposed Diesel Engine Standards Over the SET Cycle

Model Year		MHD Diesel Engine	HHD Diesel Engine
2014 – 2016	CO_2 Standard (g/bhp-hr)	502	475
	Voluntary Fuel Consumption Standard (gallon/100 bhp-hr)	4.93	4.67
2017 and later	CO_2 Standard (g/bhp-hr)	487	460
	Fuel Consumption (gallon/100 bhp-hr)	4.78	4.52

(iv) Engine Technology Package Costs

EPA has historically used two different approaches to estimate the indirect costs (sometimes called fixed costs) of regulations including costs for product development, machine tooling, new capital investments and other general forms of overhead that do not change with incremental changes in manufacturing volumes. Where the Agency could reasonably make a specific estimate of individual components of these indirect costs, EPA has done so. Where EPA could not readily make such an estimate, EPA has instead relied on the use of markup factors referred to as indirect cost multipliers (ICMs) to estimate these indirect costs as a ratio of direct manufacturing costs. In general, EPA has used whichever approach it believed could provide the most accurate assessment of cost on a case by case basis. The agencies' general approach used elsewhere in this proposal (for HD pickup trucks, gasoline engines, combination tractors, and vocational vehicles) estimates indirect costs based on the use of ICMs. *See also* 75 FR 25376. We have used this approach generally because these standards are based on installing new parts and systems purchased from a supplier. In such a case, the supplier is conducting the bulk of the research and development on the new parts and systems and including those costs in the purchase price paid by the original equipment manufacturer. In this situation, we believe that the ICM approach provides an accurate and clear estimate of the additional indirect costs borne by the manufacturer.

For the heavy-duty diesel engine segment, however, the agencies do not consider this model to be the most appropriate because the primary cost is not expected to be the purchase of parts or systems from suppliers or even the production of the parts and systems, but rather the development of the new technology by the original equipment manufacturer itself. Most of the technologies the agencies are projecting the heavy-duty engine manufacturers will use for compliance reflect modifications to existing engine systems rather than wholesale addition of technology (*e.g.,* improved turbochargers rather than adding a turbocharger where it did not exist before as was done in our light-duty joint rulemaking in the case of turbo-downsizing). When the bulk of the costs come from refining an existing technology rather than a wholesale addition of technology, a specific estimate of indirect costs may be more appropriate. For example, combustion optimization may significantly reduce emissions and cost a manufacturer millions of dollars to develop but will lead to an engine that is no more expensive to produce. Using a bill of materials approach would suggest that the cost of the emissions control was zero reflecting no new hardware and ignoring the millions of dollars spent to develop the improved combustion system. Details of the cost analysis are included in the draft RIA Chapter 2.

The agencies developed the engineering costs for the research and development of diesel engines with lower fuel consumption and CO_2 emissions. The aggregate costs for engineering hours, technician support, dynamometer cell time, and fabrication of prototype parts are estimated at $6,750,000 per manufacturer per year over the five years covering 2012 through 2016. In aggregate, this averages out to $280 per engine during 2012 through 2016 using an annual sales value of 600,000 light-, medium- and heavy-HD engines. The agencies also are estimating costs of $100,000 per engine manufacturer per engine class (light-, medium- and heavy-HD) to cover the cost of purchasing photo-acoustic measurement equipment for two engine test cells. This would be a one-time cost incurred in the year prior to implementation of the standard (*i.e.,* the cost would be incurred in 2013). In aggregate, this averages out to $4 per engine in 2013 using an annual sales value of 600,000 light-, medium- and heavy-HD engines.

Where we projected that additional new hardware was needed to the meet the proposed standards, we developed the incremental costs for those technologies and marked them up using the ICM approach. Table III–10 below summarizes those estimates of cost on a per item basis. All costs shown in Table III–18 include a low complexity ICM of 1.11 and time based learning is considered applicable to each technology.

Table III-10: Heavy-duty Diesel Engine Component Costs for Combination Tractors (2008$)

	2014 Model Year	2017 Model Year
Cylinder Head (flow optimized, increased firing pressure, improved thermal management)	$6	$6
Exhaust Manifold (flow optimized, improved thermal management)	$0	$0
Turbocharger (improved efficiency)	$17	$16
EGR Cooler (improved efficiency)	$3	$3
Water Pump (optimized, variable vane, variable speed)	$87	$79
Oil Pump (optimized)	$4	$4
Fuel Pump (higher working pressure, increased efficiency, improved pressure regulation)	$4	$4
Fuel Rail (higher working pressure)	$10	$9
Fuel Injector (optimized, improved multiple event control, higher working pressure)	$10	$9
Piston (reduced friction skirt, ring and pin)	$3	$2
Aftertreatment system (improved effectiveness SCR, dosing, dpf)[a]	$0	$0
Valve Train (reduced friction, roller tappet, MHD only)	$78	$71
Mechanical Turbocompounding	$0	$823

Note:
[a] Costs for aftertreatment improvements for MH and HH diesel engines are covered via the engineering costs (see text). For LH diesel engines, we have included the cost of aftertreatment improvements as a technology cost.

The overall diesel engine technology package cost for a medium HD engine being placed in a combination tractor is $223 in the 2014 model year and $1,027 in the 2017 model year; for a heavy HD engine being placed in a combination tractor these costs are $145 and $955 in the 2014 and 2017 model years, respectively. The differences for the medium HD engines are the valve train friction reduction costs of $78 in 2014 ($71 in 2017) that are not applied to heavy HD engines.

(v) Reasonableness of the Proposed Standards

The proposed engine standards appear to be reasonable and consistent with the agencies' respective statutory authorities. With respect to the 2014 and 2017 MY standards, all of the technologies on which the standards are predicated have already been demonstrated in some capacity and their effectiveness is well documented. The proposal reflects a 100 percent application rate for these technologies. The costs of adding these technologies remain modest across the various engine classes as shown in Table III–10. Use of these technologies would add only a small amount to the cost of the vehicle,[145] and the associated reductions are highly cost effective, an estimated $6 per ton of CO_2eq per vehicle.[146] This is even more cost effective than the estimated cost effectiveness for CO_2eq removal under the light-duty vehicle rule, already considered by the agencies to be a highly cost effective reduction.[147] Even the more expensive 2017 MY proposed standard still represents only a small fraction of the vehicle's total cost and is even more cost effective than the light-duty vehicle rule. Moreover, costs are more than offset by fuel savings. Accordingly, EPA and NHTSA view these standards as reflecting an appropriate balance of the various statutory factors under section 202(a) of the CAA and under NHTSA's EISA authority at 49 U.S.C. 32902(k)(2).

[145] Sample 2010 MY day cabs are priced at $89,000 while 2010 MY sleeper cabs are priced at $113,000. See page 3 of ICF's "Investigation of Costs for Strategies to Reduce Greenhouse Gas Emissions for Heavy-Duty On-Road Vehicles." July 2010.

[146] See Tractor CO_2 savings and technology costs for Alternative 2 in Section IX.B.

[147] The light-duty rule had an estimated cost per ton of $50 when considering the vehicle program costs only and a cost of -$210 per ton considering the vehicle program costs along with fuel savings in 2030. *See* 75 FR 25515, Table III.H.3–1.

(vi) Temporary Alternative Standard for Certain Engine Families

As discussed above in Section II.B (1)(b), notwithstanding the general reasonableness of the proposed standards, the agencies recognize that heavy-duty engines have never been subject to GHG or fuel consumption (or fuel economy) standards and that such control has not necessarily been an independent priority for manufacturers. The result is that there are a group of legacy engines with emissions higher than the industry baseline for which compliance with the proposed 2014 MY standards may be more challenging and for which there may simply be inadequate lead time. The issue is not whether these engines' GHG and fuel consumption performance cannot be improved by utilizing the technology packages on which the proposed standards are based. Those technologies can be utilized by all engines and the same degree of reductions obtained. Rather the underlying base engine components of these engines reflect designs that are decades old and therefore have base performance levels below what is typical for the industry as a whole today. Manufacturers have been gradually replacing these legacy products with new engines. Engine

manufacturers have indicated to the agencies they will have to align their planned replacement of these products with our proposed standards and at the same time add additional technologies beyond those identified by the agencies as the basis for the proposed standard. Because these changes will reflect a larger degree of overall engine redesign, manufacturers may not be able to complete this work for all of their legacy products prior to model year 2014. To pull ahead these already planned engine replacements would be impossible as a practical matter given the engineering structure and lead-times inherent in the companies' existing product development processes. We have also concluded that the use of fleet averaging would not address the issue of legacy engines because each manufacturer typically produces only a limited line of MHDD and HHDD engines. (Because there are ample fleetwide averaging opportunities for heavy-duty pickups and vans, the agencies do not perceive similar difficulties for these vehicles.)

Facing a similar issue in the light-duty vehicle rule, EPA adopted a Temporary Lead Time Allowance provision whereby a limited number of vehicles of a subset of manufacturers would meet an alternative standard in the early years of the program, affording them sufficient lead time to meet the more stringent standards applicable in later model years. See 75 FR 25414–25418. The agencies are proposing a similar approach here. As explained above in Section II B. (1) (b), the agencies are proposing a regulatory alternative whereby a manufacturer, for a limited period, would have the option to comply with a unique standard requiring the same level of reduction of emissions (i.e., percent removal) and fuel consumption as otherwise required, but the reduction would be measured from its own 2011 model year baseline. We are thus proposing an optional standard whereby manufacturers would elect to have designated engine families meet a standard of 3% reduction from their 2011 baseline emission and fuel consumption levels for that engine family. Our assessment is that this three percent reduction is appropriate based on use of similar technology packages at similar cost as we have estimated for the primary program. As explained earlier, we are not proposing that the option to select an alternative standard continues past the 2016 MY. By this time, the engines should have gone through a redesign cycle which will allow manufacturers to replace those legacy engines which resulted in abnormally high baseline emission and fuel consumption levels and to achieve the MY 2017 standards which would be feasible using the technology package set out above (optimized NOX aftertreatment, improved EGR, reductions in parasitic losses, and turbocharging). Manufacturers would, of course, be free to adopt other technology paths which meet the proposed MY 2017 standards.

Since the alternative standard is premised on the need for additional lead time, manufacturers would first have to utilize all available flexibilities which could otherwise provide that lead time. Thus, the alternative would not be available unless and until a manufacturer had exhausted all available credits and credit opportunities, and engines under the alternative standard could not generate credits. *See* 75 FR 25417–25419 (similar approach for vehicles which are part of Temporary Lead Time Allowance under the light-duty vehicle rule). We are proposing that manufacturers can select engine families for this alternative standard without agency approval, but are proposing to require that manufacturers notify the agency of their choice and to include in that notification a demonstration that it has exhausted all available credits and credit opportunities. Manufacturers would also have to demonstrate their 2011 baseline calculations as part of the certification process for each engine family for which the manufacturer elects to use the alternative standard. *See* Section V.C.1(b)(i) below.

(vii) Alternative Engine Standards Considered

The agencies are not proposing engine standards less stringent than the proposed standards because the agencies believe these proposed standards are appropriate, highly cost effective, and technologically feasible, as just described. We welcome comments supplemented with data on each aspect of this determination most importantly on individual engine technology efficacy to reduce fuel consumption and GHG emissions. Comments should also address our estimates of individual technology cost and lead-time.

The agencies considered proposing engine standards which are more stringent. Since the proposed standards reflect 100 percent utilization of the various technology packages, some additional technology would have to be added. The agencies are proposing 2017 model year standards based on the use of turbocompounding. The agencies considered the inclusion of more advanced heat recovery systems, such as Rankine or bottoming cycles, which would provide further reductions. However, the agencies are not proposing this level of stringency because our assessment is that these technologies would not be available for production by the 2017 model year. The agencies welcome comments on whether waste heat recovery technologies are appropriate to consider for the 2017 model year standard, or if not, then when would they be appropriate.

B. Heavy-Duty Pickup Trucks and Vans

This section describes the process the agencies used to develop the standards the agencies are proposing for HD pickups and vans. We started by gathering available information about the fuel consumption and CO_2 emissions from recent model year vehicles. The core portion of this information comes primarily from EPA's certification databases, CFEIS and VERIFY, which contain the publicly available data [148] regarding emission and fuel economy results. This information is not extensive because manufacturers have not been required to chassis test HD diesel vehicles for EPA's criteria pollutant emissions standards, nor have they been required to conduct any testing of heavy-duty vehicles on the highway cycle. Nevertheless, enough certification activity has occurred for diesels under EPA's optional chassis-based program, and, due to a California NO_X requirement for the highway test cycle, enough test results have been voluntarily reported for both diesel and gasoline vehicles using the highway test cycle, to yield a reasonably robust data set. To supplement this data set, for purposes of this rulemaking EPA initiated its own testing program using in-use vehicles. This program and the results from it thus far are described in a memorandum to the docket for this rulemaking.[149]

Heavy-duty pickup trucks and vans are sold in a variety of configurations to meet market demands. Among the differences in these configurations that affect CO_2 emissions and fuel consumption are curb weight, GVWR, axle ratio, and drive wheels (two-wheel drive or four-wheel drive). Because the currently-available test data set does not capture all of these configurations, it is necessary to extend that data set across the product mix using adjustment factors. In this way a test result from, say a truck with two-wheel drive, 3.73:1 axle ratio, and 8000 lb test weight, can

[148] *http://www.epa.gov/otaq/certdata.htm.*

[149] Memorandum from Cleophas Jackson, U.S. EPA, to docket EPA–HQ–OAR–2010–0162, "Heavy-Duty Greenhouse Gas and Fuel Consumption Test Program Summary", September 20, 2010.

be used to model emissions and fuel consumption from a truck of the same basic body design, but with 4wd, a 4.10:1 axle ratio, and 8,500 lb test weight. The adjustment factors are based on data from testing in which only the parameters of interest are varied. These parameterized adjustments and their basis are also described in a memorandum to the docket for this rulemaking.[150]

The agencies requested and received from each of the three major manufacturers confidential information for each model and configuration, indicating the values of each of these key parameters as well as the annual production (for the U.S. market). Production figures are useful because, under our proposed standards for HD pickups and vans, compliance is judged on the basis of production-weighted (corporate average) emissions or fuel consumption level, not individual vehicle levels. For consistency and to avoid confounding the analysis with data from unusual market conditions in 2009, the production and vehicle specification data is from the 2008 model year. We made the simplifying assumption that these sales figures reasonably approximate future sales for purposes of this analysis.

One additional assessment was needed to make the data set useful as a baseline for the standards selection. Because the appropriate standards are determined by applying efficiency-improving technologies to the baseline fleet, it is necessary to know the level of penetration of these technologies in the latest model year (2010). This information was also provided confidentially by the manufacturers. Generally, the agencies found that the HD pickup and van fleet was at a roughly consistent level of technology application, with (1) the transition from 4-speed to 5- or 6-speed automatic transmissions mostly accomplished, (2) coupled cam phasing to achieve variable valve control on gasoline engines likewise mostly in place, and (3) substantial remaining potential for optimizing catalytic diesel NO_X aftertreatment to improve fuel economy (the new heavy-duty NO_X standards having taken effect in the 2010 model year).

Taking this 2010 baseline fleet, and applying the technologies determined to be feasible and appropriate by the 2018 model year, along with their effectiveness levels, the agencies could then make a determination of appropriate proposed standards. The assessment of feasibility, described immediately below, takes into account the projected costs of these technologies. The derivation of these costs, largely based on analyses developed in the light-duty GHG and fuel economy rulemaking, are described in Section III.B(3).

Our assessment concluded that the technologies that the agencies considered feasible and appropriate for HD pickups and vans could be consistently applied to essentially all vehicles across this sector by the 2018 model year. Therefore we did not apply varying penetration rates across vehicle types and models in developing and evaluating the proposed standards.

Since the manufacturers of HD pickups and vans generally only have one basic pick-up truck and van with different versions ((*i.e.,* different wheel bases, cab sizes, two-wheel drive, four-wheel drive, *etc.*) and do not have the flexibility of the light-duty fleet to coordinate model improvements over several years, changes to the HD pickups and vans to meet new standards must be carefully planned with the redesign cycle taken into account. The opportunities for large-scale changes (*e.g.,* new engines, transmission, vehicle body and mass) thus occur less frequently than in the light-duty fleet, typically at spans of 8 or more years. However, opportunities for gradual improvements not necessarily linked to large scale changes can occur between the redesign cycles. Examples of such improvements are upgrades to an existing vehicle model's engine, transmission and aftertreatment systems. Given this long redesign cycle and our understanding with respect to where the different manufacturers are in that cycle, the agencies have initially determined that the full implementation of the proposed standards would be feasible and appropriate by the 2018 model year.

Although we did not determine that it was necessary for feasibility to apply varying technology penetration levels to different vehicles, we did decide that a phased implementation schedule would be appropriate to accommodate manufacturers' redesign workload and product schedules, especially in light of this sector's relatively low sales volumes and long product cycles. We did not determine a specific cost of implementing the final standards immediately in 2014 without a phase-in, but we assessed it to be much higher than the cost of the phase-in we are proposing, due to the workload and product cycle disruptions it would cause, and also due to manufacturers' resulting need to develop some of these technologies for heavy-duty applications sooner than or simultaneously with light-duty development efforts. *See* generally 75 FR 25467–25468 explaining why attempting major changes outside the redesign cycle period raises very significant issues of both feasibility and cost. On the other hand, waiting until 2018 before applying any new standards could miss the opportunity to achieve meaningful and cost-effective early reductions not requiring a major product redesign when the largest changes and reductions are expected to occur.

The proposed phase-in schedule, 15–20–40–60–100 percent in 2014–2015–2016–2017–2018, respectively, was chosen to strike a balance between meaningful reductions in the early years (reflecting the technologies' penetration rates of 15 and 20 percent) and providing manufacturers with needed lead time via a gradually accelerating ramp-up of technology penetration.[151] By expressing the proposed phase-in in terms of increasing fleetwide stringency for each manufacturer, while also providing for credit generation and use (including averaging, carry-forward, and carry-back), we believe our proposal affords manufacturers substantial flexibility to satisfy the phase-in through a variety of pathways: the gradual application of technologies across the fleet (averaging a fifth of total production in each year), greater application levels on only a portion of the fleet, or a mix of the two.

We considered setting more stringent standards that would require the application of additional technologies by 2018. We expect, in fact, that some of these technologies may well prove feasible and cost-effective in this timeframe, and may even become technologies of choice for individual manufacturers. This dynamic has played out in EPA programs before and highlights the value of setting performance-based standards that leave engineers the freedom to find the most cost-effective solutions.

However, the agencies do believe that at this stage there is not enough information to conclude that the additional technologies provide an appropriate basis for standard-setting. For example, we believe that 42V stop-start systems can be applied to gasoline vehicles with significant GHG and fuel

[150] Memorandum from Anthony Neam and Jeff Cherry, U.S. EPA, to docket EPA–HQ–OAR–2010–0162, October 18, 2010.

[151] The NHTSA proposal provides voluntary standards for model years 2014 and 2015. NHTSA and EPA also propose to provide an alternative standards phase-in that meets EISA's requirement for three years of regulatory stability. *See* Section II.C.d.ii for a more detailed discussion.

consumption benefits, but we recognize that there is uncertainty at this time over the cost-effectiveness of these systems in heavy-duty applications, and over customer acceptance of vehicles with high GCWR towing large loads that would routinely stop running at idle. Hybrid electric technology likewise could be applied to heavy-duty vehicles, and in fact has already been so applied on a limited basis. However, the development, design, and tooling effort needed to apply this technology to a vehicle model is quite large, and seems less likely to prove cost-effective in this timeframe, due to the small sales volumes relative to the light-duty sector. Here again, potential customer acceptance would need to be better understood because the smaller engines that facilitate much of a hybrid's benefit are typically at odds with the importance pickup trucks buyers place on engine horsepower and torque, whatever the vehicle's real performance.

We also considered setting less stringent standards calling for a more limited set of applied technologies. However, our assessment concluded with a high degree of confidence that the technologies on which the proposed standards are premised are clearly available at reasonable cost in the 2014–2018 timeframe, and that the phase-in and other flexibility provisions allow for their application in a very cost-effective manner, as discussed in this section below.

More difficult to characterize is the degree to which more or less stringent standards might be appropriate because of under- or over-estimating effectiveness of the technologies whose performance is the basis of the proposed standards. Our basis for these estimates is described in Section III.B.(1)(1) . Because for the most part these technologies have not yet been applied to HD pickups and vans, even on a limited basis, we are relying to some degree on engineering judgment in predicting their effectiveness. Even so, we believe that we have applied this judgment using the best information available, primarily from our recent rulemaking on light-duty vehicle GHGs and fuel economy, and have generated a robust set of effectiveness values.

We solicit comment and new information that would aid the agencies in establishing the appropriate level of stringency for the HD pickup and van standards, and on all facets of the assessment described here and elsewhere in these rulemaking proposals.

(1) What technologies did the agencies consider?

The agencies considered over 35 vehicle technologies that manufacturers could use to improve the fuel consumption and reduce CO_2 emissions of their vehicles during MYs 2014–2018. The majority of the technologies described in this section is readily available, well known, and could be incorporated into vehicles once production decisions are made. Other technologies considered may not currently be in production, but are beyond the research phase and under development, and are expected to be in production in highway vehicles over the next few years. These are technologies which are capable of achieving significant improvements in fuel economy and reductions in CO_2 emissions, at reasonable costs. The agencies did not consider technologies in the research stage because there is insufficient time for such technologies to move from research to production during the model years covered by this proposal.

The technologies considered in the agencies' analysis are briefly described below. They fall into five broad categories: Engine technologies, transmission technologies, vehicle technologies, electrification/accessory technologies, and hybrid technologies.

In this class of trucks and vans, diesel engines are installed in about half of all vehicles. The ratio between gasoline and diesel engine purchases by consumers has tended to track changes in the overall cost of oil and the relative cost of gasoline and diesel fuels. When oil prices are higher, diesel sales tend to increase. This trend has reversed when oil prices fall or when diesel fuel prices are significantly higher than gasoline. In the context of our technology discussion for heavy-duty pickups and vans, we are treating gasoline and diesel engines separately so each has a set of baseline technologies. We discuss performance improvements in terms of changes to those baseline engines. Our cost and inventory estimates contained elsewhere reflect the current fleet baseline with an appropriate mix of gasoline and diesel engines. Note that we are not basing the proposed standards on a targeted switch in the mix of diesel and gasoline vehicles. We believe our proposed standards require similar levels of technology development and cost for both diesel and gasoline vehicles. Hence the proposed program does not force, nor does it discourage, changes in a manufacturer's fleet mix between gasoline and diesel vehicles. Although we considered setting a single standard based on the performance level possible for diesel vehicles, we are not proposing such an approach because the potential disruption in the HD pickup and van market from a forced shift would not be justified. Types of engine technologies that improve fuel efficiency and reduce CO_2 emissions include the following:

- *Low-friction lubricants*—low viscosity and advanced low friction lubricant oils are now available with improved performance and better lubrication. If manufacturers choose to make use of these lubricants, they would need to make engine changes and possibly conduct durability testing to accommodate the low-friction lubricants.
- *Reduction of engine friction losses*—can be achieved through low-tension piston rings, roller cam followers, improved material coatings, more optimal thermal management, piston surface treatments, and other improvements in the design of engine components and subsystems that improve engine operation.
- *Cylinder deactivation*—deactivates the intake and exhaust valves and prevents fuel injection into some cylinders during light-load operation. The engine runs temporarily as though it were a smaller engine which substantially reduces pumping losses.
- *Variable valve timing*—alters the timing of the intake valve, exhaust valve, or both, primarily to reduce pumping losses, increase specific power, and control residual gases.
- *Stoichiometric gasoline direct-injection technology*—injects fuel at high pressure directly into the combustion chamber to improve cooling of the air/fuel charge within the cylinder, which allows for higher compression ratios and increased thermodynamic efficiency.
- *Diesel engine improvements and diesel aftertreatment improvements*—improved EGR systems and advanced timing can provide more efficient combustion and, hence, lower fuel consumption. Aftertreatment systems are a relatively new technology on diesel vehicles and, as such, improvements are expected in coming years that allow the effectiveness of these systems to improve while reducing the fuel and reductant demands of current systems.

Types of transmission technologies considered include:

- *Improved automatic transmission controls*—optimizes shift schedule to maximize fuel efficiency under wide ranging conditions, and minimizes losses associated with torque converter slip through lock-up or modulation.

• *Six-, seven-, and eight-speed automatic transmissions*—the gear ratio spacing and transmission ratio are optimized for a broader range of engine operating conditions.

Types of vehicle technologies considered include:

• *Low-rolling-resistance tires*—have characteristics that reduce frictional losses associated with the energy dissipated in the deformation of the tires under load, therefore improving fuel efficiency and reducing CO_2 emissions.

• *Aerodynamic drag reduction*—is achieved by changing vehicle shape or reducing frontal area, including skirts, air dams, underbody covers, and more aerodynamic side view mirrors.

• *Mass reduction and material substitution*—Mass reduction encompasses a variety of techniques ranging from improved design and better component integration to application of lighter and higher-strength materials. Mass reduction is further compounded by reductions in engine power and ancillary systems (transmission, steering, brakes, suspension, *etc.*). The agencies recognize there is a range of diversity and complexity for mass reduction and material substitution technologies and there are many techniques that automotive suppliers and manufacturers are using to achieve the levels of this technology that the agencies have modeled in our analysis for this proposal.

Types of electrification/accessory and hybrid technologies considered include:

• *Electric power steering and Electro-Hydraulic power steering*—are electrically assisted steering systems that have advantages over traditional hydraulic power steering because it replaces a continuously operated hydraulic pump, thereby reducing parasitic losses from the accessory drive.

• *Improved accessories*—may include high efficiency alternators, electrically driven (i.e., on-demand) water pumps and cooling fans. This excludes other electrical accessories such as electric oil pumps and electrically driven air conditioner compressors.

• *Air Conditioner Systems*—These technologies include improved hoses, connectors and seals for leakage control. They also include improved compressors, expansion valves, heat exchangers and the control of these components for the purposes of improving tailpipe CO_2 emissions as a result of A/C use.[152]

[152] See draft RIA Chapter 2.3 for fuller technology descriptions.

How did the agencies determine the costs and effectiveness of each of these technologies?

Building on the technical analysis underlying the 2012–2016 MY light-duty vehicle rule, the agencies took a fresh look at technology cost and effectiveness values for purposes of this proposal. For costs, the agencies reconsidered both the direct or "piece" costs and indirect costs of individual components of technologies. For the direct costs, the agencies followed a bill of materials (BOM) approach employed by NHTSA and EPA in the light-duty rule.

For two technologies, stoichiometric gasoline direct injection (SGDI) and turbocharging with engine downsizing, the agencies relied to the extent possible on the available tear-down data and scaling methodologies used in EPA's ongoing study with FEV, Incorporated. This study consists of complete system tear-down to evaluate technologies down to the nuts and bolts to arrive at very detailed estimates of the costs associated with manufacturing them.[153]

For the other technologies, considering all sources of information and using the BOM approach, the agencies worked together intensively to determine component costs for each of the technologies and build up the costs accordingly. Where estimates differ between sources, we have used engineering judgment to arrive at what we believe to be the best cost estimate available today, and explained the basis for that exercise of judgment.

Once costs were determined, they were adjusted to ensure that they were all expressed in 2008 dollars using a ratio of gross domestic product (GDP) values for the associated calendar years,[154] and indirect costs were accounted for using the new approach developed by EPA and used in the 2012–2016 light-duty rule. NHTSA and EPA also reconsidered how costs should be adjusted by modifying or scaling content assumptions to account for differences across the range of vehicle sizes and functional requirements, and adjusted the associated material cost impacts to account for the revised content, although some of these adjustments may be different for each agency due to the different vehicle subclasses used in their respective models.

Regarding estimates for technology effectiveness, NHTSA and EPA used the estimates from the 2012–2016 light-duty rule as a baseline but adjusted them as appropriate, taking into account the unique requirement of the heavy-duty test cycles to test at curb weight plus half payload versus the light-duty requirement of curb plus 300 lb. The adjustments were made on an individual technology basis by assessing the specific impact of the added load on each technology when compared to the use of the technology on a light-duty vehicle. The agencies also considered other sources such as the 2010 NAS Report, recent CAFE compliance data, and confidential manufacturer estimates of technology effectiveness. NHTSA and EPA engineers reviewed effectiveness information from the multiple sources for each technology and ensured that such effectiveness estimates were based on technology hardware consistent with the BOM components used to estimate costs. Together, the agencies compared the multiple estimates and assessed their validity, taking care to ensure that common BOM definitions and other vehicle attributes such as performance and drivability were taken into account.

The agencies note that the effectiveness values estimated for the technologies may represent average values applied to the baseline fleet described earlier, and do not reflect the potentially-limitless spectrum of possible values that could result from adding the technology to different vehicles. For example, while the agencies have estimated an effectiveness of 0.5 percent for low friction lubricants, each vehicle could have a unique effectiveness estimate depending on the baseline vehicle's oil viscosity rating. Similarly, the reduction in rolling resistance (and thus the improvement in fuel efficiency and the reduction in CO_2 emissions) due to the application of LRR tires depends not only on the unique characteristics of the tires originally on the vehicle, but on the unique characteristics of the tires being applied, characteristics which must be balanced between fuel efficiency, safety, and performance. Aerodynamic drag reduction is much the same—it can improve fuel efficiency and reduce CO_2 emissions, but it is also highly dependent on vehicle-specific functional objectives. For purposes of this NPRM, NHTSA and EPA believe that employing average values for technology effectiveness estimates is an appropriate way of recognizing the potential variation in the specific benefits that individual manufacturers

[153] U.S. Environmental Protection Agency, "Draft Report—Light-Duty Technology Cost Analysis Pilot Study," Contract No. EP–C–07–069, Work Assignment 1–3, September 3, 2009.

[154] NHTSA examined the use of the CPI multiplier instead of GDP for adjusting these dollar values, but found the difference to be exceedingly small—only $0.14 over $100.

(and individual vehicles) might obtain from adding a fuel-saving technology. However, the agencies seek comment on whether additional levels of specificity beyond that already provided would improve the analysis for the final rules, and if so, how those levels of specificity should be analyzed.

The following section contains a detailed description of our assessment of vehicle technology cost and effectiveness estimates. The agencies note that the technology costs included in this NPRM take into account only those associated with the initial build of the vehicle. The agencies seek comment on the additional lifetime costs, if any, associated with the implementation of advanced technologies including maintenance and replacement costs. Based on comments, the agencies may decide to conduct additional analysis for the final rules regarding operating, maintenance and replacement costs.

(a) Engine Technologies

NHTSA and EPA have reviewed the engine technology estimates used in the 2012–2016 light-duty rule. In doing so NHTSA and EPA reconsidered all available sources and updated the estimates as appropriate. The section below describes both diesel and gasoline engine technologies considered for this proposal.

(i) Low Friction Lubricants

One of the most basic methods of reducing fuel consumption in both gasoline and diesel engines is the use of lower viscosity engine lubricants. More advanced multi-viscosity engine oils are available today with improved performance in a wider temperature band and with better lubricating properties. This can be accomplished by changes to the oil base stock (*e.g.*, switching engine lubricants from a Group I base oils to lower-friction, lower viscosity Group III synthetic) and through changes to lubricant additive packages (*e.g.*, friction modifiers and viscosity improvers). The use of 5W–30 motor oil is now widespread and auto manufacturers are introducing the use of even lower viscosity oils, such as 5W–20 and 0W–20, to improve cold-flow properties and reduce cold start friction. However, in some cases, changes to the crankshaft, rod and main bearings and changes to the mechanical tolerances of engine components may be required. In all cases, durability testing would be required to ensure that durability is not compromised. The shift to lower viscosity and lower friction lubricants will also improve the effectiveness of valvetrain technologies such as cylinder deactivation, which rely on a minimum oil temperature (viscosity) for operation.

Based on the 2012–2016 MY light-duty vehicle rule, and previously-received confidential manufacturer data, NHTSA and EPA estimated the effectiveness of low friction lubricants to be between 0 to 1 percent.

In the light-duty rule, the agencies estimated the cost of moving to low friction lubricants at $3 per vehicle (2007$). That estimate included a markup of 1.11 for a low complexity technology. For HD pickups and vans, we are using the same base estimate but have marked it up to 2008 dollars using the GDP price deflator and have used a markup of 1.17 for a low complexity technology to arrive at a value of $4 per vehicle. As in the light-duty rule, learning effects are not applied to costs for this technology and, as such, this estimate applies to all model years.[155] [156]

(ii) Engine Friction Reduction

In addition to low friction lubricants, manufacturers can also reduce friction and improve fuel consumption by improving the design of both diesel and gasoline engine components and subsystems. Approximately 10 percent of the energy consumed by a vehicle is lost to friction, and just over half is due to frictional losses within the engine.[157] Examples include improvements in low-tension piston rings, piston skirt design, roller cam followers, improved crankshaft design and bearings, material coatings, material substitution, more optimal thermal management, and piston and cylinder surface treatments. Additionally, as computer-aided modeling software continues to improve, more opportunities for evolutionary friction reductions may become available.

All reciprocating and rotating components in the engine are potential candidates for friction reduction, and minute improvements in several components can add up to a measurable fuel efficiency improvement. The 2012–2016 light-duty final rule, the 2010 NAS Report, and NESCCAF and Energy and Environmental Analysis reports, as well as confidential manufacturer data, indicate a range of effectiveness for engine friction reduction to be between 1 to 3 percent. NHTSA and EPA continue to believe that this range is accurate.

Consistent with the 2012–2016 MY light-duty vehicle rule, the agencies estimate the cost of this technology at $14 per cylinder compliance cost (2008$), including the low complexity ICM markup value of 1.17. Learning impacts are not applied to the costs of this technology and, as such, this estimate applies to all model years. This cost is multiplied by the number of engine cylinders.

(iii) Coupled Cam Phasing

Valvetrains with coupled (or coordinated) cam phasing can modify the timing of both the inlet valves and the exhaust valves an equal amount by phasing the camshaft of an overhead valve engine.[158] For overhead valve engines, which have only one camshaft to actuate both inlet and exhaust valves, couple cam phasing is the only variable valve timing implementation option available and requires only one cam phaser.[159]

Based on the 2012–2016 light-duty final rule, previously-received confidential manufacturer data, and the NESCCAF report, NHTSA and EPA estimated the effectiveness of couple cam phasing to be between 1 and 4 percent. NHTSA and EPA reviewed this estimate for purposes of the NPRM, and continue to find it accurate.

In the 2012–2016 light-duty final rule, the agencies estimated a $41 cost per cam phaser not including any markup (2007$). NHTSA and EPA believe that this estimate remains accurate. Using the new indirect cost multiplier of 1.17, for a low complexity technology, the compliance cost per cam phaser would be $46 (2008$) in the 2014 model year. Time-based learning is applied to this

[155] Note that throughout the cost estimates for this HD analysis, the agencies have used slightly higher markups than those used in the 2012–2016 MY light-duty vehicle rule. The new, slightly higher ICMs include return on capital of roughly 6%, a factor that was not included in the light-duty analysis.

[156] Note that the costs developed for low friction lubes for this analysis reflect the costs associated with any engine changes that would be required as well as any durability testing that may be required.

[157] "Impact of Friction Reduction Technologies on Fuel Economy," Fenske, G. Presented at the March 2009 Chicago Chapter Meeting of the 'Society of Tribologists and Lubricated Engineers' Meeting, March 18th, 2009. Available at: *http://www.chicagostle.org/program/2008-2009/Impact%20of%20Friction%20Reduction%20Technologies%20on%20Fuel%20Economy%20-%20with%20VGs%20removed.pdf* (last accessed July 9, 2009).

[158] Although couple cam phasing appears only in the single overhead cam and overhead valve branches of the decision tree, it is noted that a single phaser with a secondary chain drive would allow couple cam phasing to be applied to direct overhead cam engines. Since this would potentially be adopted on a limited number of direct overhead cam engines NHTSA did not include it in that branch of the decision tree.

[159] It is also noted that coaxial camshaft developments would allow other variable valve timing options to be applied to overhead valve engines. However, since they would potentially be adopted on a limited number of overhead valve engines, NHTSA did not include them in the decision tree.

technology. This technology was considered for gasoline engines only.

(iv) Cylinder Deactivation

In conventional spark-ignited engines throttling the airflow controls engine torque output. At partial loads, efficiency can be improved by using cylinder deactivation instead of throttling. Cylinder deactivation can improve engine efficiency by disabling or deactivating (usually) half of the cylinders when the load is less than half of the engine's total torque capability—the valves are kept closed, and no fuel is injected—as a result, the trapped air within the deactivated cylinders is simply compressed and expanded as an air spring, with reduced friction and heat losses. The active cylinders combust at almost double the load required if all of the cylinders were operating. Pumping losses are significantly reduced as long as the engine is operated in this "part-cylinder" mode.

Cylinder deactivation control strategy relies on setting maximum manifold absolute pressures or predicted torque within which it can deactivate the cylinders. Noise and vibration issues reduce the operating range to which cylinder deactivation is allowed, although manufacturers are exploring vehicle changes that enable increasing the amount of time that cylinder deactivation might be suitable. Some manufacturers may choose to adopt active engine mounts and/or active noise cancellations systems to address Noise Vibration and Harshness (NVH) concerns and to allow a greater operating range of activation. Cylinder deactivation is a technology keyed to more lightly loaded operation, and so may be a less likely technology choice for manufacturers designing for effectiveness in the loaded condition required for testing, and in the real world that involves frequent operation with heavy loads.

Cylinder deactivation has seen a recent resurgence thanks to better valvetrain designs and engine controls. General Motors and Chrysler Group have incorporated cylinder deactivation across a substantial portion of their V8-powered lineups.

Effectiveness improvements scale roughly with engine displacement-to-vehicle weight ratio: the higher displacement-to-weight vehicles, operating at lower relative loads for normal driving, have the potential to operate in part-cylinder mode more frequently.

NHTSA and EPA adjusted the 2012–2016 light-duty final rule estimates using updated power to weight ratings of heavy-duty trucks and confidential business information and confirmed a range of 3 to 4 percent for these vehicles, though as mentioned above there is uncertainty over how often this technology would be exercised on the test cycles, and a lower range may be warranted for HD vehicles.

NHTSA and EPA consider the costs for this technology to be identical to that for V8 engines on light-duty trucks. As such, the agencies have used the cost used in the 2012–2016 light-duty final rule. Using the new markup of 1.17 for a low complexity technology results in an estimate of $193 (2008$) in the 2014 model year. Time based learning is applied to this technology. This technology was considered for gasoline engines only.

(v) Stoichiometric Gasoline Direct Injection

SGDI engines inject fuel at high pressure directly into the combustion chamber (rather than the intake port in port fuel injection). SGDI requires changes to the injector design, an additional high pressure fuel pump, new fuel rails to handle the higher fuel pressures and changes to the cylinder head and piston crown design. Direct injection of the fuel into the cylinder improves cooling of the air/fuel charge within the cylinder, which allows for higher compression ratios and increased thermodynamic efficiency without the onset of combustion knock. Recent injector design advances, improved electronic engine management systems and the introduction of multiple injection events per cylinder firing cycle promote better mixing of the air and fuel, enhance combustion rates, increase residual exhaust gas tolerance and improve cold start emissions. SGDI engines achieve higher power density and match well with other technologies, such as boosting and variable valvetrain designs.

Several manufacturers have recently introduced vehicles with SGDI engines, including GM and Ford and have announced their plans to increase dramatically the number of SGDI engines in their portfolios.

The 2012–2016 light-duty final rule estimated the range of 1 to 2 percent for SGDI. NHTSA and EPA reviewed this estimate for purposes of the NPRM, and continue to find it accurate.

Consistent with the 2012–2016 light-duty final rule, NHTSA and EPA cost estimates for SGDI take into account the changes required to the engine hardware, engine electronic controls, ancillary and NVH mitigation systems. Through contacts with industry NVH suppliers, and manufacturer press releases, the agencies believe that the NVH treatments will be limited to the mitigation of fuel system noise, specifically from the injectors and the fuel lines. For this analysis, the agencies have estimated the costs at $395 (2008$) in the 2014 model year. Time based learning is applied to this technology. This technology was considered for gasoline engines only, as diesel engines already employ direct injection.

(b) Diesel Engine Technologies

Diesel engines have several characteristics that give them superior fuel efficiency compared to conventional gasoline, spark-ignited engines. Pumping losses are much lower due to lack of (or greatly reduced) throttling. The diesel combustion cycle operates at a higher compression ratio, with a very lean air/fuel mixture, and turbocharged light-duty diesels typically achieve much higher torque levels at lower engine speeds than equivalent-displacement naturally-aspirated gasoline engines. Additionally, diesel fuel has a higher energy content per gallon.[160] However, diesel fuel also has a higher carbon to hydrogen ratio, which increases the amount of CO_2 emitted per gallon of fuel used by approximately 15 percent over a gallon of gasoline.

Based on confidential business information and the 2010 NAS Report, two major areas of diesel engine design will be improved during the 2014–2018 timeframe. These areas include aftertreatment improvements and a broad range of engine improvements.

(i) Aftertreatment Improvements

The HD diesel pickup and van segment has largely adopted the SCR type of aftertreatment system to comply with criteria pollutant emission standards. As the experience base for SCR expands over the next few years, many improvements in this aftertreatment system such as construction of the catalyst, thermal management, and reductant optimization will result in a significant reduction in the amount of fuel used in the process. This technology was not considered in the 2012–2016 light-duty final rule. Based on confidential business information, EPA and NHTSA estimate the reduction in CO_2 as a result of these improvements at 3 to 5 percent.

The agencies have estimated the cost of this technology at $25 for each percentage improvement in fuel consumption. This estimate is based on

[160] Burning one gallon of diesel fuel produces about 15 percent more carbon dioxide than gasoline due to the higher density and carbon to hydrogen ratio.

the agencies' belief that this technology is, in fact, a very cost effective approach to improving fuel consumption. As such, $25 per percent improvement is considered a reasonable cost. This cost would cover the engineering and test cell related costs necessary to develop and implement the improved control strategies that would allow for the improvements in fuel consumption. Importantly, the engineering work involved would be expected to result in cost savings to the aftertreatment and control hardware (lower platinum group metal loadings, lower reductant dosing rates, *etc.*). Those savings are considered to be included in the $25 per percent estimate described here. Given the 4 percent average expected improvement in fuel consumption results in an estimated cost of $110 (2008$) for a 2014 model year truck or van. This estimate includes a low complexity ICM of 1.17 and time based learning from 2012 forward.

(ii) Engine Improvements

Diesel engines in the HD pickup and van segment are expected to have several improvements in their base design in the 2014–2018 timeframe. These improvements include items such as improved combustion management, optimal turbocharger design, and improved thermal management. This technology was not considered in the 2012–2016 light-duty final rule. Based on confidential business information, EPA and NHTSA estimate the reduction in CO_2 as a result of these improvements at 4 to 6 percent.

The cost for this technology includes costs associated with low temperature exhaust gas recirculation, improved turbochargers and improvements to other systems and components. These costs are considered collectively in our costing analysis and termed "diesel engine improvements." The agencies have estimated the cost of diesel engine improvements at $147 based on the cost estimates for several individual technologies. Specifically, the direct manufacturing costs we have estimated are: improved cylinder head, $9; turbo efficiency improvements, $16; EGR cooler improvements, $3; higher pressure fuel rail, $10; improved fuel injectors, $13; improved pistons, $2; and reduced valve train friction, $94. All values are in 2008 dollars and are applicable in the 2014MY. Applying a low complexity ICM of 1.17 results in a cost of $172 (2008$) applicable in the 2014MY. We consider time based learning to be appropriate for these technologies.

(c) Transmission Technologies

NHTSA and EPA have also reviewed the transmission technology estimates used in the 2012–2016 light-duty final rule. In doing so, NHTSA and EPA considered or reconsidered all available sources and updated the estimates as appropriate. The section below describes each of the transmission technologies considered for this proposal.

(i) Improved Automatic Transmission Control (Aggressive Shift Logic and Early Torque Converter Lockup)

Calibrating the transmission shift schedule to upshift earlier and quicker, and to lock-up or partially lock-up the torque converter under a broader range of operating conditions can reduce fuel consumption and CO_2 emissions. However, this operation can result in a perceptible degradation in NVH. The degree to which NVH can be degraded before it becomes noticeable to the driver is strongly influenced by characteristics of the vehicle, and although it is somewhat subjective, it always places a limit on how much fuel consumption can be improved by transmission control changes. Given that the Aggressive Shift Logic and Early Torque Converter Lockup are best optimized simultaneously due to the fact that adding both of them primarily requires only minor modifications to the transmission or calibration software, these two technologies are combined in the modeling. We consider these technologies to be present in the baseline, since 6-speed automatic transmissions are installed in the majority of Class 2b and 3 trucks in the 2010 model year timeframe.

(ii) Automatic 6- and 8-Speed Transmissions

Manufacturers can also choose to replace 4- 5- and 6-speed automatic transmissions with 8-speed automatic transmissions. Additional ratios allow for further optimization of engine operation over a wider range of conditions, but this is subject to diminishing returns as the number of speeds increases. As additional planetary gear sets are added (which may be necessary in some cases to achieve the higher number of ratios), additional weight and friction are introduced. Also, the additional shifting of such a transmission can be perceived as bothersome to some consumers, so manufacturers need to develop strategies for smooth shifts. Some manufacturers are replacing 4- and 5-speed automatics with 6-speed automatics already, and 7- and 8-speed automatics have entered production in light-duty vehicles, albeit in lower-volume applications in luxury and performance oriented cars.

As discussed in the light-duty final GHG rule, confidential manufacturer data projected that 6-speed transmissions could incrementally reduce fuel consumption by 0 to 5 percent from a 4-speed automatic transmission, while an 8-speed transmission could incrementally reduce fuel consumption by up to 6 percent from a 4-speed automatic transmission. GM has publicly claimed a fuel economy improvement of up to 4 percent for its new 6-speed automatic transmissions.[161]

NHTSA and EPA reviewed and revised these effectiveness estimates based on actual usage statistics and testing methods for these vehicles along with confidential business information. When combined with improved automatic transmission control, the agencies estimate the effectiveness for a conversion from a 4 to a 6-speed transmission to be 5.3% and a conversion from a 6 to 8-speed transmission to be 1.7%. While 8-speed transmissions were not considered in the 2012–2016 light-duty final rule, they are considered as a technology of choice for this analysis in that manufacturers are expected to upgrade the 6-speed automatic transmissions being implemented today with 8-speed automatic transmissions in the 2014–2018 timeframe. For this proposal, we are estimating the cost of an 8-speed automatic transmission at $231 (2008$) relative to a 6-speed automatic transmission in the 2014 model year. This estimate is based from the 2010 NAS Report and we have applied a low complexity ICM of 1.17 and time based learning. This technology applies to both gasoline and diesel trucks and vans.

(d) Electrification/Accessory Technologies

(i) Electrical Power Steering or Electrohydraulic Power Steering

Electric power steering (EPS) or Electrohydraulic power steering (EHPS) provides a potential reduction in CO_2 emissions and fuel consumption over hydraulic power steering because of reduced overall accessory loads. This eliminates the parasitic losses

[161] General Motors, news release, "From Hybrids to Six-Speeds, Direct Injection And More, GM's 2008 Global Powertrain Lineup Provides More Miles with Less Fuel" (released Mar. 6, 2007). Available at *http://www.gm.com/experience/fuel_economy/news/2007/adv_engines/2008-powertrain-lineup-082707.jsp* (last accessed Sept. 18, 2008).

associated with belt-driven power steering pumps which consistently draw load from the engine to pump hydraulic fluid through the steering actuation systems even when the wheels are not being turned. EPS is an enabler for all vehicle hybridization technologies since it provides power steering when the engine is off. EPS may be implemented on most vehicles with a standard 12V system. Some heavier vehicles may require a higher voltage system which may add cost and complexity.

The 2012–2016 light-duty final rule estimated a 1 to 2 percent effectiveness based on the 2002 NAS report for light-duty vehicle technologies, a Sierra Research report, and confidential manufacturer data. NHTSA and EPA reviewed these effectiveness estimates and found them to be accurate, thus they have been retained for purposes of this NPRM.

NHTSA and EPA adjusted the EPS cost for the current rulemaking based on a review of the specification of the system. Adjustments were made to include potentially higher voltage or heavier duty system operation for HD pickups and vans. Accordingly, higher costs were estimated for systems with higher capability. After accounting for the differences in system capability and applying the ICM markup of low complexity technology of 1.17, the estimated costs for this proposal are $108 for a MY 2014 truck or van (2008$). As EPS systems are in widespread usage today, time-based learning is deemed applicable. EHPS systems are considered to be of equal cost and both are considered applicable to gasoline and diesel engines.

(ii) Improved Accessories

The accessories on an engine, including the alternator, coolant and oil pumps are traditionally mechanically-driven. A reduction in CO_2 emissions and fuel consumption can be realized by driving them electrically, and only when needed ("on-demand").

Electric water pumps and electric fans can provide better control of engine cooling. For example, coolant flow from an electric water pump can be reduced and the radiator fan can be shut off during engine warm-up or cold ambient temperature conditions which will reduce warm-up time, reduce warm-up fuel enrichment, and reduce parasitic losses.

Indirect benefit may be obtained by reducing the flow from the water pump electrically during the engine warm-up period, allowing the engine to heat more rapidly and thereby reducing the fuel enrichment needed during cold starting of the engine. Further benefit may be obtained when electrification is combined with an improved, higher efficiency engine alternator. Intelligent cooling can more easily be applied to vehicles that do not typically carry heavy payloads, so larger vehicles with towing capacity present a challenge, as these vehicles have high cooling fan loads.[162]

The agencies considered whether to include electric oil pump technology for the rulemaking. Because it is necessary to operate the oil pump any time the engine is running, electric oil pump technology has insignificant effect on efficiency. Therefore, the agencies decided to not include electric oil pump technology for this proposal.

NHTSA and EPA jointly reviewed the estimates of 1 to 2 percent effectiveness estimates used in the 2012–2016 light-duty final rule and found them to be accurate for Improved Electrical Accessories. Consistent with the 2012–2016 light-duty final rule, the agencies have estimated the cost of this technology at $88 (2008$) including a low complexity ICM of 1.17. This cost is applicable in the 2014 model year. Improved accessory systems are in production currently and thus time-based learning is applied. This technology was considered for diesel trucks and vans only.

(e) Vehicle Technologies

(i) Mass Reduction

Reducing a vehicle's mass, or down-weighting the vehicle, decreases fuel consumption by reducing the energy demand needed to overcome forces resisting motion, and rolling resistance. Manufacturers employ a systematic approach to mass reduction, where the net mass reduction is the addition of a direct component or system mass reduction plus the additional mass reduction taken from indirect ancillary systems and components, as a result of full vehicle optimization, effectively compounding or obtaining a secondary mass reduction from a primary mass reduction. For example, use of a smaller, lighter engine with lower torque-output subsequently allows the use of a smaller, lighter-weight transmission and drive line components. Likewise, the compounded weight reductions of the body, engine and drivetrain reduce stresses on the suspension components, steering components, wheels, tires and brakes, allowing further reductions in the mass of these subsystems. The reductions in unsprung masses such as brakes, control arms, wheels and tires further reduce stresses in the suspension mounting points. This produces a compounding effect of mass reductions.

Estimates of the synergistic effects of mass reduction and the compounding effect that occurs along with it can vary significantly from one report to another. For example, in discussing its estimate, an Auto-Steel Partnership report states that "These secondary mass changes can be considerable—estimated at an additional 0.7 to 1.8 times the initial mass change."§[163] This means for each one pound reduction in a primary component, up to 1.8 pounds can be reduced from other structures in the vehicle (*i.e.*, a 180 percent factor). The report also discusses that a primary variable in the realized secondary weight reduction is whether or not the powertrain components can be included in the mass reduction effort, with the lower end estimates being applicable when powertrain elements are unavailable for mass reduction. However, another report by the Aluminum Association, which primarily focuses on the use of aluminum as an alternative material for steel, estimated a factor of 64 percent for secondary mass reduction even though some powertrain elements were considered in the analysis.[164] That report also notes that typical values for this factor vary from 50 to 100 percent. Although there is a wide variation in stated estimates, synergistic mass reductions do exist, and the effects result in tangible mass reductions. Mass reductions in a single vehicle component, for example a door side impact/intrusion system, may actually result in a significantly higher weight savings in the total vehicle, depending on how well the manufacturer integrates the modification into the overall vehicle design. Accordingly, care must be taken when reviewing reports on weight reduction methods and practices to ascertain if compounding effects have been considered or not.

[162] In the CAFE model, improved accessories refers solely to improved engine cooling. However, EPA has included a high efficiency alternator in this category, as well as improvements to the cooling system.

[163] "Preliminary Vehicle Mass Estimation Using Empirical Subsystem Influence Coefficients," Malen, D.E., Reddy, K. Auto-Steel Partnership Report, May 2007, Docket EPA–HQ–OAR–2009–0472–0169. Accessed on the Internet on May 30, 2009 at: *http://www.a-sp.org/database/custom/Mass%20Compounding%20-%20Final%20Report.pdf.*

[164] "Benefit Analysis: Use of Aluminum Structures in Conjunction with Alternative Powertrain Technologies in Automobiles," Bull, M. Chavali, R., Mascarin, A., Aluminum Association Research Report, May 2008, Docket EPA–HQ–OAR–2009–0472–0168. Accessed on the Internet on April 30, 2009 at: *http://www.autoaluminum.org/downloads/IBIS–Powertrain-Study.pdf.*

Mass reduction is broadly applicable across all vehicle subsystems including the engine, exhaust system, transmission, chassis, suspension, brakes, body, closure panels, glazing, seats and other interior components, engine cooling systems and HVAC systems. It is estimated that up to 1.25 kilograms of secondary weight savings can be achieved for every kilogram of weight saved on a vehicle when all subsystems are redesigned to take into account the initial primary weight savings.[165] [166]

Mass reduction can be accomplished by proven methods such as:

- *Smart Design:* Computer aided engineering (CAE) tools can be used to better optimize load paths within structures by reducing stresses and bending moments applied to structures. This allows better optimization of the sectional thicknesses of structural components to reduce mass while maintaining or improving the function of the component. Smart designs also integrate separate parts in a manner that reduces mass by combining functions or the reduced use of separate fasteners. In addition, some "body on frame" vehicles are redesigned with a lighter "unibody" construction.
- *Material Substitution:* Substitution of lower density and/or higher strength materials into a design in a manner that preserves or improves the function of the component. This includes substitution of high-strength steels, aluminum, magnesium or composite materials for components currently fabricated from mild steel.
- *Reduced Powertrain Requirements:* Reducing vehicle weight sufficiently allows for the use of a smaller, lighter and more efficient engine while maintaining or increasing performance. Approximately half of the reduction is due to these reduced powertrain output requirements from reduced engine power output and/or displacement, changes to transmission and final drive gear ratios. The subsequent reduced rotating mass (*e.g.*, transmission, driveshafts/halfshafts, wheels and tires) via weight and/or size reduction of components are made possible by reduced torque output requirements.
- Automotive companies have largely used weight savings in some vehicle subsystems to offset or mitigate weight gains in other subsystems from increased feature content (sound insulation, entertainment systems, improved climate control, panoramic roof, *etc.*).
- Lightweight designs have also been used to improve vehicle performance parameters by increased acceleration performance or superior vehicle handling and braking.

Many manufacturers have already announced proposed future products plans reducing the weight of a vehicle body through the use of high strength steel body-in-white, composite body panels, magnesium alloy front and rear energy absorbing structures reducing vehicle weight sufficiently to allow a smaller, lighter and more efficient engine. Nissan will be reducing average vehicle curb weight by 15% by 2015.[167] Ford has identified weight reductions of 250 to 750 lb per vehicle as part of its implementation of known technology within its sustainability strategy between 2011 and 2020.[168] Mazda plans to reduce vehicle weight by 220 pounds per vehicle or more as models are redesigned. [169, 170] Ducker International estimates that the average curb weight of light-duty vehicle fleet will decrease approximately 2.8% from 2009 to 2015 and approximately 6.5% from 2009 to 2020 via changes in automotive materials and increased change-over from previously used body-on-frame automobile and light-truck designs to newer unibody designs.167 While the opportunity for mass reductions available to the light-duty fleet may not in all cases be applied directly to the heavy-duty fleet due to the different designs for the expected duty cycles of a "work" vehicle, mass reductions are still available particularly to areas unrelated to the components necessary for the work vehicle aspects.

Due to the payload and towing requirements of these heavy-duty vehicles, engine downsizing was not considered in the estimates for CO_2 reduction in the area of mass reduction/material substitution. NHTSA and EPA estimate that a 3 percent mass reduction with no engine downsizing results in a 1 percent reduction in fuel consumption. In addition, a 5 and 10 percent mass reduction with no engine downsizing result in an estimated CO_2 reduction of 1.6 and 3.2 percent respectively. These effectiveness values are 50% of the 2012–2016 light-duty final rule values due to the elimination of engine downsizing for this class of vehicle.

Consistent with the 2012–2016 light-duty final rule, the agencies have estimated the cost of mass reduction at $1.32 per pound (2008$). For this analysis, the agencies are estimating a 5% mass reduction or, given the baseline weight of current trucks and vans, are estimating costs of $462, $544, $513, and $576 for Class 2b gasoline, 2b diesel, 3 gasoline, 3 diesel trucks and vans, respectively. All values are in 2008 dollars, are applicable in the 2014 model year and include a low complexity ICM of 1.17. Time based learning is considered applicable to mass reduction technologies.

The agencies have recently completed work on an Interim Joint Technical Assessment Report that considers light-duty GHG and fuel economy standards for the years 2017 through 2025.[171] In that report, the agencies have used updated cost estimates for mass reduction which were not available in time for use in this analysis but could be used in the final analysis. The agencies request comment on which mass reduction costs—those used in this draft analysis or those used in the Joint Technical Assessment Report—would be most appropriate for Class 2b & 3 trucks and vans along with supporting information.

(ii) Low Rolling Resistance Tires

Tire rolling resistance is the frictional loss associated mainly with the energy dissipated in the deformation of the tires under load and thus influences fuel efficiency and CO_2 emissions. Other tire design characteristics (*e.g.*, materials, construction, and tread design) influence durability, traction (both wet and dry grip), vehicle handling, and ride comfort in addition to rolling resistance. A typical LRR tire's attributes would include: increased tire inflation

[165] "Future Generation Passenger Compartment-Validation (ASP 241)" Villano, P.J., Shaw, J.R., Polewarczyk, J., Morgans, S., Carpenter, J.A., Yocum, A.D., in "Lightweighting Materials—FY 2008 Progress Report," U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Vehicle Technologies Program, May 2009, Docket EPA–HQ–OAR–2009–0472–0190.

[166] "Preliminary Vehicle Mass Estimation Using Empirical Subsystem Influence Coefficients," Malen, D.E., Reddy, K. Auto-Steel Partnership Report, May 2007, Docket EPA–HQ–OAR–2009–0472–0169. Accessed on the Internet on May 30, 2009 at: *http://www.a-sp.org/database/custom/Mass%20Compounding%20-%20Final%20Report.pdf.*

[167] "Lighten Up!," Brooke, L., Evans, H. Automotive Engineering International, Vol. 117, No. 3, March 2009.

[168] "2008/9 Blueprint for Sustainability," Ford Motor Company. Available at: *http://www.ford.com/go/sustainability* (last accessed February 8, 2010).

[169] "Mazda to cut vehicle fuel consumption 30 percent by 2015," Mazda press release, June 23, 2009. Available at: *http://www.mazda.com/publicity/release/2008/200806/080623.html*(last accessed February 8, 2010).

[170] "Mazda: Don't believe hot air being emitted by hybrid hype," Greimel, H. Automotive News, March 30, 2009.

[171] "Interim Joint Technical Assessment Report: Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards for Model Years 2017–2025;" September 2010; available at *http://epa.gov/otaq/climate/regulations/ldv-ghg-tar.pdf* and in the docket for this rule.

pressure, material changes, and tire construction with less hysteresis, geometry changes (*e.g.*, reduced aspect ratios), and reduction in sidewall and tread deflection. These changes would generally be accompanied with additional changes to suspension tuning and/or suspension design.

EPA and NHTSA estimated a 1 to 2 percent increase in effectiveness with a 10 percent reduction in rolling resistance, which was based on the 2010 NAS Report findings and consistent with the 2012–2016 light-duty final rule.

Based on the 2012–2016 light-duty final rule and the 2010 NAS Report, the agencies have estimated the cost for LRR tires to be $6 per Class 2b truck or van, and $9 per Class 3 truck or van.[172] The higher cost for the Class 3 trucks and vans is due to the predominant use of dual rear tires and, thus, 6 tires per truck. Due to the commodity-based nature of this technology, cost learning is not applied. This technology is considered applicable to both gasoline and diesel.

(iii) Aerodynamic Drag Reduction

Many factors affect a vehicle's aerodynamic drag and the resulting power required to move it through the air. While these factors change with air density and the square and cube of vehicle speed, respectively, the overall drag effect is determined by the product of its frontal area and drag coefficient, Cd. Reductions in these quantities can therefore reduce fuel consumption and CO_2 emissions. Although frontal areas tend to be relatively similar within a vehicle class (mostly due to market-competitive size requirements), significant variations in drag coefficient can be observed. Significant changes to a vehicle's aerodynamic performance may need to be implemented during a redesign *(e.g.*, changes in vehicle shape). However, shorter-term aerodynamic reductions, with a somewhat lower effectiveness, may be achieved through the use of revised exterior components (typically at a model refresh in mid-cycle) and add-on devices that currently being applied. The latter list would include revised front and rear fascias, modified front air dams and rear valances, addition of rear deck lips and underbody panels, and lower aerodynamic drag exterior mirrors.

The 2012–2016 light-duty final rule estimated that a fleet average of 10 to 20 percent total aerodynamic drag reduction is attainable which equates to incremental reductions in fuel consumption and CO_2 emissions of 2 to 3 percent for both cars and trucks. These numbers are generally supported by confidential manufacturer data and public technical literature. For the heavy-duty truck category, a 5 to 10 percent total aerodynamic drag reduction was considered due to the different structure and use of these vehicles equating to incremental reductions in fuel consumption and CO_2 emissions of 1 to 2 percent.

Consistent with the 2012–2016 light-duty final rule, the agencies have estimated the cost for this technology at $54 (2008$) including a low complexity ICM of 1.17. This cost is applicable in the 2014 model year to both gasoline and diesel trucks and vans.

(3) What are the projected technology packages' effectiveness and cost?

The assessment of the proposed technology effectiveness was developed through the use of the EPA Lumped Parameter model developed for the light-duty rule. Many of the technologies were common with the light-duty assessment but the effectiveness of individual technologies was appropriately adjusted to match the expected effectiveness when implemented in a heavy-duty application. The model then uses the individual technology effectiveness levels but then takes into account technology synergies. The model is also designed to prevent double counting from technologies that may directly or indirectly impact the same physical attribute (*e.g.*, pumping loss reductions).

To achieve the levels of the proposed standards for gasoline and diesel powered heavy-duty vehicles, the technology packages were determined to generally require the technologies previously discussed respective to unique gasoline and diesel technologies. Although some of the technologies may already be implemented in a portion of heavy-duty vehicles, none of the technologies discussed are considered ubiquitous in the heavy-duty fleet. Also, as would be expected, the available test data shows that some vehicle models will not need the full complement of available technologies to achieve the proposed standards. Furthermore, many technologies can be further improved (*e.g.*, aerodynamic improvements) from today's best levels, and so allow for compliance without needing to apply a technology that a manufacturer might deem less desirable.

Technology costs for HD pickup trucks and vans are shown in Table III–11.

[172] "Tires and Passenger Vehicle Fuel Economy," Transportation Research Board Special Report 286, National Research Council of the National Academies, 2006, Docket EPA–HQ–OAR–2009–0472–0146.

Table III-11 Technology Costs for HD Pickup Trucks & Vans Inclusive of Indirect Cost Markups for the 2014MY (2008$)

Technology	Class 2b Gasoline	Class 2b Diesel	Class 3 Gasoline	Class 3 Diesel
Low friction lubes	$4	$4	$4	$4
Engine friction reduction	$108	N/A	$108	N/A
Coupled cam phasing	$46	N/A	$46	N/A
Cylinder deactivation	$193	N/A	$193	N/A
Stoichiometric gasoline direct injection	$395	N/A	$395	N/A
Engine improvements	N/A	$172	N/A	$172
8s automatic transmission (increment to 6s automatic transmission)	$231	$231	$231	$231
Improved accessories	N/A	$88	N/A	$88
Low rolling resistance tires	$6	$6	$9	$9
Aerodynamic improvements	$54	$54	$54	$54
Electric (or electro/hydraulic) power steering	$108	$108	$108	$108
Aftertreatment improvements	N/A	$110	N/A	$110
Mass reduction (5%)	$462	$544	$513	$576
Air conditioning	$21	$21	$21	$21
Total	$1,628	$1,338	$1,683	$1,373
At 15% phase-in in 2014	$244	$201	$252	$206

(4) Reasonableness of the Proposed Standards

The proposed standards are based on the application of the control technologies described in this section. These technologies are available within the lead time provided, as discussed in draft RIA Chapter 2.3. These controls are estimated to add costs of approximately $1,249 to $1,592 for MY 2018 heavy-duty pickups and vans. Reductions associated with these costs and technologies are considerable, estimated at a 12 percent reduction of CO_2eq emissions from the MY 2010 baseline for gasoline engine-equipped vehicles and 17 percent for diesel engine equipped vehicles, estimated to result in reductions of 21 MMT of CO_2eq emissions over the lifetimes of 2014 through 2018 MY vehicles.[173] The reductions are cost effective, estimated at $100 per ton of CO_2eq removed in 2030.[174] This cost is consistent with the light-duty rule which was estimated at $100 per ton of CO_2eq removed in 2020 excluding fuel savings. Moreover, taking into account the fuel savings associated with the program, the cost becomes −$200 per ton of CO_2eq in 2030. The cost of controls is fully recovered due to the associated fuel savings, with a payback period within the fifth and sixth year of ownership, as shown in Table VIII–6 below. Given the large, cost effective emission reductions based on use of feasible technologies which are available in the lead time provided, plus the lack of adverse impacts on vehicle safety or utility, EPA and NHTSA regard these proposed standards as appropriate and consistent with our respective statutory authorities under CAA section 202(a) and NHTSA's EISA authority under 49 U.S.C. 32902(k)(2).

C. Class 2b–8 Vocational Vehicles

Vocational vehicles cover a wide variety of applications which influence both the body style and usage patterns. They also are built using a complex process, which includes additional parties such as body builders. These factors have led the agencies to propose a vehicle standard for vocational vehicles for the first phase of the program that relies on less extensive addition of technology as well as focusing on the chassis manufacturer as the manufacturer subject to the standard. We believe that future rulemakings will consider increased stringency and possibly more application-specific standards. The agencies are proposing standards for the diesel and gasoline engines used in vocational vehicles, similar to those discussed above for Class 7 and 8 tractors.

(1) What technologies did the agencies consider to reduce the CO_2 emissions and fuel consumption of vocational vehicles?

Similar to the approach taken with tractors, the agencies evaluated aerodynamic, tire, idle reduction, weight reduction, hybrid powertrain, and engine technologies and their impact on reducing fuel consumption and GHG emissions. The engines used in vocational vehicles include both gasoline and diesel engines, thus, each type is discussed separately below. As explained in Section II.D.1.b, the proposed regulatory structure for heavy-duty engines separates the compression ignition (or "diesel") engines into three regulatory subcategories—light heavy, medium heavy, and heavy heavy diesel

[166] *See* Table VI–4.

[167] *See* Table VIII–3.

engines—while spark ignition (or "gasoline") engines are a single regulatory subcategory. Therefore, the subsequent discussion will assess each type of engine separately.

(a) Vehicle Technologies

Vocational vehicles typically travel fewer miles than combination tractors. They also tend to be used in more urban locations (with consequent stop and start drive cycles). Therefore the average speed of vocational vehicles is significantly lower than tractors. This has a significant effect on the types of technologies that are appropriate to consider for reducing CO_2 emissions and fuel consumption.

The agencies considered the type of technologies for vocational vehicles based on the energy losses of a typical vocational vehicle. The technologies are similar to the ones considered for tractors. Argonne National Lab conducted an energy audit using simulation tools to evaluate the energy losses of vocational vehicles, such as a Class 6 pickup and delivery truck. Argonne found that 74 percent of the energy losses are attributed to the engine, 13 percent to tires, 9 percent to aerodynamics, two percent to transmission losses, and the remaining four percent of losses to axles and accessories for a medium-duty truck traveling at 30 mph.[175]

Low Rolling Resistance Tires: Tires are the second largest contributor to energy losses of vocational vehicles, as found in the energy audit conducted by Argonne National Lab (as just mentioned). The range of rolling resistance of tires used on vocational vehicles today is large. This is in part due to the fact that the competitive pressure to improve rolling resistance of vocational vehicle tires has been less than that found in the line haul tire market. In addition, the drive cycles typical for these applications often lead truck buyers to value tire traction and durability more heavily than rolling resistance. Therefore, the agencies concluded that a regulatory program that seeks to optimize tire rolling resistance in addition to traction and durability can bring about fuel consumption and CO_2 emission reductions from this segment. The 2010 NAS report states that rolling resistance impact on fuel consumption reduces with mass of the vehicle and with drive cycles with more frequent starts and stops. The report found that the fuel consumption reduction opportunity for reduced rolling resistance ranged between one and three percent in the 2010 through 2020 timeframe.[176] The agencies estimate that average rolling resistance from tires in 2010 model year can be reduced by 10 percent by 2014 model year based on the tire development achievements over the last several years in the line haul truck market which would lead to a 2 percent reduction in fuel consumption based on GEM.

Aerodynamics: The Argonne National lab work shows that aerodynamics have less of an impact on vocational vehicle energy losses than do engines or tires. In addition, the aerodynamic performance of a complete vehicle is significantly influenced by the body of the truck. The agencies are not proposing to regulate body builders in this phase of regulations for the reasons discussed in Section II. Therefore, we are not basing any of the proposed standards for vocational vehicles on aerodynamic improvements. Nor would aerodynamic performance be input into GEM to demonstrate compliance.

Weight Reduction: NHTSA and EPA are also not basing any of the proposed standards on use of vehicle weight reduction. Thus, vehicle mass reductions would not be input into GEM. The vocational vehicle models are not designed to be application-specific. Therefore weight reductions are difficult to quantify.

Drivetrain: Optimization of vehicle gearing to engine performance through selection of transmission gear ratios, final drive gear ratios and tire size can play a significant role in reducing fuel consumption and GHGs. Optimization of gear selection versus vehicle and engine speed accomplished through driver training or automated transmission gear selection can provide additional reductions. The 2010 NAS report found that the opportunities to reduce fuel consumption in heavy-duty vehicles due to transmission and driveline technologies in the 2015 timeframe ranged between 2 and 8 percent.[177] Initially, the agencies considered reflecting transmission choices and technology in our standard setting process for both tractors and vocational vehicles (*see* previous discussion above on automated transmissions for tractors). We have however decided not to do so for the following reasons.

The primary factors that determine optimum gear selection are vehicle weight, vehicle aerodynamics, vehicle speed, and engine performance typically considered on a two dimensional map of engine speed and torque. For a given power demand (determined by speed, aerodynamics and vehicle mass) an optimum transmission and gearing setup will keep the engine power delivery operating at the best speed and torque points for highest engine efficiency. Since power delivery from the engine is the product of speed and torque a wide range of torque and speed points can be found that deliver adequate power, but only a smaller subset will provide power with peak efficiency. Said more generally, the design goal is for the transmission to deliver the needed power to the vehicle while maintaining engine operation within the engine's "sweet spot" for most efficient operation. Absent information about vehicle mass and aerodynamics (which determines road load at highway speeds) it is not possible to optimize the selection of gear ratios for lowest fuel consumption. Truck and chassis manufacturers today offer a wide range of tire sizes, final gear ratios and transmission choices so that final bodybuilders can select an optimal combination given the finished vehicle weight, general aerodynamic characteristics and expected average speed. In order to set fuel efficiency and GHG standards that would reflect these optimizations, the agencies would need to regulate a wide range of small entities that are final bodybuilders, would need to set a large number of uniquely different standards to reflect the specific weight and aerodynamic differences and finally would need test procedures to evaluate these differences that would not themselves be excessively burdensome. Finally, the agencies would need the underlying data regarding effectively all of the vocational trucks produced today in order to determine the appropriate standards. Because the market is already motivated to reach these optimizations themselves today, because we have insufficient data to determine appropriate standards, and finally, because we believe the testing burden would be unjustifiably high, we are not proposing to reflect transmission and gear ratio optimization in our GEM model or in our standard setting.

We are broadly seeking comment on our reasons for not reflecting these technology choices including recommendations for ways that the agencies could effectively reflect transmission related improvements. The agencies welcome comment on transmission and driveline technologies

[175] Argonne National Lab. Evaluation of Fuel Consumption Potential of Medium and Heavy-duty Vehicles through Modeling and Simulation. October 2009. Page 89.

[176] *See* 2010 NAS Report, Note 111, page 146.

[177] *See* 2010 NAS Report, Note 111, pp 134 and 137.

specific to the vocational vehicle market that can achieve fuel consumption and GHG emissions reductions.

Idle Reduction: Episodic idling by vocational vehicles occurs during the workday, unlike the overnight idling of combination tractors. Vocational vehicle idling can be divided into two typical types. The first type is idling while waiting—such as during a pickup or delivery. This type of idling can be reduced through automatic engine shut-offs. The second type of idling is to accomplish PTO operation, such as compacting garbage or operating a bucket. The agencies have found only one study that quantifies the emissions due to idling conducted by Argonne National Lab based on 2002 VIUS data.[178] EPA conducted a work assignment to assist in characterizing PTO operations. The study of a utility truck used in two different environments (rural and urban) and a refuse hauler found that the PTO operated on average 28 percent of time relative to the total time spent driving and idling. The use of hybrid powertrains to reduce idling is discussed below.

Hybrid Powertrains: Several types of vocational vehicles are well suited for hybrid powertrains. Vehicles such as utility or bucket trucks, delivery vehicles, refuse haulers, and buses have operational usage patterns with either a significant amount of stop-and-go activity or spend a large portion of their operating hours idling the main engine to operate a PTO unit. The industry is currently developing three types of hybrid powertrain systems—hydraulic, electric, and plug-in electric. The hybrids developed to date have seen fuel consumption and CO_2 emissions reductions between 20 and 50 percent in the field. However, there are still some key issues that are restricting the penetration of hybrids, including overall system cost, battery technology, and lack of cost-effective electrified accessories. The agencies are proposing to include hybrid powertrains as a technology to meet the vocational vehicle standard, as described in Section IV. However, the agencies are not proposing a vocational vehicle standard predicated on using a specific penetration of hybrids. We have not predicated the standards based on the use of hybrids reflecting the still nascent level of technology development and the very small fraction of vehicle sales they would be expected to account for in this timeframe—on the order of only a percent or two. Were we to overestimate the number of hybrids that could be produced, we would set a standard that is not feasible. We believe that it is more appropriate given the status of technology development and our high hopes for future advancements in hybrid technologies to encourage their production through incentives. The agencies welcome comments on this approach.

(b) Gasoline Engine Technologies

The gasoline (or spark ignited) engines certified and sold as loose engines into the heavy-duty truck market are typically large V8 and V10 engines produced by General Motors and Ford. The basic engine architecture of these engines is the same as the versions used in the heavy-duty pickup trucks and vans. Therefore, the technologies analyzed by the agencies mirror the gasoline engine technologies used in the heavy-duty pickup truck analysis in Section III.B above.

Building on the technical analysis underlying the 2012–2016 MY light-duty vehicle rule, the agencies took a fresh look at technology effectiveness values for purposes of this proposal using a starting point the estimates from that rule. The agencies then considered the impact of test procedures (such as higher test weight of HD pickup trucks and vans) on the effectiveness estimates. The agencies also considered other sources such as the 2010 NAS Report, recent CAFE compliance data, and confidential manufacturer estimates of technology effectiveness. NHTSA and EPA engineers reviewed effectiveness information from the multiple sources for each technology and ensured that such effectiveness estimates were based on technology hardware consistent with the BOM components used to estimate costs.

The agencies note that the effectiveness values estimated for the technologies may represent average values, and do not reflect the potentially-limitless spectrum of possible values that could result from adding the technology to different vehicles. For example, while the agencies have estimated an effectiveness of 0.5 percent for low friction lubricants, each vehicle could have a unique effectiveness estimate depending on the baseline vehicle's oil viscosity rating. For purposes of this NPRM, NHTSA and EPA believe that employing average values for technology effectiveness estimates is an appropriate way of recognizing the potential variation in the specific benefits that individual manufacturers (and individual engines) might obtain from adding a fuel-saving technology. However, the agencies seek comment on whether additional levels of specificity beyond that already provided would improve the analysis for the final rules, and if so, how those levels of specificity should be analyzed.

Baseline Engine: Similar to the gasoline engine used as the baseline in the light-duty GHG rule, the agencies assumed the baseline engine in this segment to be a naturally aspirated, overhead valve V8 engine. The following discussion of effectiveness is generally in comparison to 2010 baseline engine performance.

The technologies the agencies considered include the following:

Engine Friction Reduction: In addition to low friction lubricants, manufacturers can also reduce friction and improve fuel consumption by improving the design of engine components and subsystems. Examples include improvements in low-tension piston rings, piston skirt design, roller cam followers, improved crankshaft design and bearings, material coatings, material substitution, more optimal thermal management, and piston and cylinder surface treatments. The 2010 NAS, NESCCAF [179] and EEA [180] reports as well as confidential manufacturer data used in the light-duty vehicle rulemaking suggested a range of effectiveness for engine friction reduction to be between 1 to 3 percent. NHTSA and EPA continue to believe that this range is accurate.

Coupled Cam Phasing: Valvetrains with coupled (or coordinated) cam phasing can modify the timing of both the inlet valves and the exhaust valves an equal amount by phasing the camshaft of a single overhead cam engine or an overhead valve engine. Based on the 2012–2016 MY light-duty vehicle rule, previously-received confidential manufacturer data, and the NESCCAF report, NHTSA and EPA estimated the effectiveness of couple cam phasing CCP to be between 1 and 4 percent. NHTSA and EPA reviewed this estimate for purposes of the NPRM, and continue to find it accurate.

Cylinder Deactivation: In conventional spark-ignited engines throttling the airflow controls engine torque output. At partial loads, efficiency can be improved by using cylinder deactivation instead of throttling. Cylinder deactivation can improve engine efficiency by disabling or deactivating (usually) half of the

[178] Gaines, Linda, A. Vyas, J. Anderson (Argonne National Laboratory). *Estimation of Fuel Use by Idling Commercial Trucks.* January 2006.

[179] Northeast States Center for a Clean Air Future. "Reducing Greenhouse Gas Emissions from Light-Duty Motor Vehicles." September 2004.

[180] Energy and Environmental Analysis, Inc. "Technology to Improve the Fuel Economy of Light Duty Trucks to 2015." May 2006.

cylinders when the load is less than half of the engine's total torque capability—the valves are kept closed, and no fuel is injected—as a result, the trapped air within the deactivated cylinders is simply compressed and expanded as an air spring, with reduced friction and heat losses. The active cylinders combust at almost double the load required if all of the cylinders were operating. Pumping losses are significantly reduced as long as the engine is operated in this "part cylinder" mode. Effectiveness improvements scale roughly with engine displacement-to-vehicle weight ratio—the higher displacement-to-weight vehicles, operating at lower relative loads for normal driving, have the potential to operate in part-cylinder mode more frequently. Therefore, the agencies reduced the effectiveness assumed from this technology for trucks because of the lower displacement-to-weight ratio relative to light-duty vehicles. NHTSA and EPA adjusted the 2010 light-duty vehicle final rule estimates using updated power to weight ratings of heavy-duty trucks and confidential business information and confirmed a range of 3 to 4 percent for these vehicles.

Stoichiometric gasoline direct injection: SGDI (also known as spark-ignition direct injection engines) inject fuel at high pressure directly into the combustion chamber (rather than the intake port in port fuel injection). Direct injection of the fuel into the cylinder improves cooling of the air/fuel charge within the cylinder, which allows for higher compression ratios and increased thermodynamic efficiency without the onset of combustion knock. Recent injector design advances, improved electronic engine management systems and the introduction of multiple injection events per cylinder firing cycle promote better mixing of the air and fuel, enhance combustion rates, increase residual exhaust gas tolerance and improve cold start emissions. SGDI engines achieve higher power density and match well with other technologies, such as boosting and variable valvetrain designs. The 2012–2016 MY light-duty vehicle final rule estimated the effectiveness of SGDI to be between 2 and 3 percent. NHTSA and EPA revised these estimated accounting for the use and testing methods for these vehicles along with confidential business information estimates received from manufacturers while developing the proposal. Based on these revisions, NHTSA and EPA estimate the range of 1 to 2 percent for SGDI.

(c) Diesel Engine Technologies

Different types of diesel engines are used in vocational vehicles, depending on the application. They fall into the categories of Light, Medium, and Heavy Heavy-duty Diesel engines. The Light Heavy-duty Diesel engines typically range between 4.7 and 6.7 liters displacement. The Medium Heavy-duty Diesel engines typically have some overlap in displacement with the Light Heavy-duty Diesel engines and range between 6.7 and 9.3 liters. The Heavy Heavy-duty Diesel engines typically are represented by engines between 10.8 and 16 liters.

Baseline Engine: There are three baseline diesel engines, a Light, Medium, and a Heavy Heavy-duty Diesel engine. The agencies developed the baseline diesel engine as a 2010 model year engine with an aftertreatment system which meets EPA's 0.2 grams of NO_X/bhp-hr standard with an SCR system along with EGR and meets the PM emissions standard with a diesel particulate filter with active regeneration. The engine is turbocharged with a variable geometry turbocharger. The following discussion of technologies describes improvements over the 2010 model year baseline engine performance, unless otherwise noted. Further discussion of the baseline engine and its performance can be found in Section III.C.2.(c)(i) below. The following discussion of effectiveness is generally in comparison to 2010 baseline engine performance, and is in reference to performance in terms of the Heavy-duty FTP that would be used for compliance for these engine standards. This is in comparison to the steady state SET procedure that would be used for compliance purposes for the engines used in Class 7 and 8 tractors. *See* Section II.B.2.(i) above.

Turbochargers: Improved efficiency of a turbocharger compressor or turbine could reduce fuel consumption by approximately 1 to 2 percent over today's variable geometry turbochargers in the market today. The 2010 NAS report identified technologies such as higher pressure ratio radial compressors, axial compressors, and dual stage turbochargers as design paths to improve turbocharger efficiency.

Low Temperature Exhaust Gas Recirculation: Most LHDD, MHDD, and HHDD engines sold in the U.S. market today use cooled EGR, in which part of the exhaust gas is routed through a cooler (rejecting energy to the engine coolant) before being returned to the engine intake manifold. EGR is a technology employed to reduce peak combustion temperatures and thus NO_X. Low-temperature EGR uses a larger or secondary EGR cooler to achieve lower intake charge temperatures, which tend to further reduce NO_X formation. If the NO_X requirement is unchanged, low-temperature EGR can allow changes such as more advanced injection timing that will increase engine efficiency slightly more than one percent. Because low-temperature EGR reduces the engine's exhaust temperature, it may not be compatible with exhaust energy recovery systems such as turbocompound or a bottoming cycle.

Engine Friction Reduction: Reduced friction in bearings, valve trains, and the piston-to-liner interface will improve efficiency. Any friction reduction must be carefully developed to avoid issues with durability or performance capability. Estimates of fuel consumption improvements due to reduced friction range from 0.5 to 1.5 percent.[181]

Selective catalytic reduction: This technology is common on 2010 heavy-duty diesel engines. Because SCR is a highly effective NO_X aftertreatment approach, it enables engines to be optimized to maximize fuel efficiency, rather than minimize engine-out NO_X. 2010 SCR systems are estimated to result in improved engine efficiency of approximately 4 to 5 percent compared to a 2007 in-cylinder EGR-based emissions system and by an even greater percentage compared to 2010 in-cylinder approaches.[182] As more effective low-temperature catalysts are developed, the NO_X conversion efficiency of the SCR system will increase. Next-generation SCR systems could then enable still further efficiency improvements; alternatively, these advances could be used to maintain efficiency while down-sizing the aftertreatment. We estimate that continued optimization of the catalyst could offer 1 to 2 percent reduction in fuel use over 2010 model year systems in the 2014 model year.[183] The agencies also estimate that continued refinement and optimization of the SCR systems could provide an additional 2 percent reduction in the 2017 model year.

[181] TIAX, Assessment of Fuel Economy Technologies for Medium- and Heavy-duty Vehicles, Final Report, Nov. 19, 2009, pg. 4–15.

[182] Stanton, D. "Advanced Diesel Engine Technology Development for High Efficiency, Clean Combustion." Cummins, Inc. Annual Progress Report 2008 Vehicle Technologies Program: Advanced Combustion Engine Technologies, U.S. Department of Energy. Pp. 113–116. December 2008.

[183] TIAX Assessment of Fuel Economy Technologies for Medium and Heavy-duty Vehicles, Report to National Academy of Sciences, Nov 19, 2009, pg. 4–9.

Improved Combustion Process: Fuel consumption reductions in the range of 1 to 4 percent are identified in the 2010 NAS report through improved combustion chamber design, higher fuel injection pressure, improved injection shaping and timing, and higher peak cylinder pressures.[184]

Reduced Parasitic Loads: Accessories that are traditionally gear or belt driven by a vehicle's engine can be optimized and/or converted to electric power. Examples include the engine water pump, oil pump, fuel injection pump, air compressor, power-steering pump, cooling fans, and the vehicle's air-conditioning system. Optimization and improved pressure regulation may significantly reduce the parasitic load of the water, air and fuel pumps. Electrification may result in a reduction in power demand, because electrically powered accessories (such as the air compressor or power steering) operate only when needed if they are electrically powered, but they impose a parasitic demand all the time if they are engine driven. In other cases, such as cooling fans or an engine's water pump, electric power allows the accessory to run at speeds independent of engine speed, which can reduce power consumption. The TIAX study used 2 to 4 percent fuel consumption improvement for accessory electrification, with the understanding that electrification of accessories will have more effect in short-haul/urban applications and less benefit in line-haul applications.[185]

(2) What is the projected technology package's effectiveness and cost?

(a) Vocational Vehicles

(i) Baseline Vocational Vehicle Performance

The baseline vocational vehicle model is defined in GEM, as described in draft RIA Chapter 4.4.6. The agencies used a baseline rolling resistance coefficient for today's vocational vehicle fleet of 9 kg/metric ton.[186] Further vehicle technology is not included in this baseline, as discussed below in the discussion of the baseline vocational vehicle. The baseline engine fuel consumption represents a 2010 model year diesel engine, as described in draft RIA Chapter 4. Using these values, the baseline performance of these vehicles is included in Table III–12.

Table III-12: Baseline Vocational Vehicle Performance

	Vocational Vehicle		
	Light Heavy-Duty	Medium Heavy-Duty	Heavy Heavy-Duty
Fuel Consumption Baseline (gallon/1,000 ton-mile)	37.6	22.3	11.3
CO_2 Baseline (grams CO_2/ton-mile)	382	227	115

(ii) Vocational Vehicle Technology Package

The proposed program for vocational vehicles for this phase of regulatory standards is limited to performance of tire and engine technologies. Aerodynamics technology, weight reduction, drive train improvement, and hybrid power trains are not included for the reasons discussed above in Section III.C(1). The agencies are seeking comment on the appropriateness of this approach.

The assessment of the proposed technology effectiveness was developed through the use of the GEM. To account for the two proposed engine standards, EPA is proposing the use of a 2014 model year fuel consumption map in GEM to derive the 2014 model year truck standard and a 2017 model year fuel consumption map to derive the 2017 model year truck standard. (These fuel consumption maps reflect the main standards proposed for HD diesel engines, not the alternative standards.) EPA estimates that the rolling resistance of tires can be reduced by 10 percent in the 2014 model year. The vocational vehicle standards for all three regulatory categories were determined using a tire rolling resistance coefficient of 8.1 kg/metric ton with a 100 percent application rate by the 2014 model year. The set of input parameters which are modeled in GEM are shown in Table III–13.

Table III-13: GEM Inputs for Proposed Vocational Vehicle Standards

	2014 MY	2017 MY
Engine	2014 MY 7L for LHD/MHD and 15L for HHD Trucks	2017 MY 7L for LHD/MHD and 15L for HHD Trucks
Tire Rolling Resistance (kg/metric ton)	8.1	8.1

[184] *See* 2010 NAS Report, Note 111, page 56.

[185] TIAX. 2009. Pages 3–5.

[186] The baseline tire rolling resistance for this segment of vehicles was derived for the proposal based on the current baseline tractor and passenger car tires. The baseline tractor drive tire has a rolling resistance of 8.2 kg/metric ton based on SmartWay testing. The average passenger car has a tire rolling resistance of 9.75 kg/metric ton based on a presentation made to CARB by the Rubber Manufacturer's Association. Additional details are available in the draft RIA Chapter 2.

The agencies developed the proposed standards by using the engine and tire rolling resistance inputs in the GEM, as shown in Table III–13. The percent reductions shown in Table III–14 reflect improvements over the 2010 model year baseline vehicle with a 2010 model year baseline engine.

Table III-14: Proposed Vocational Vehicle Standards and Percent Reductions

	Vocational Vehicle		
	Light Heavy-Duty	Medium Heavy-Duty	Heavy Heavy-Duty
2016 MY Fuel Consumption Standard (gallon/1,000 ton-mile)	35.2	20.8	10.7
2017 MY Fuel Consumption Standard (gallon/1,000 ton-mile)	33.8	20.0	10.5
2014 MY CO_2 Standard (grams CO_2/ton-mile)	358	212	109
2017 MY CO_2 Standard (grams CO_2/ton-mile)	344	204	107
Percent Reduction from 2010 baseline in 2014 MY	6%	7%	6%
Percent Reduction from 2010 baseline in 2017 MY	10%	10%	7%

(iii) Technology Package Cost

EPA and NHTSA developed the costs of LRR tires based on the ICF report. The estimated cost per truck is $155 (2008$) for LHD and MHD trucks and $186 (2008$) for HHD trucks. These costs include a low complexity ICM of 1.14 and are applicable in the 2014 model year.

(iv) Reasonableness of the Proposed Standards

The proposed standards would not only add only a small amount to the vehicle cost, but are highly cost effective, an estimated $20 ton of CO_2eq per vehicle in 2030.[187] This is even less than the estimated cost effectiveness for CO_2eq removal under the light-duty vehicle rule, already considered by the agencies to be a highly cost effective reduction.[188] Moreover, the modest cost of controls is recovered almost immediately due to the associated fuel savings, as shown in the payback analysis included in Table VIII–7. Given that the standards are technically feasible within the lead time afforded by the 2014 model year, are inexpensive and highly cost effective, and do not have other adverse potential impacts (*e.g.,* there are no projected negative impacts on safety or vehicle utility), the proposed standards represent a reasonable choice under section 202(a) of the CAA and NHTSA's EISA authority under 49 U.S.C. 32902(k)(2), and the agencies believe that the standards are consistent with their respective authorities.

(v) Alternative Vehicle Standards Considered

The agencies are not proposing vehicle standards less stringent than the proposed standards because the agencies believe these standards are highly cost effective, as just explained.

The agencies considered proposing truck standards which are more stringent reflecting the inclusion of hybrid powertrains in those vocational vehicles where use of hybrid powertrains is appropriate. The agencies estimate that a 25 percent utilization rate of hybrid powertrains in MY 2017 vocational vehicles would add, on average, $30,000 to the cost of each vehicle and more than double the cost of the rule for this sector. *See* the draft RIA at Chapter 6.1.8. The emission reductions associated with these very high costs appear to be modest. *See* the draft RIA Table 6–14. In addition, the agencies are proposing flexibilities in the form of generally applicable credit opportunities for advanced technologies, to encourage use of hybrid powertrains. *See* Section IV.C.2 below. The agencies welcome comments on whether hybrid powertrain technologies are appropriate to consider for the 2017 model year standard, or if not, then when would they be appropriate.

(b) Gasoline Engines

(i) Baseline Gasoline Engine Performance

EPA and NHTSA developed the reference heavy-duty gasoline engines to represent a 2010 model year engine compliant with the 0.2 g/bhp-hr NO_X standard for on-highway heavy-duty engines.

NHTSA and EPA developed the baseline fuel consumption and CO_2 emissions for the gasoline engines from manufacturer reported CO_2 values used in the certification of non-GHG pollutants. The baseline engine for the analysis was developed to represent a 2011 model year engine, because this is the most current information available. The average CO_2 performance of the heavy-duty gasoline engines was 660 g/bhp-hour, which will be used as a baseline. The baseline gasoline engines are all stoichiometric port fuel injected V–8 engines without cam phasers or other variable valve timing technologies. While they may reflect some degree of static valve timing optimization for fuel efficiency they do not reflect the potential to adjust timing with engine speed.

(ii) Gasoline Engine Technology Package Effectiveness

The gasoline engine technology package includes engine friction reduction, coupled cam phasing, and SGDI to produce an overall five percent reduction from the reference engine based on the Heavy-duty Lumped Parameter model. The agencies are projecting a 100% application rate of

[187] *See* Section VIII.D.

[188] The light-duty rule had an estimated cost per ton of $50 when considering the vehicle program costs only and a cost of −$210 per ton considering the vehicle program costs along with fuel savings in 2030. *See* 75 FR 25515, Table III.H.3–1.

this technology package to the heavy-duty gasoline engines, which results in a CO_2 standard of 627 g/bhp-hr and a fuel consumption standard of 7.05 gallon/100 bhp-hr. As discussed in Section II.D.b.ii, the agencies propose that the gasoline engine standards begin in the 2016 model year based on the agencies' projection of the engine redesign schedules of the small number of engines in this category.

(iii) Gasoline Engine Technology Package Cost

For costs, the agencies reconsidered both the direct or "piece" costs and indirect costs of individual components of technologies. For the direct costs, the agencies followed a BOM approach employed by NHTSA and EPA in the 2012–2016 LD rule. NHTSA and EPA are proposing to use the marked up gasoline engine technology costs developed for the HD Pickup Truck and Van segment because they are made by the same manufacturers (primarily by Ford and GM) and, the same products simply sold as loose engines rather than complete vehicles. Hence the engine cost estimates are fundamentally the same. The costs are summarized in Table III–15. The costs shown in Table III–15 include a low complexity ICM of 1.17 and are applicable in the 2016 model year. No learning effects are applied to engine friction reduction costs, while time based learning is considered applicable to both coupled cam phasing and SGDI.

Table III-15: Heavy-duty Gasoline Engine Technology Costs inclusive of Indirect Cost Markups (2008$)

	2016MY
Engine Friction Reduction	$88
Coupled Cam Phasing	$43
Stoichiometric Gas Direct Injection	$372
Total	$504

(iv) Reasonableness of the Proposed Standard

The proposed engine standards appear to be reasonable and consistent with the agencies' respective authorities. With respect to the 2016 MY standard, all of the technologies on which the standards are predicated have been demonstrated and their effectiveness is well documented. The proposal reflects a 100 percent application rate for these technologies. The costs of adding these technologies remain modest across the various engine classes as shown in Table III–15. Use of these technologies would add only a small amount to the cost of the vehicle,[189] and the associated reductions are highly cost effective, an estimated $30 per ton of CO_2eq per vehicle.[190] This is even more cost effective than the estimated cost effectiveness for CO_2eq removal and fuel economy improvement under the light-duty vehicle rule, already considered by the agencies to be a highly cost effective reduction.[191] Accordingly, EPA and NHTSA view these standards as reflecting an appropriate balance of the various statutory factors under section 202(a) of the CAA and under NHTSA's EISA authority at 49 U.S.C. 32902(k)(2).

(v) Alternative Gasoline Engine Standards Considered

The agencies are not proposing gasoline standards less stringent than the proposed standards because the agencies believe these standards are feasible in the lead time provided, inexpensive, and highly cost effective. We welcome comments supplemented with data on each aspect of this determination most importantly on individual gasoline engine technology efficacy to reduce fuel consumption and GHGs as well was our estimates of individual technology cost and lead-time.

The proposed rule reflects 100 percent penetration of the technology package on whose performance the standard is based, so some additional technology would need to be added to obtain further improvements. The agencies considered proposing gasoline engine standards which are more stringent reflecting the inclusion of cylinder deactivation and other advanced technologies. However, the agencies are not proposing this level of stringency because our assessment is that these technologies would not be available for production by the 2017 model year. The agencies welcome comments on whether other gasoline technologies are appropriate to consider for the 2017 model year standard, or if not, then when would they be appropriate.

(c) Diesel Engines

(i) Baseline Diesel Engine Performance

EPA and NHTSA developed the baseline heavy-duty diesel engines to represent a 2010 model year engine compliant with the 0.2 g/bhp-hr NO_X standard for on-highway heavy-duty engines.

The agencies utilized 2007 through 2011 model year CO_2 certification levels from the Heavy-duty FTP cycle as the basis for the baseline engine CO_2 performance. The pre-2010 data are subsequently adjusted to represent 2010 model year engine maps by using predefined technologies including SCR and other systems that are being used in current 2010 production. The engine CO_2 results were then sales weighted within each regulatory subcategory to develop an industry average 2010 model year reference engine, as shown in Table III–16. The level of CO_2 emissions and fuel consumption of these engines varies significantly, where the engine with the highest CO_2 emissions is estimated to be 20 percent greater than the sales weighted average. Details of this analysis are included in draft RIA Chapter 2.

[189] Sample 2010 MY vocational vehicles range in price between $40,000 for a Class 4 work truck to approximately $200,000 for a Class 8 refuse hauler. *See* pages 16–17 of ICF's "Investigation of Costs for Strategies to Reduce Greenhouse Gas Emissions for Heavy-Duty On-Road Vehicles." July 2010.

[190] *See* Vocational Vehicle CO_2 savings and technology costs for Alternative 2 in Section IX.B.

[191] The light-duty rule had an estimated cost per ton of $50 when considering the vehicle program costs only and a cost of −$210 per ton considering the vehicle program costs along with fuel savings in 2030. *See* 75 FR 25515, Table III.H.3–1.

Table III-16: 2010 Model Year Reference Diesel Engine Performance Over the Heavy-duty FTP Cycle

	CO_2 Emissions (g/bhp-hr)	Fuel Consumption (gallon/100 bhp-hr)
LHD Diesel	630	6.19
MHD Diesel	630	6.19
HHD Diesel	584	5.74

(ii) Diesel Engine Packages

The diesel engine technology packages for the 2014 model year include engine friction reduction, improved aftertreatment effectiveness, improved combustion processes, and low temperature EGR system optimization. The improvements in parasitic and friction losses come through piston designs to reduce friction, improved lubrication, and improved water pump and oil pump designs to reduce parasitic losses. The aftertreatment improvements are available through lower backpressure of the systems and optimization of the engine-out NO_X levels. Improvements to the EGR system and air flow through the intake and exhaust systems, along with turbochargers can also produce engine efficiency improvements. It should be pointed out that individual technology improvements are not additive to each other due to the interaction of technologies. The agencies assessed the impact of each technology over the Heavy-duty FTP and project an overall cycle improvement in the 2014 model year of 3 percent for HHD diesel engines and 5 percent for LHD and MHD diesel engines, as detailed in draft RIA Chapter 2.4.2.9 and 2.4.2.10. EPA used a 100 percent application rate of this technology package to determine the level of the proposed 2014 MY standards

Recently, EPA's heavy-duty highway engine program for criteria pollutants provided new emissions standards for the industry in three year increments. The heavy-duty engine manufacturer product plans have fallen into three year cycles to reflect this environment. EPA is proposing set CO_2 emission standards recognizing the opportunity for technology improvements over this timeframe while reflecting the typical heavy-duty engine manufacturer product plan cycles. Thus, the agencies are proposing to establish initial standards for the 2014 model year and a more stringent standard for heavy-duty engines beginning in the 2017 model year.

The 2017 model year technology package for LHD and MHD diesel engine includes continued development and refinement of the 2014 model year technology package, in particular the additional improvement to aftertreatment systems. This package leads to a projected 9 percent reduction for LHD and MHD diesel engines in the 2017 model year. The HHD diesel engine technology packages for the 2017 model year include the continued development of the 2014 model year technology package plus turbocompounding. A similar approach to evaluating the impact of individual technologies as taken to develop the overall reduction of the 2014 model year package was taken with the 2017 model year package. The Heavy-duty FTP cycle improvements lead to a 5 percent reduction on the cycle for HHDD, as detailed in draft RIA Chapter 2.4.2.13. The agencies used a 100 percent application rate of the technology package to determine the proposed 2017 MY standards. The agencies believe that bottom cycling technologies are still in the development phase and will not be ready for production by the 2017 model year.[192] Therefore, these technologies were not included in determining the stringency of the proposed standards. However, we do believe the bottoming cycle approach represents a significant opportunity to reduce fuel consumption and GHG emissions in the future. EPA and NHTSA are therefore both proposing provisions described in Section IV to create incentives for manufacturers to continue to invest to develop this technology.

The overall projected improvements in CO_2 emissions and fuel consumption over the baseline are included in Table III–17.

Table III-17: Percent Fuel Consumption and CO_2 Emission Reductions Over the Heavy-duty FTP Cycle

	2014	2017
LHD Diesel	5%	9%
MHD Diesel	5%	9%
HHD Diesel	3%	5%

(iii) Technology Package Costs

NHTSA and EPA jointly developed costs associated with the engine technologies to assess an overall package cost for each regulatory category. Our engine cost estimates for diesel engines used in vocational vehicles include a separate analysis of the incremental part costs, research and development activities, and additional equipment, such as emissions equipment to measure N_2O emissions. Our general approach used elsewhere in this proposal (for HD pickup trucks, gasoline engines, Class 7 and 8 tractors, and Class 2b–8 vocational vehicles) estimates a direct manufacturing cost for a part and marks it up based on a factor to account for indirect costs. *See also* 75 FR 25376. We believe that approach is

[192] TIAX noted in their report to the NAS panel that the engine improvements beyond 2015 model year included in their report are highly uncertain, though they include waste heat recovery in the engine package for 2016 through 2020 (page 4–29).

appropriate when compliance with proposed standards is achieved generally by installing new parts and systems purchased from a supplier. In such a case, the supplier is conducting the bulk of the research and development on the new parts and systems and including those costs in the purchase price paid by the original equipment manufacturer. The indirect costs incurred by the original equipment manufacturer need not include much cost to cover research and development since the bulk of that effort is already done. For the MHD and HHD diesel engine segment, however, the agencies believe we can make a more accurate estimate of technology cost using this alternate approach because the primary cost is not expected to be the purchase of parts or systems from suppliers or even the production of the parts and systems, but rather the development of the new technology by the original equipment manufacturer itself. Therefore, the agencies believe it more accurate to directly estimate the indirect costs. EPA commonly uses this approach in cases where significant investments in research and development can lead to an emission control approach that requires no new hardware. For example, combustion optimization may significantly reduce emissions and cost a manufacturer millions of dollars to develop but will lead to an engine that is no more expensive to produce. Using a bill of materials approach would suggest that the cost of the emissions control was zero reflecting no new hardware and ignoring the millions of dollars spent to develop the improved combustion system. Details of the cost analysis are included in the draft RIA Chapter 2. To reiterate, we have used this different approach because the MHD and HHD diesel engines are expected to comply in large part via technology changes that are not reflected in new hardware but rather knowledge gained through laboratory and real world testing that allows for improvements in control system calibrations—changes that are more difficult to reflect through direct costs with indirect cost multipliers.

The agencies developed the engineering costs for the research and development of diesel engines with lower fuel consumption and CO_2 emissions. The aggregate costs for engineering hours, technician support, dynamometer cell time, and fabrication of prototype parts are estimated at $6,750,000 per manufacturer per year over the five years covering 2012 through 2016. In aggregate, this averages out to $280 per engine during 2012 through 2016 using a very rough annual sales value of 600,000 LHD, MHD and HHD diesel engines. The agencies also are estimating costs of $100,000 per engine manufacturer per engine class (LHD, MHD and HHD diesel) to cover the cost of purchasing photo-acoustic measurement equipment for two engine test cells. This would be a one-time cost incurred in the year prior to implementation of the standard (*i.e.,* the cost would be incurred in 2013). In aggregate, this averages out to $4 per engine in 2013 using a very rough annual sales value of 600,000 LHD, MHD and HHD diesel engines.

EPA also developed the incremental piece cost for the components to meet each of the 2014 and 2017 standards. These costs shown in Table III–18 which include a low complexity ICM of 1.11; time based learning is considered applicable to each technology.

Table III-18: Heavy-duty Diesel Engine Component Costs inclusive of Indirect Cost Markups (2008$)

	2014 Model Year	2017 Model Year
Cylinder Head (flow optimized, increased firing pressure, improved thermal management)	$6 (MHD & HH) $10 (LHD)	$6 (MHD & HHD) $9 (LHD)
Exhaust Manifold (flow optimized, improved thermal management)	$0	$0
Turbocharger (improved efficiency)	$17	$16
EGR Cooler (improved efficiency)	$3	$3
Water Pump (optimized, variable vane, variable speed)	$87	$79
Oil Pump (optimized)	$4	$4
Fuel Pump (higher working pressure, increased efficiency, improved pressure regulation)	$4	$4
Fuel Rail (higher working pressure)	$10 (MHD & HHD) $11 (LHD)	$9 (MHD & HHD) $10 (LHD)
Fuel Injector (optimized, improved multiple event control, higher working pressure)	$10 (MHD & HHD) $14 (LHD)	$9 (MHD & HHD) $13 (LHD)
Piston (reduced friction skirt, ring and pin)	$3	$2
Aftertreatment system (improved effectiveness SCR, dosing, dpf)[a]	$0 (MHD & HHD) $111 (LHD)	$0 (MHD & HHD) $101 (LHD)
Valve Train (reduced friction, roller tappet)	$78 (MHD) $104 (LHD)	$71 (MHD) $95 (LHD)

Note:
[a] Note that costs for aftertreatment improvements for MHD and HHD diesel engines are covered via the engineering costs (see text). For LH diesel engines, we have included the cost of aftertreatment improvements as a technology cost.

The overall costs for each diesel engine regulatory subcategory are included in Table III–19.

Table III-19: Diesel Engine Technology Costs per Engine (2008$)

	2014	2017
LHD Diesel	$369	$337
MHD Diesel	$223	$203
HHD Diesel	$145	$132

(iv) Reasonableness of the Proposed Standards

The proposed engine standards appear to be reasonable and consistent with the agencies' respective authorities. With respect to the 2014 and 2017 MY standards, all of the technologies on which the standards have already been demonstrated and their effectiveness is well documented. The proposal reflects a 100 percent application rate for these technologies. The costs of adding these technologies remain modest across the various engine classes as shown in Table III–19. Use of these technologies would add only a small amount to the cost of the vehicle,[193] and the associated reductions are highly cost effective, an estimated $30 per ton of CO_2eq per vehicle.[194] This is even more cost effective than the estimated cost effectiveness for CO_2eq removal and fuel economy improvement under the light-duty vehicle rule, already considered by

[193] Sample 2010 MY vocational vehicles range in price between $40,000 for a Class 4 work truck to approximately $200,000 for a Class 8 refuse hauler. *See* pages 16–17 of ICF's "Investigation of Costs for Strategies to Reduce Greenhouse Gas Emissions for Heavy-Duty On-Road Vehicles." July 2010.

[194] *See* Vocational Vehicle CO_2 savings and technology costs for Alternative 2 in Section IX.B.

the agencies to be a highly cost effective reduction.[195] Accordingly, EPA and NHTSA view these standards as reflecting an appropriate balance of the various statutory factors under section 202(a) of the CAA and under NHTSA's EISA authority at 49 U.S.C. 32902(k)(2).

(v) Alternative Diesel Engine Standards Considered

Other than the specific proposal related to legacy engine products, the agencies are not proposing diesel engine standards less stringent than the proposed standards because the agencies believe these standards are highly cost effective. We welcome comments supplemented with data on each aspect of this determination most importantly on individual engine technology efficacy to reduce fuel consumption and GHGs as well as our estimates of individual technology cost and lead-time.

The agencies considered proposing diesel engine standards which are more stringent reflecting the inclusion of other advanced technologies. However, the agencies are not proposing this level of stringency because our assessment is that these technologies would not be available for production by the 2017 model year. The agencies welcome comments on whether other diesel engine technologies are appropriate to consider for the 2017 model year standard, or if not, then when would they be appropriate.

IV. Proposed Regulatory Flexibility Provisions

This section discusses proposed flexibility provisions intended to achieve the goals of the overall program while providing alternate pathways to achieve those goals. The primary flexibility provisions the agencies are proposing for combination tractors and vocational vehicles relate to a program of Averaging, Banking, and Trading of credits that EPA and NHTSA are proposing in association with each agency's respective CO_2 and fuel consumption standards (*see* Section II above). For HD pickups and vans, the primary flexibility provision is the fleet averaging program patterned after the LD GHG and CAFE rule. EPA is not proposing an emission credit program associated with the proposed N_2O, CH_4, or HFC standards. This section also describes proposed flexibility provisions that would apply in specific circumstances.

[195] The light-duty rule had a cost per ton of $50 when considering the vehicle program costs only and a cost of −$210 per ton considering the vehicle program costs along with fuel savings in 2030. *See* 75 FR 25515, Table III.H.3–1.

A. Averaging, Banking, and Trading Program

Averaging, Banking, and Trading (ABT) of emissions credits have been an important part of many EPA mobile source programs under CAA Title II, including engine and vehicle programs. ABT programs can be important because they can help to address many issues of technological feasibility and lead-time, as well as considerations of cost. ABT programs are not just add-on provisions included to help reduce costs, but are usually an integral part of the standard setting itself. An ABT program is important because it provides manufacturers flexibilities that assist the development and implementation of new technologies efficiently and therefore enables new technologies to be implemented at a more progressive pace than without ABT. A well-designed ABT program can provide important environmental benefits and at the same time increase flexibility for and reduce costs to the regulated industry.

Section II above describes EPA's proposed GHG emission standards and NHTSA's proposed fuel consumption standards. For each of these respective sets of standards, the agencies are also proposing ABT provisions consistent with each agency's statutory authority. The agencies have worked closely together to design these proposed provisions to be essentially identical to each other in form and function. Because of this fundamental similarity, the remainder of this section refers to these provisions collectively as "the ABT program" except where agency-specific distinctions are required.

As discussed in detail below, the structure of this proposed GHG ABT program for HD engines is based closely on earlier ABT programs for HD engines; the proposed program for HD pickups and vans is built on the existing light-duty GHG program flexibility provisions; and we propose first-time ABT provisions for combination tractors and vocational vehicles that are as consistent as possible with our other HD vehicle regulations. The flexibility provisions associated with this new regulatory category are intended to systematically build upon the structure of the existing programs.

As an overview, "averaging" means the exchange of emission credits between engine families or truck families within a given manufacturer's regulatory subcategory. For example within each regulatory subcategory, engine manufacturers divide their product line into "engine families" that are comprised of engines expected to have similar emission characteristics throughout their useful life. Averaging allows a manufacturer to certify one or more engine families within the same regulatory subcategory at levels above the applicable emission standard. The increased emissions over the standard would need to be offset by one or more engine families within that manufacturer's regulatory subcategory that are certified below the same emission standard, such that the average emissions from all the manufacturer's engine families, weighted by engine power, regulatory useful life, and production volume, are at or below the level of the emission standard. (The inclusion of engine power, useful life, and production volume in the averaging calculations allows the emissions credits or debits to be expressed in total emissions over the useful life of the credit-using or generating engine sales.) Total credits for each regulatory subcategory within each model year are determined by summing together the credits calculated for every engine family within that specific regulatory subcategory.

"Banking" means the retention of emission credits by the manufacturer for use in future model year averaging or trading. "Trading" means the exchange of emission credits between manufacturers, which can then be used for averaging purposes, banked for future use, or traded to another manufacturer.

In the current HD program for criteria pollutants, manufacturers are restricted to only averaging, banking and trading credits generated within a regulatory subcategory, and we are proposing to continue this restriction in the GHG and fuel consumption program. However, the agencies are evaluating—and therefore request comment on—potential alternative approaches in which fewer restrictions are placed on the use of credits for averaging, banking, and trading. Particularly, the agencies request comment on removing prohibitions on averaging and trading between some or all regulatory categories in this proposal, and on removing restrictions between some or all regulatory subcategories that are within the same regulatory category (*e.g.,* allowing trading of credits between class 7 day cabs and class 8 sleeper cabs).

In the past, we have followed the practice of allowing averaging and trading between like products because we have recognized that the estimation of emissions credits is not an absolutely precise process, and actual emissions reductions or increases "in use" would vary due to differences in vehicle duty cycles, maintenance practices and any

number of other factors. By restricting credit averaging and trading to only allow averaging and trading between like products, the agencies gain some degree of assurance that the operation and use of the vehicles generating credits and consuming credits would be similar. The agencies also note that some industry participants have expressed concern that allowing credit averaging, banking and trading across different products may create an unlevel playing field for the regulated industry. Specifically, engine and truck manufacturers have commonly expressed to us a concern that some manufacturers with a wide range of product offerings spanning a number of regulatory categories would be able to use the ABT program provisions to generate credits in regulatory class markets where they face less competition and then use those credits to compete unfairly in other regulatory categories where they face greater competition. Finally, in the context of regulating criteria pollutants that can have localized and regional impacts, we have been concerned about the unintended consequence of unrestricted credit averaging or trading on local or regional concentrations of pollutants, whereby emissions reductions might become concentrated in some localities or regions to the detriment of other areas needing the reductions.

The agencies are evaluating the possibility of placing fewer restrictions on averaging and trading because increasing the flexibility offered to manufacturers to average, bank, and trade credits across regulatory subcategories and categories could potentially significantly reduce the overall cost of the program. Specifically, we request comment on the extent to which a difference—or unexpected difference—in the marginal costs of compliance per gallon of fuel saved or ton of GHG reduced across categories or subcategories, combined with provision for averaging and trading across categories and subcategories, can allow manufacturers to achieve the same overall reduction in fuel use and emissions at lower cost.

While trading restrictions in the context of past EPA rulemakings have been motivated in part by the local or regional nature of the pollutant being regulated, in this instance, opportunities for greater flexibility may exist in light of the fact that greenhouse gases are a global pollutant for which local consequences are related to global, not local or regional atmospheric concentrations. However, trading ratios may need to be established for averaging and trading across categories, and potentially across subcategories, to ensure that averaging and trading across categories and subcategories does not lead to a net increase in emissions or fuel use in light of differences in vehicle use patterns across categories and subcategories. Further, it is possible to design trading ratios that ensure a net reduction in emissions and fuel use as a result of averaging and trading. The agencies also request comment on the potential additional savings in costs (beyond those already calculated in this proposal) due to increased flexibility in averaging and trading provisions, on how such averaging and trading flexibilities could be designed to ensure environmental neutrality, on whether trading ratios should be designed to achieve a net reduction in emissions and fuel use as a result of trading, on the concerns that have been raised by some regarding impacts on intra-industry competition, and on how to address the above identified concerns about dissimilarities in operation and use of vehicles.

(1) Heavy-duty Engines

For the heavy-duty engine ABT program, EPA and NHTSA are proposing to use EPA's existing regulatory engine classifications as the subcategory designations under this engine ABT program. The proposed regulations use the term "averaging set" which aligns with the regulatory subcategories or regulatory class in the context that they define the same set of products. The existing diesel engine subcategories are light-heavy-duty (LHD), medium-heavy-duty (MHD), and heavy-heavy-duty (HHD). LHD diesel engines are primarily used in vehicles with a GVWR below 19,500 lb. Vehicle body types in this group might include any heavy-duty vehicle built for a light-duty truck chassis, van trucks, multi-stop vans, recreational vehicles, and some single axle straight trucks. Vehicles containing these engines would normally include personal transportation, light-load commercial hauling and delivery, passenger service, agriculture, and construction applications.

MHD diesel engines are normally used in vehicles whose GVWR varies from 19,501–33,000 lb. Vehicles containing these engines typically include school buses, tandem axle straight trucks, city tractors, and a variety of special purpose vehicles such as small dump trucks, and trash compactor trucks. Normally the applications for these vehicles would include commercial short haul and intra-city delivery and pickup.

HHD diesel engines are intended for use in vehicles which exceed 33,000 lb GVWR. Vehicles containing engines of this type are normally tractors, trucks, and buses used in inter-city, long-haul applications. HHD engines are generally regarded as designed for rebuild and have a long useful life period. LHD and MHD engines are typically not intended for rebuild, though some MHD engines are designed for rebuild, and have a shorter useful life.

Gasoline or spark ignited engines for heavy-duty vehicles fall into one separate regulatory subcategory. These engines are typically installed in trucks with a GVWR ranging from 8,500 pounds to 19,500 pounds although they can be installed into trucks of any size.

The compliance program we are proposing would adopt a slightly different method for generating a manufacturer's CO_2 emission and fuel consumption credit or deficit. The manufacturer's certification test result would serve as the basis for the generation of the manufacturer's Family Certification Level (FCL). The FCL is a new term we propose for this program to differentiate the purpose of this credit generation technique from the Family Emission Limit (FEL) previously used in a similar context in other EPA rules. A manufacturer could define its FCL at any level at or above the certification test result. Credits for the ABT program would be generated when the FCL is compared to its CO_2 and fuel consumption standard, as discussed in Section II. The credits earned in this section would be restricted to the engine subcategory and not tradable with other engine subcategories consistent with EPA's past practice for ABT programs as described previously. Credit calculation for the proposed Engine ABT and program would be generated, either positive or negative, according to Equation IV–1 and Equation IV–2:

Equation IV–1: Proposed HD Engine CO_2 credit (deficit)

$$\text{HD Engine } CO_2 \text{ credit (deficit) (metric tons)} = (\text{Std} - \text{FCL}) \times (\text{CF}) \times (\text{Volume}) \times (\text{UL}) \times (10^{-6})$$

Where:

Std = the standard associated with the specific engine regulatory subcategory (g/bhp-hr)

FCL = Family Certification Level for the engine family

CF = a transient cycle conversion factor in bhp-hr/mile which is the integrated total cycle brake horsepower-hour divided by the equivalent mileage of the Heavy-duty FTP cycle. For gasoline heavy-duty engines, the equivalent mileage is 6.3 miles. For diesel heavy-duty engines, the equivalent mileage is 6.5 miles. The agencies are proposing that the CF

determined by the Heavy-duty FTP cycle be used for engines certifying to the SET standard.
Volume = (projected or actual) production volume of the engine family
UL = useful life of the engine (miles)
10^{-6} converts the grams of CO_2 to metric tons

Equation IV–2: Proposed HD Engine Fuel Consumption credit (deficit) in gallons

HD Engine Fuel Consumption credit (deficit) (gallons) = (Std − FCL) × (CF) × (Volume) × (UL) × 10^2

Where:
Std = the standard associated with the specific engine regulatory subcategory (gallon/100 bhp-hr)
FCL = Family Certification Level for the engine family (gallon/100 bhp-hr)
CF = a transient cycle conversion factor in bhp-hr/mile which is the integrated total cycle brake horsepower-hour divided by the equivalent mileage of the Heavy-duty FTP cycle. For gasoline heavy-duty engines, the equivalent mileage is 6.3 miles. For diesel heavy-duty engines, the equivalent mileage is 6.5 miles. The agencies are proposing that the CF determined by the Heavy-duty FTP cycle be used for engines certifying to the SET standard.
Volume = (projected or actual) production volume of the engine family
UL = useful life of the engine (miles)
10^2 = conversion to gallons

To calculate credits or deficits, manufacturers would determine an FCL for each engine family they have designated for the ABT program. We have defined engine families in 40 CFR 1036.230 and manufacturers may designate how to group their engines for certification and compliance purposes. The FCL may be above (negative) or below (positive) its standard and would be used to establish the CO_2 credits earned (or used) in Equation IV–1. The proposed CO_2 and fuel consumption standards are associated with specific regulatory subcategories as described in Sections II.B and II.D (gasoline, light heavy-duty diesel, medium heavy-duty diesel, and heavy heavy-duty diesel). In the ABT program, engines certified with an FCL below the standard generate positive credits (g/bhp-hr and gal/100 bhp-hr). As discussed in Section II.B and II.D, engine families for which a manufacturer elects to use the alternative standard of a percent reduction from the engine family's 2011 MY baseline would be ineligible to either generate or use credits.

The volume used in Equations IV–1 and IV–2 refers to the total number of eligible engines sold per family participating in the ABT program during that model year. The useful life values in Equation IV–1 are proposed to be the same as the regulatory classifications previously used for the engine subcategories. Thus, the agencies propose that for LHD diesel engines and gasoline engines, the useful life values would be 110,000 miles; for MHD diesel engines, 185,000 miles; and for HHD diesel engines, 435,000 miles.

As noted above, credits generated by engine manufacturers under this ABT program would be restricted for use only within their engine subcategory based on performance against the standard as defined in Section II.B and II.D. Thus, LHD diesel engine manufacturers could only use their LHD diesel engine credits for averaging, banking and trading with LHD diesel engines, not with MHD diesel or HHD diesel engines. This limitation is consistent with ABT provisions in EPA's existing criteria pollutant program for engines and would help assure that credits earned to reduce GHG emissions and fuel consumption would be used to limit their growth and not circumvent the intent of the regulations. EPA and NHTSA are concerned that extending the use of credits beyond these designated subcategories could also create an advantage for large or integrated manufacturers that currently does not exist in the market. A manufacturer that produces both engines and heavy-duty highway vehicles could mix credits across engine and vehicle categories, shifting the burden between the sectors, not equally shared in either sector, to gain an advantage over competitors that are not integrated. Similarly, large volume manufacturers of engines can shift credits between heavy heavy-duty diesel engines and light heavy-duty diesel engines to gain an advantage in one subcategory over other manufacturers that may not have multiple engine offerings over several regulatory engine subcategories. Finally, relating credits between subcategories of engines could be problematic because of the differences in regulatory useful lives. The agencies want to avoid having credits from longer useful life categories flooding shorter useful life categories, adversely impacting compliance with the proposed CO_2 and fuel consumption standards in the shorter useful life category. The agencies would like to ensure that this regulation reduces CO_2 emissions and improves fuel consumption in each engine subcategory while not interfering with the ability of manufacturers to engage in free trade and competition. Limiting credit ABT to the regulatory subcategory and not between engines and vehicles would help prevent a competitive advantage due solely to the regulatory structure. Although the reasons for restricting engine credits to the same engine subcategory seem persuasive to us, the agencies welcome comments on the extension of credits beyond the limitations we are proposing.[196]

Under previous ABT programs for other rulemakings, EPA has allowed manufacturers to carry forward deficits from engines for a set period of time. The agencies are proposing to allow manufacturers of engines to carry forward deficits for up to three years before reconciling the short-fall. However, manufacturers would need to use credits, once credits are generated, to offset a shortfall before credits may be banked or traded for additional model years. This restriction reduces the chance of manufacturers passing forward deficits before reconciling shortfalls and exhausting those credits before reconciling past deficits. We will accept comments on alternative approaches for reconciling deficit shortfalls in the engine category.

As described in Section II above, EPA is proposing that a manufacturer may choose to comply with the N_2O or CH_4 cap standards using CO_2 credits. A manufacturer choosing this option would convert its N_2O or CH_4 test results into CO_2eq to determine the amount of CO_2 credits required. This approach recognizes the inter-correlation of these elements in impacting global warming. This option does not apply to the NHTSA fuel consumption program. To account for the different global warming potential of these GHGs, EPA proposes that manufacturers determine the amount of CO_2 credits required by multiplying the shortfall by the GWP. For example, a manufacturer would use 25 kg of positive CO_2 credits to offset 1 kg of negative CH_4 credits. Or a manufacturer would use 298 kg of positive CO_2 credits to offset 1 kg of negative N_2O credits. In general we do not expect manufacturers to use this provision. However, we are providing this alternative as a flexibility in the event an engine manufacturer has trouble meeting the CH_4 and/or N_2O emission caps. There are not ABT credits for performance that falls below the CH_4 or N_2O caps.

Additional flexibilities for engines are discussed later in Section IV(B).

[196] These concerns were not present in the 2012–2016 MY light-duty vehicle rule, where most manufacturers offer diverse product lines and there is not as much disparity among useful lives. That rule consequently does not restrict CO_2 credit trading opportunities between light-duty vehicle sectors.

(2) Class 7 and 8 Combination Tractors

In addition to the engine ABT program described above, the agencies are also proposing a vehicle ABT program to facilitate reductions in GHG emissions and fuel consumption based on combination tractor design changes and improvements. For this category, the structure of the proposed ABT program should create incentives for tractor manufacturers to advance new, clean technologies, or existing technologies earlier than they would otherwise.

As explained in Sections II and III above, combination tractor manufacturers are divided into nine regulatory subcategories under these proposed rules, as shown in the following table:

Table IV-1: Proposed Regulatory Subcategories for Combination Tractors

Class 7 Day Cab	Class 8 Day Cab	Class 8 Sleeper Cab
Low Roof	Low Roof	Low Roof
Mid Roof	Mid Roof	Mid Roof
High Roof	High Roof	High Roof

The proposed regulations use the term "averaging set" which aligns with the regulatory subcategories or regulatory class in the context that they define the same set of products. Vehicle credits for tractors in these classifications would be earned on a g/ton-mile or gallon/1,000 ton-mile basis for tractors which are below the standard. Credits generated within regulatory subcategories would be tradable between truck manufacturers in that specific regulatory subcategory only. Credits would not be fungible between engine and vehicle regulatory categories. This is similar to the restrictions we have described above for engine manufacturers.

This limitation would help ensure that credits earned to reduce GHG emissions and fuel consumption would be used to limit their growth and not circumvent the intent of our regulation. As with engine credits, we are concerned that extending the use of credits to be transferred or traded to other classes may create an advantage for large or integrated manufacturers that currently does not exist in the market. We would like to ensure that this regulation reduces the emission of CO_2 and fuel consumption but does not effectively penalize non-integrated manufacturers and those with limited participation in the market. ABT provides manufacturers the flexibility to deal with unforeseen shifts in the marketplace that affect sales volumes. This structure allows for a straightforward compliance program for each sector independently with aspects that are also independently quantifiable and verifiable. Credit calculation for the proposed Class 7 and 8 tractor CO_2 and fuel consumption credits would be generated, either positive or negative, according to Equation IV–3 and Equation IV–4:

Equation IV–3: The Proposed Class 7 and 8 Tractor CO_2 Credit (Deficit)

Class 7 and 8 Tractor CO_2 credit (deficit)(metric tons) = (Std-FEL) × (Payload Tons) × (Volume) × (UL) × (10^{-6})

Where:

Std = the standard associated with the specific tractor regulatory class (g/ton-mile)

Payload tons = the prescribed payload for each class in tons (12.5 tons for Class 7 and 19 tons for Class 8)

FEL = Family Emission Limit for the tractor family which is equal to the output from GEM (g/ton-mile)

Volume = (projected or actual) production volume of the tractor family

UL = useful life of the tractor (435,000 miles for Class 8 and 185,000 miles for Class 7)

10^{-6} converts the grams of CO_2 to metric tons

Equation IV–4: Proposed Class 7 and 8 Tractor Fuel Consumption credit (deficit) in gallons:

Class 7 and 8 Tractor Fuel Consumption credit (deficit)(gallons) = (Std − FEL) × (Payload Tons) × (Volume) × (UL) × 10^3

Where:

Std = the standard associated with the specific tractor regulatory subcategory (gallons/1,000 ton-mile)

Payload tons = the prescribed payload for each class in tons (12.5 tons for Class 7 and 19 tons for Class 8)

FEL = Family Emission Limit for the tractor family (gallons/1,000 ton-mile)

Volume = (projected or actual) production volume of the tractor family

UL = useful life of the tractor (435,000 miles for Class 8 and 185,000 miles for Class 7)

10^3 = conversion to gallons

Similar to the proposed Heavy-duty Engine ABT program described in the previous section, we are proposing that tractor manufacturers would be able to carry forward credit deficits from their regulatory subcategories for three years before reconciling the shortfall. However, just as in the engine category, manufacturers would need to use credits once those credits have been generated to offset a shortfall before those credits can be banked or traded for additional model years. This restriction reduces the chance of tractor manufacturers passing forward deficits before reconciling their shortfalls and exhausting those credits before reconciling past deficits. Manufacturers of vehicles that generate a deficit at the end of the model year could carry that deficit forward for three years following the model year for which that deficit was generated. Deficits would need to be reconciled at the reporting dates for year three. We will accept comments on alternative approaches of reconciling deficit shortfalls.

Additional flexibilities for Class 7 and 8 combination tractors are discussed later in Section IV.B.

(3) Class 2b–8 Vocational Vehicles

Similar to the Class 7 and 8 combination tractor manufacturers, we are offering a limited ABT program for Class 2b–8 vocational chassis manufacturers. Vehicle credits would be generated for those manufacturers that introduce products into the market with rolling resistance improvements which are better than required to meet the proposed vehicle standards, The certification of the chassis would be based on the use of LRR tires. Credit calculation for the proposed Class 2b–8 vocational vehicle CO_2 and fuel consumption credits (deficits) would be generated, either positive or negative, according to Equation IV–5 and Equation IV–6:

Equation IV–5: The proposed Vocational Vehicle CO_2 vehicle credit (deficit)

Vocational Vehicle CO_2 credit (deficit) (metric tons) = (Std − FEL) ×

(Payload Tons) × (Sales Volume) × (UL) × (10^{-6})

Where:

Std = the standard associated with the specific vocational vehicle subcategory (g/ton-mile)
Payload tons = the prescribed payload for each subcategory in tons (2.85 tons for LHD, 5.6 tons for MHD, and 19 tons for HHD vehicles)
FEL = Family Emission Limit for the vehicle family (g/ton-mile)
Volume = (projected or actual) production volume of the vehicle family
UL = useful life of the vehicle (110,000 miles for LHD, 185,000 miles for MHD, or 435,000 miles for HHD vehicles)
10^{-6} converts the grams of CO_2 to metric tons

Equation IV–6: Proposed Vocational Vehicle Fuel Consumption credit (deficit) in gallons

Vocational Vehicle Fuel Consumption credit for (deficit) (gallons) = (Std − FEL) × (Payload Tons) × (Sales Volume) × (UL) × 10^3

Where:

Std = the standard associated with the specific vocational vehicle regulatory subcategory (gallon/1,000 ton-mile)
Payload tons = the prescribed payload for each regulatory subcategory in tons (2.85 tons for LHD, 5.6 tons for MHD, and 19 tons for HHD vehicles)
FEL = Family Emission Limit for the vehicle family (gallon/1,000 ton-mile)
Volume = (projected or actual) production volume of the vehicle family
UL = useful life of the vehicle (110,000 miles for LHD, 185,000 miles for MHD, or 435,000 miles for HHD vehicles)
10^3 converts to gallons

Also, similar to the proposed heavy-duty engine and tractor ABT programs, the vehicle credits generated within each regulatory subcategory would be allowed to be averaged, banked, or traded between chassis manufacturers within their existing subcategories. For vocational vehicles the proposed vehicle subcategories are based on the vehicle's GVWR. We are proposing three vehicle subcategories LHD with a GVWR less than or equal to 19,500 pounds, MHD vehicles with a GVWR greater than 19,500 and less than or equal to 33,000 pounds, and HHD vehicles with a GVWR greater than 33,000 pounds. These three weight categories would form the subcategories for vocational vehicles and are found in 40 CFR 1037.230. The proposed regulations use the term "averaging set" which aligns with the regulatory categories or regulatory class in the context that they define the same set of products.

Similar to the proposed Heavy-duty Engine ABT program above, vocational chassis manufacturers would be able to carry forward deficits for three years before reconciling the shortfall. However, just as in the engine category, manufacturers would need to use credits earned once those credits have been generated to offset a shortfall before those credits can be banked or traded for additional model years. This restriction reduces the chance of chassis manufacturers passing forward deficits before reconciling their shortfalls and exhausting those credits before reconciling past deficits. Manufacturers of vocational vehicles that generate a deficit at the end of the model year could carry that deficit forward for three years following the model year for which that deficit was generated. Deficits would need to be reconciled at the reporting dates for year three. We will accept comments on alternative approaches of reconciling deficit shortfalls.

(4) Heavy-Duty Pickup Truck and Van Flexibility Provisions

EPA and NHTSA are proposing specific flexibility provisions for manufacturers of HD pickups and vans, similar to provisions adopted in the recent rulemaking for light-duty car and truck GHGs and fuel economy. Additional flexibilities that apply to the broad range of heavy-duty vehicles, including HD pickups and vans, are discussed in Section IV.B. All of these flexibilities would help enable new technologies to be implemented faster and more cost-effectively than without a flexibility program, and also help manufacturers deal with unexpected shifts in sales.

A manufacturer's credit or debit balance would be determined by calculating their fleet average performance and comparing it to the manufacturer's CO_2 and fuel consumption standards, as determined by their fleet mix, for a given model year. A target standard is determined for each vehicle with a unique payload, towing capacity and drive configuration. These unique targets, weighted by their associated production volumes, are summed at the end of the model year to derive the production volume-weighted manufacturer annual fleet average standard. A manufacturer would generate credits if its fleet average CO_2 or fuel consumption level is lower than its standard and would generate debits if its fleet average CO_2 or fuel consumption level is above that standard. The end-of-year reports would provide appropriate data to reconcile pre-compliance estimates with final model year figures. Similar to the light-duty GHG program, the agencies would address any ultimate deficits by a possible void of certificates on a sufficient number of vehicles to address the shortfall. Enforcement action would entail penalty or other relief as appropriate or applicable.

In addition to production weighting, we are proposing that the EPA credit calculations include a factor for the vehicle useful life, in miles, in order to allow the expression of credits in metric tons, as in the light-duty GHG program. The NHTSA credit calculation would use standard and performance levels in fuel consumption units (gallons per 100 miles), as opposed to fuel economy units (mpg) as done in the light-duty program, along with the vehicle useful life, in miles, allowing the expression of credits in gallons. We propose that other provisions for the generation, tracking, trading, and use of the credits be the same as those adopted in the light-duty GHG program, including a 5-year limit on credit carry-forward to future model years and a 3-year limit on deficit carry-forward (or credit carry-back).

The total model year fleet credit (debit) calculations would use the following equations:

CO_2 Credits (Mg) = [(CO_2 Std − CO_2 Act) × Volume × UL] ÷ 1,000,000

Fuel Consumption Credits (gallons) = (FC Std − FC Act) × Volume × UL × 100

Where:

CO_2 Std = Fleet average CO_2 standard (g/mi)
FC Std = Fleet average fuel consumption standard (gal/100 mile)
CO_2 Act = Fleet average actual CO_2 value (g/mi)
FC Act = Fleet average actual fuel consumption value (gal/100 mile)
Volume = the total production of vehicles in the regulatory class
UL = the useful life for the regulatory class (miles)

We are proposing that HD pickups and vans comprise a self-contained averaging set, such that credits earned may be used freely for other HD pickups and vans but not for other vehicles or engines, and credits generated by other vehicles or engines may not be used to demonstrate compliance for HD pickups and vans. We believe this approach is appropriate because the HD pickup and van fleet is relatively small and the balanced fleetwide averaging concept is critical for obtaining the desired technology development in the 2014–2018 timeframe, so that the potential for large credit flows into or out of this vehicle category would create unwarranted market uncertainty, which in turn could jeopardize the impetus to develop needed technologies. An exception to this approach is proposed for advanced technology credits as discussed in Section IV.B(2).

As described above, HD pickup and van manufacturers would be able to carry forward deficits from their fleet-wide average for three years before reconciling the shortfall. Manufacturers would be required to provide a plan in their pre-model year reports showing how they would resolve projected credit deficits. However, just as in the engine category, manufacturers would need to use credits earned once those credits have been generated to offset a shortfall before those credits can be banked or traded for additional model years. This restriction reduces the chance of vehicle manufacturers passing forward deficits before reconciling their shortfalls and exhausting those credits before reconciling past deficits. We request comments on all aspects of the proposed HD pickup and van credit program.

B. Additional Proposed Flexibility Provisions

The agencies are also proposing provisions to facilitate reductions in GHG emissions and fuel consumption beginning in the 2014 model year. While we view our proposed ABT and flexibility structure as sufficient to encourage reduction efforts by heavy-duty highway engine and vehicle manufacturers, we understand that other efforts may enhance the overall GHG and fuel consumption reduction we anticipate achieving. Therefore we propose the following flexibilities to create additional opportunities for manufacturers to reduce their GHG emissions and fuel consumption. These opportunities would help provide additional incentives for manufacturers to innovate and to develop new strategies and cleaner technologies.

(1) Early Credit Option

The agencies are proposing that manufacturers of HD engines, combination tractors, and vocational vehicles be eligible to generate early credits if they demonstrate improvements in excess of the proposed standards prior to model year they become effective. The start dates for EPA's GHG standards and NHTSA's fuel consumption standards vary by regulatory category (*see* Section II for the model years when the standards become effective). Specifically, manufacturers would need to certify their engines or vehicles to the standards at least six months before the start of the first model year of the mandatory standards. The limitations on the use of credits in the ABT programs—*i.e.*, limiting averaging to within each the regulatory category and vehicle or engine subcategory—would apply for the proposed early credits as well.

NHTSA and EPA also request comment on whether a credit multiplier, specifically a multiplier of 1.5, would be appropriate to apply to early credits from HD engines, combination tractors, and vocational vehicles, as a greater incentive for early compliance. Additionally, the agencies seek comment on whether or not a requirement that HD engines, combination tractors, and vocational vehicles that are eligible to generate early credits, be allowed to do so only if they certify prior to June 1, 2013 should a multiplier of 1.5 be applied to early credits.

We are proposing that manufacturers of HD pickups and vans who demonstrate improvements for model year 2013 such that their fleet average emissions and fuel consumption are lower than the model year 2014 standards be eligible for early credits. Under the proposed structure for the fleet average standards, this credit opportunity would entail certifying a manufacturer's entire HD pickup and van fleet in model year 2013, and assessing this fleet against the model year 2014 target levels discussed in Section II. The agencies consider the proposed availability of early credits to be a valuable complement to the overall program to the extent that they encourage early implementation of effective technologies. We request comment on ways the early credit opportunities can be tailored to accomplish this objective and protect against unanticipated windfalls.

(2) Advanced Technology Credits

EPA and NHTSA are proposing targeted provisions that we expect would promote the implementation of advanced technologies. Specifically, manufacturers that incorporate these technologies would be eligible for special credits that could be applied to other heavy-duty vehicles or engines, including those in other heavy-duty categories. We seek comment on any conversion factors that may be needed. Technologies that we propose to make eligible are:

- Hybrid powertrain designs that include energy storage systems.
- Rankine cycle engines.
- All-electric vehicles.
- Fuel cell vehicles.

NHTSA and EPA request comment on whether a credit multiplier, specifically a multiplier of 1.5, would be appropriate to apply to advanced technology credits, as a greater incentive for their introduction. NHTSA and EPA request comment on the list of technologies identified as advanced technologies and whether additional technologies should be added to the list. NHTSA and EPA also request comment on whether credits generated from vehicles complying prior to 2014 and using Advanced SmartWay or Advanced SmartWay II aerodynamic technologies should be designated as Advanced Technology Credits.

(a) All-Electric Vehicles and HD Pickup Truck and Van Hybrids

For HD pickup and van hybrids, we propose that testing would be done using adjustments to the test procedures developed for light-duty hybrids. NHTSA and EPA are also proposing that all-electric and other zero emission vehicles produced in model years before 2014 be able to earn credits for use in the 2014 and later HD pickup and van compliance program, provided the vehicles are covered by an EPA certificate of conformity for criteria pollutants. These credits would be calculated based on the 2014 diesel standard targets corresponding to the vehicle's work factor, and treated as though they were earned in 2014 for purposes of credit life. Manufacturers would not have to early-certify their entire HD pickup and van fleet in a model year as for other early-complying vehicles. NHTSA and EPA are also proposing that model year 2014 and later EVs and other zero emission vehicles be factored into the fleet average GHG and fuel consumption calculations based on the diesel standards targets for their model year and work factor. If advanced technology credits generated by pickups and vans are used in another HD vehicle category, these credits would, of course, be subtracted from the manufacturer's pickup and van category credit balance.

In the 2012–2016 MY Light-Duty Vehicle Rule, EPA discussed at length the issue of whether to account for upstream emissions of GHGs in assessing the amount of credit to offer to various types of electric vehicles—that is, GHG emissions associated with generation of the electricity needed to power the electric vehicle. *See* 75 FR 25434–25436. Although acknowledging that such emissions would not be accounted for if electric vehicle GHG emissions are assessed at zero for credit generating purposes, EPA believed that this was the appropriate course in order to provide an incentive for commercialization of this extremely promising technology. At the same time, EPA adopted a cumulative cap whereby upstream emissions would be accounted for if sales of EVs exceeded a given amount.

The agencies believe that these same considerations apply to heavy-duty vehicles. Indeed, the agencies believe that introduction of EVs into the heavy-duty fleet would be less frequent than for light-duty vehicles, so that there is less risk of dilution of the main standards by unexpectedly high introduction of EVs into the heavy-duty fleet and at least an equally compelling reason to provide an incentive for the technology's commercial introduction. Given the unlikelihood of significant penetration of the technology in the model years of these standards, the agencies similarly do not see a need to adopt the type of cumulative caps which would trigger an upstream emission accounting procedure as in the light-duty vehicle rule. The agencies solicit comment on these issues, however.

(b) Vocational Vehicle and Tractor Hybrids

For vocational vehicles or combination tractors incorporating hybrid powertrains, we propose two methods for establishing the number of credits generated, each of which is discussed next. The agencies are not aware of models that have been adequately peer reviewed with data that can assess this technology without the conclusion of a comparison test of the actual physical product.

(i) Chassis Dynamometer Evaluation

For hybrid certification to generate credits we propose to utilize chassis testing as an effective way to compare the CO_2 emissions and fuel consumption performance of conventional and hybrid vehicles. We are proposing that heavy-duty hybrid vehicles be certified using "A to B" vehicle chassis dynamometer testing. This concept allows a hybrid vocational vehicle manufacturer to directly quantify the benefit associated with use of its hybrid system on an application-specific basis. The concept would entail testing the conventional vehicle, identified as "A", using the cycles as defined in Section V. The "B" vehicle would be the hybrid version of vehicle "A". The "B" vehicle would need to be the same exact vehicle model as the "A" vehicle. As an alternative, if no specific "A" vehicle exists for the hybrid vehicle that is the exact vehicle model, the most similar vehicle model would need to be used for testing. We propose to define the "most similar vehicle" as a vehicle with the same footprint, same payload, same testing capacity, the same engine power system, the same intended service class, and the same coefficient of drag.

To determine the benefit associated with the hybrid system for GHG performance, the weighted CO_2 emissions results from the chassis test of each vehicle would define the benefit as described below:

1. (CO_2_A − CO_2_B)/(CO_2_A) = _____ (Improvement Factor)
2. Improvement Factor × GEM CO_2 Result_B = _____ (g/ton mile benefit)

Similarly, the benefit associated with the hybrid system for fuel consumption would be determined from the weighted fuel consumption results from the chassis tests of each vehicle as described below:

3. (Fuel Consumption_A − Fuel Consumption_B)/(Fuel Consumption_A) = _____ (Improvement Factor)
4. Improvement Factor × GEM Fuel Consumption Result_B = _____ (gallon/1,000 ton mile benefit)

The credits for the hybrid vehicle would be calculated as described in the ABT program by Equation IV–5 and Equation IV–6, except that the result from Equation 2 above replaces the (Std-FEL) value. We are proposing that the tons of CO_2 or gallons of fuel credits generated by a hybrid vehicle could flow into any regulatory subcategory.

The agencies are proposing two sets of duty cycles to evaluate the benefit depending on the vehicle application to assess hybrid vehicle performance—without and with PTO systems. The key difference between these two sets of vehicles is that one set (*e.g.*, delivery trucks) does not operate a PTO while the other set (*e.g.*, bucket and refuse trucks) does.

The first set of duty cycles would apply to the hybrid powertrains used to improve the motive performance of the vehicles without a PTO system (such as pickup and delivery trucks). The typical operation of these vehicles is very similar to the overall drive cycles proposed in Section II. Therefore, the agencies are proposing to use the same vehicle drive cycle weightings for testing these vehicles, as shown in Table IV–2.

Table IV-2: Proposed Drive Cycle Weightings for Hybrid Vehicles Without PTO

	Transient	55 mph	65 mph
Vocational Vehicles	42%	21%	37%
Day Cab Tractors	19%	17%	64%
Sleeper Cab Tractors	5%	9%	86%

The second set of duty cycles apply to testing hybrid vehicles used in applications such as utility and refuse trucks tend to have additional benefits associated with use of stored energy, which avoids main engine operation and related CO_2 emissions and fuel consumption during PTO operation. To appropriately address benefits, exercising the conventional and hybrid vehicles using their PTO would help to quantify the benefit to GHG emissions and fuel consumption reductions. The duty cycle proposed to quantify the hybrid CO_2 and fuel consumption impact over this broader set of operation would be the three primary drive cycles plus a PTO duty cycle. Our proposed PTO cycle is based on consideration of using alternate, appropriate duty cycles with Administrator approval in a public process. The PTO duty cycle as proposed takes into account the sales impact and population of utility trucks and refuse haulers. As described in draft RIA Chapter 3, the agencies are proposing to add an additional PTO cycle to measure the improvement achieved for this type of hybrid powertrain application. The proposed weightings for the hybrids with PTO are included in Table IV–3. The agencies welcome comments on the proposed drive cycle weightings and the proposed PTO cycle.

Table IV-3: Proposed Drive Cycle Weightings for Hybrid Vehicles with PTO

	Transient	55 mph	65 mph	PTO
Vocational Vehicles with PTO	30%	15%	27%	28%

(ii) Engine Dynamometer Evaluation

The engine test procedure we are proposing for hybrid evaluation involves exercising the conventional engine and hybrid-engine system based on an engine testing strategy. The basis for the system control volume, which serves to determine the valid test article, would need to be the most accurate representation of real world functionality. An engine test methodology would be considered valid to the extent the test is performed on a test article that does not mischaracterize criteria pollutant performance or actual system performance. Energy inputs should not be based on simulation data which is not an accurate reflection of actual real world operation. It is clearly important to be sure credits are generated based on known physical systems. This includes testing using recovered vehicle kinetic energy. Additionally, the duty cycle over which this engine-hybrid system would be exercised would need to reflect the use of the application, while not promoting a proliferation of duty cycles which prevent a standardized basis for comparing hybrid system performance. The agencies are proposing the use of the Heavy-duty FTP cycle for evaluation of hybrid vehicles, which is the same test cycle proposed for engines used in vocational vehicles. For powerpack testing, which includes the engine and hybrid systems in a pre-transmission format, the engine based testing is applicable for determination of brake-specific emissions benefit versus the engine standard. For post-transmission powertrain systems and vehicles, the comparison evaluation based on the Improvement Factor and the GEM result based on a vehicle drive trace in a powertrain test cell or chassis dynamometer test cell seem to accurately reflect the performance improvements associated with these test configurations. It is important that introduction of clean technology be incentivized without compromising the program intent of real world improvements in GHG and fuel consumption performance. The agencies seek comments on the most appropriate test procedures to accurately reflect the performance improvement associated with hybrid systems tested using these or other protocols.

(3) Innovative Technology Credits

NHTSA and EPA are proposing a credit opportunity intended to apply to new and innovative technologies that reduce fuel consumption and CO_2 emissions, but for which the reduction benefits are not captured over the test procedure used to determine compliance with the standards (*i.e.*, the benefits are "off-cycle"). *See* 75 FR 25438–25440 where EPA adopted a similar credit program for MY 2012–2016 light-duty vehicles. In this case, the 'test procedure' includes not only the Heavy-duty FTP and SET procedures used to measure compliance with the engine standards, but also the GEM. Eligible innovative technologies would be those that are newly introduced in one or more vehicle models or engines, but that are not yet widely implemented in the heavy-duty fleet. This could include known technologies not yet widely utilized in a particular subcategory. Further, any credits for these off-cycle technologies would need to be based on real-world fuel consumption and GHG reductions that can be measured with verifiable test methods and representing driving conditions typical of the vehicle application.

We would not consider technologies to be eligible for these credits if the technology has a significant impact on CO_2 emissions and fuel consumption over the primary test cycles or are the technologies on whose performance the various vehicle and engine standards are premised. However, EPA and NHTSA are aware of some emerging and innovative technologies and concepts in various stages of development with CO_2 emissions and fuel consumption reduction potential that might not be adequately captured on the proposed certification test cycles, and we believe that some of these technologies might merit some additional CO_2 and fuel consumption credit generating potential for the manufacturer. Examples include predictive cruise control, gear-down protection, and active aerodynamic features not exercised in the certification test, such as adjustable ride height for pickup trucks. We believe it would be appropriate to provide an incentive to encourage the introduction of these types of technologies and that a credit mechanism is an effective way to do so. This optional credit opportunity would be available through the 2018 model year reflecting that technologies may be common by then, but the agencies welcome comment on the need to extend beyond model year 2018.

EPA and NHTSA propose that credits generated using innovative technologies be restricted within the subcategory where the credit was generated. The agencies request comments whether credits generated using innovative technologies should be fungible across vehicle and engine categories.

We are proposing that manufacturers quantify CO_2 and fuel consumption reductions associated with the use of the off-cycle technologies such that the credits could be applied based on the proposed metrics (such as g/mile and gal/100 mile for pickup trucks, g/ton-mile and gal/1,000 ton-mile for tractors and vocational vehicles, and g/bhp-hr and gal/100 bhp-hr for engines). Credits would have to be based on real additional reductions of CO_2 emissions and fuel consumption and would need to be quantifiable and verifiable with a repeatable methodology. Such submissions of data should be submitted to EPA and NHTSA, and would be subject to a public evaluation process in which the public would have opportunity for comment. *See* 75 FR 25440. We propose that the technologies upon which the credits are based would be subject to full useful life compliance provisions, as with other emissions controls. Unless the manufacturer can demonstrate that the technology would not be subject to in-use deterioration over the useful life of the vehicle, the manufacturer would have to account for deterioration in the estimation of the credits in order to ensure that the credits are based on real in-use emissions reductions over the life of the vehicle.

In cases where the benefit of a technological approach to reducing CO_2 emissions and fuel consumption cannot be adequately represented using existing test cycles, EPA and NHTSA would review and approve as appropriate test procedures and analytical approaches to estimate the effectiveness of the technology for the purpose of generating credits. The demonstration program should be robust, verifiable, and capable of demonstrating the real-world emissions benefit of the technology with strong statistical significance. *See* 75 FR

25440. For HD pickups and vans, EPA and NHTSA believe that the 5-cycle approach currently used in EPA's fuel economy labeling program for light-duty vehicles may provide a suitable test regimen, provided it can be reliably conducted on the dynamometer and can capture the impact of the off-cycle technology (*see* 71 FR 77872, December 27, 2006). EPA established the 5-cycle test methods to better represent real-world factors impacting fuel economy, including higher speeds and more aggressive driving, colder temperature operation, and the use of air conditioning.

The CO_2 and fuel consumption benefit of some technologies may be able to be demonstrated with a modeling approach. In other cases manufacturers might have to design on-road test programs that are statistically robust and based on real-world driving conditions. Whether the approach involves on-road testing, modeling, or some other analytical approach, the manufacturer would be required to present a proposed methodology to EPA and NHTSA. EPA and NHTSA would approve the methodology and credits only if certain criteria were met. Baseline emissions and control emissions would need to be clearly demonstrated over a wide range of real-world driving conditions and over a sufficient number of vehicles to address issues of uncertainty with the data. Data would need to be on a vehicle model-specific basis unless a manufacturer demonstrated model-specific data was not necessary. Approval of the approach to determining a CO_2 and fuel consumption benefit would not imply approval of the results of the program or methodology; when the testing, modeling, or analyses are complete the results would likewise be subject to EPA and NHTSA review and approval. The agencies believe that suppliers and vehicle manufacturers could work together to develop testing, modeling, or analytical methods for certain technologies, similar to the SAE approach used for A/C refrigerant leakage scores. As with the similar procedure for alternative off-cycle credits under the 2012–2016 MY light-duty vehicle program, the agencies would include an opportunity for public comment as part of any approval process.

The agencies request comments on the proposed approach for off-cycle emissions credits, including comments on how best to structure the program. EPA and NHTSA particularly request comments on how the case-by-case approach to assessing off-cycle innovative technology credits could best be designed, including ways to ensure the verification of real-world emissions benefits and to ensure transparency in the process of reviewing manufacturers' proposed test methods.

V. NHTSA and EPA Proposed Compliance, Certification, and Enforcement Provisions

A. Overview

(1) Proposed Compliance Approach

This section describes EPA's and NHTSA's proposed program to ensure compliance with EPA's proposed emission standards for CO_2, N_2O, and CH_4 and NHTSA's proposed fuel consumption standards, as described in Section II. To achieve the goals projected in this proposal, it is important for the agencies to have an effective and coordinated compliance program for our respective standards. As is the case with the Light-Duty GHG and CAFE program, the proposed compliance program for heavy-duty vehicles and engines has two central priorities. (1) To address the agencies' respective statutory requirements; and (2) to streamline the compliance process for both manufacturers and the agencies by building on existing practice wherever possible, and by structuring the program such that manufacturers can use a single data set to satisfy the requirements of both agencies. It is also important to consider the provisions of EPA's existing criteria pollutant program in the development of the approach used for heavy-duty certification and compliance. The existing EPA heavy-duty highway engine emissions program has an established infrastructure and methodology that would allow effective integration with this proposed GHG and fuel consumption program, without needing to create new unique processes in many instances. The compliance program would also need to address the importance of the impact of new control methods for heavy-duty vehicles as well as other control systems and strategies that may extend beyond the traditional purview of the criteria pollutant program.

The proposed heavy-duty compliance program would use a variety of mechanisms to conduct compliance assessments, including preproduction certification and postproduction, in-use monitoring once vehicles enter customer service. Specifically, the agencies are establishing a compliance program that utilizes existing EPA testing protocols and certification procedures. Under the provisions of this program, manufacturers would have significant opportunity to exercise implementation flexibility, based on the program schedule and design, as well as the credit provisions that are being proposed in the program for advanced technologies. This proposal includes a process to foster the use of innovative technologies, not yet contemplated in the current certification process. EPA would continue to conduct compliance preview meetings which provide the agency an opportunity to review a manufacturer's new product plans and ABT projections. Given the nature of the proposed compliance program which would involve both engine and vehicle compliance for some categories, it would be necessary for manufacturers to begin pre-certification meetings with EPA early enough to address issues of certification and compliance for both integrated and non-integrated product offerings.

Based on feedback EPA and NHTSA received during the Light-Duty GHG comment period, both agencies would seek to ensure transparency in the compliance process. In addition to providing information in published reports annually regarding the status of credit balances and compliance on an industry basis, EPA and NHTSA seek comment on additional strategies for providing information useful to the public regarding industry's progress toward reducing GHG emissions and fuel consumption from this sector while protecting sensitive business information.

(a) Heavy-Duty Pickup Trucks and Vans

The proposed compliance regulations (for certification, testing, reporting, and associated compliance activities) for heavy-duty pickup trucks and vans closely track both current practices and the recently adopted greenhouse gas regulations for light-duty vehicles and trucks. Thus they would be familiar to manufacturers. EPA already oversees testing, collects and processes test data, and performs calculations to determine compliance with both CAFE and CAA standards for Light-Duty. For Heavy-Duty products that closely parallel light-duty pick-ups and vans, under a coordinated approach, the compliance mechanisms for both programs for NHTSA and EPA would be consistent and non-duplicative for GHG pollutant standards and fuel consumption requirements. Vehicle emission standards established under the CAA apply throughout a vehicle's full useful life.

Under EPA existing criteria pollutant emission standard program for heavy-duty pickup trucks and vans, vehicle manufacturers certify a group of vehicles called a test group. A test group

typically includes multiple vehicle lines and model types that share critical emissions-related features. The manufacturer generally selects and tests a single vehicle, typically considered "worst case" for criteria pollutant emissions, which is allowed to represent the entire test group for certification purposes. The test vehicle is the one expected to be the worst case for the emission standard at issue. Emissions from the test vehicle are assigned as the value for the entire test group. However, the compliance program in the recent GHG regulations for light-duty vehicles, which is essentially the well established CAFE compliance program, allows and may require manufacturers to perform additional testing at finer levels of vehicle models and configurations in order to get more precise model-level fuel economy and CO_2 emission levels. This same approach would be applied to heavy-duty pickups and vans. Additionally, like the light-duty program, approved use of analytically derived fuel economy would be allowed to predict the fuel efficiency and CO_2 levels of some vehicles in lieu of testing when deemed appropriate by the agencies. The degree to which analytically derived fuel economy would be allowed and the design of the adjustment factors would be determined by the agencies.

(b) Heavy-Duty Engines

Heavy-duty engine certification and compliance for traditional criteria pollutants has been established by EPA in its current general form since 1985. In developing a program to address GHG pollutants, it is important to build upon the infrastructure for certification and compliance that exists today. At the same time, it is necessary to develop additional tools to address compliance with GHG emissions requirements, since the proposed standard reflect control strategies that extend beyond those of traditional criteria pollutants. In so doing, the agencies are proposing use of EPA's current engine test based strategy—currently used for criteria pollutant compliance—to also measure compliance for GHG emissions. The agencies are also proposing to add new strategies to address vehicle specific designs and hardware which impact GHG emissions. The traditional engine approach would largely match the existing criteria pollutant control strategy. This would allow the basic tools for certification and compliance, which have already been developed and implemented, to be expanded for carbon dioxide, methane, and nitrous oxide. Engines with similar emissions control technology may be certified in engine families, as with criteria pollutants.

For EPA, the proposed approach for certification would follow the current process, which would require manufacturer submission of certification applications, approval of the application, and receipt of the certificate of conformity prior to introduction into commerce of any engines. EPA proposes the certificate of conformity be a single document that would be applicable for both criteria pollutants and greenhouse gas pollutants. NHTSA would assess compliance with its fuel consumption standards based on the results of the EPA GHG emissions compliance process for each engine family.

(c) Class 7 and 8 Combination Tractors and Class 2b–8 Vocational Vehicles

Currently, except for HD pickups and vans, EPA does not directly regulate exhaust emissions from heavy-duty vehicles as a complete entity. Instead, a compliance assessment of the engine is undertaken as described above. Vehicle manufacturers installing certified engines are required to do so in a manner that maintains all functionality of the emission control system. While no process exists for certifying these heavy-duty vehicles, the agencies believe that a process similar to the one we propose for use for heavy-duty engines can be applied to the vehicles.

The agencies are proposing related certification programs for heavy-duty vehicles. Manufacturers would divide their vehicles into families and submit applications to each agency for certification for each family. However, the demonstration of compliance would not require emission testing of the complete vehicle, but would instead involve a computer simulation model, GEM. This modeling tool uses a combination of manufacturer-specified and agency-defined vehicle parameters to estimate vehicle emissions and fuel consumption. This model would then be exercised over certain drive cycles. EPA and NHTSA are proposing the duty cycles over which Class 7 and 8 combination tractors would be exercised to be: 65 mile per hour steady state cruise cycle, the 55 mile per hour steady state cruise cycle, and the California ARB transient cycle. Additional details regarding these duty cycles will be addressed in Section V.D(1)(b) below. Over each duty cycle, the simulation tool would return the expected CO_2 emissions, in g/ton-mile, and fuel consumption, gal/1,000 ton-mile, which would then be compared to the standards.

B. Heavy-Duty Pickup Trucks and Vans

(1) Proposed Compliance Approach

EPA and NHTSA are proposing new emission standards to control greenhouse gases (GHGs) and reduce fuel consumption from heavy-duty trucks between a gross vehicle weight rating between 8,500 and 14,000 pounds that are not already covered under the MY 2012–2016 light-duty truck and medium-duty passenger vehicle GHG standards. In this section "trucks" now refers to heavy-duty pickup trucks and vans between 8,500 and 14,000 pounds not already covered under the above light-duty rule.

First, EPA is proposing fleet average emission standards for CO_2 on a gram per mile (g/mile) basis and NHTSA is proposing fuel consumption standards on a gal/100 mile basis that would apply to a manufacturer's fleet of heavy-duty trucks and vans with a GVWR from 8,500 pounds to 14,000 pounds (Class 2b and 3). CO_2 is the primary pollutant resulting from the combustion of vehicular fuels, and the amount of CO_2 emitted is highly correlated to the amount of fuel consumed. In addition, the EPA is proposing separate emissions standards for three other GHG pollutants: CH_4, N_2O, and HFC. CH_4 and N_2O emissions relate closely to the design and efficient use of emission control hardware (*i.e.*, catalytic converters). The standards for CH_4 and N_2O would be set as caps that would limit emissions increases and prevent backsliding from current emission levels. In lieu of meeting the caps, EPA is optionally proposing that manufacturer could offset any N_2O emissions or any CH_4 emissions above the cap by taking steps to further reduce CO_2. Separately, EPA is proposing to set standards to control the leakage of HFCs from air conditioning systems. EPA and NHTSA are requesting comment on the opportunity for manufacturers to earn credits toward the fleet-wide average CO_2 and fuel consumption standards for improvements to air conditioning system efficiency that reduce the load on the engine and thereby reduce CO_2 emissions and fuel consumption.

Previously, complete vehicles with a Gross Vehicle Weight Rating of 8,500–14,000 pounds could be certified according to 40 CFR part 86, subpart S. These heavy-duty chassis certified vehicles were required to pass emissions on both the Light-duty FTP and HFET (California certified only

requirement).[197] These proposed rules would use the same testing procedures already required for heavy-duty chassis certification, namely the Light-duty FTP and the HFET but extend the requirement for chassis certification for CO_2 emissions to diesel-powered vehicles. Currently, chassis certification is a gasoline requirement and a diesel option. Using the data from these two tests, EPA and NHTSA would compare the CO_2 emissions and fuel consumption results against the attribute-based target. The attribute upon which the CO_2 standard would be based would be a function of vehicle payload, vehicle towing capacity and two-wheel versus four-wheel drive configuration as discussed in Section II.C(1)(b) of this notice. The attribute-based standard targets would be used to determine a manufacturer fleet standard and would be subject to an average banking and trading scheme similar to the light-duty GHG rule.

This proposal would require nearly all heavy-duty trucks between 8,500 and 14,000 pounds gross vehicle weight rating that are not already covered under the light-duty truck and medium-duty passenger vehicle GHG standards to have a CO_2, CH_4 and N_2O values assigned to them, either from actual chassis dynamometer testing or from the results of a representative vehicle in the test group with appropriate adjustments made for differences. This requirement would apply based on whether the vehicle manufacturer sold the vehicle as a complete or nearly complete vehicle.[198] Manufacturers would be allowed to exclude vehicles they sell to secondary manufacturers without cabs (often known as rolling chassis), as well as a very small number of vehicles sold with cabs. Specifically, a manufacturer could certify up to two percent of its vehicles with complete cabs, or up to 2,000 vehicles if its total sales in this category was less than 100,000, as vocational vehicles. To the extent manufacturers are allowed to engine certify for criteria pollutant (non-GHG) requirements today, they would be allowed to continue to do so under the proposed regulations.

Because the program being proposed for heavy-duty pickup trucks and vans is so similar to the program recently adopted for light-duty trucks and codified in 40 CFR part 86, subpart S, EPA is proposing to apply most of those subpart S regulatory provisions to heavy-duty pickup trucks and vans and to not recodify them in the new part 1037. Most of the new part 1037 would not apply for heavy-duty pickup trucks and vans. How 40 CFR part 86 applies, and which provisions of the new 40 CFR part 1037 apply for heavy-duty pickup trucks and vans is described in § 1037.104.

(a) Certification Process

CAA section 203(a)(1) prohibits manufacturers from introducing a new motor vehicle into commerce unless the vehicle is covered by an EPA-issued certificate of conformity. Section 206(a)(1) of the CAA describes the requirements for EPA issuance of a certificate of conformity, based on a demonstration of compliance with the emission standards established by EPA under section 202 of the Act. The certification demonstration requires emission testing, and must be done for each model year.[199]

Under existing heavy-duty chassis certification and other EPA emission standard programs, vehicle manufacturers certify a group of vehicles called a test group. A test group typically includes multiple vehicle car lines and model types that share critical emissions-related features.[200] The manufacturer generally selects and tests one vehicle to represent the entire test group for certification purposes. The test vehicle is the one expected to be the worst case for the criteria emission standard at issue.

EPA requires the manufacturer to make a good faith demonstration in the certification application that vehicles in the test group will both (1) comply throughout their useful life within the emissions bin assigned, and (2) contribute to fleetwide compliance with the applicable emissions standards when the year is over. EPA issues a certificate for the vehicles included in the test group based on this demonstration, and includes a condition in the certificate that if the manufacturer does not comply with the fleet average, then production vehicles from that test group will be treated as not covered by the certificate to the extent needed to bring the manufacturer's fleet average into compliance with the applicable standards.

The certification process often occurs several months prior to production and manufacturer testing may occur months before the certificate is issued. The certification process for the existing heavy-duty chassis program is an efficient way for manufacturers to conduct the needed testing well in advance of certification, and to receive certificates in a time frame which allows for the orderly production of vehicles. The use of conditions on the certificate has been an effective way to ensure that manufacturers comply throughout their useful life and meet fleet standards when the model year is complete and the accounting for the individual model sales is performed. EPA has also adopted this approach as part of its LD GHG compliance program.

EPA is proposing to similarly condition each certificate of conformity for the GHG program upon a manufacturer's good faith demonstration of compliance with the manufacturer's fleetwide average CO_2 standard. The following discussion explains how EPA proposes to integrate the proposed vehicle certification program into the existing certification program.

An integrated approach with NHTSA will be undertaken to allow manufacturers a single point of entry to address certification and compliance. Vehicle manufacturers would initiate the formal certification process with their submission of application for a certificate of conformity to EPA.

(b) Certification Test Groups and Test Vehicle Selection

For heavy-duty chassis certification to the criteria emission standards, manufacturers currently as mentioned above divide their fleet into "test groups" for certification purposes. The test group is EPA's unit of certification; one certificate is issued per test group. These groupings cover vehicles with similar emission control system designs expected to have similar emissions performance (*see* 40 CFR 86.1827–01). The factors considered for determining test groups include Gross Vehicle Weight, combustion cycle, engine type, engine displacement, number of cylinders and cylinder arrangement, fuel type, fuel metering system, catalyst construction and precious metal composition, among others. Vehicles having these features in common are generally placed in the same test group.[201]

EPA is proposing to retain the current test group structure for heavy-duty pickups and vans in the certification requirements for CO_2. At the time of

[197] Diesel engines are engine-certified with the option to chassis certification Federally and for California.

[198] The proposed regulations would use the term "cab-complete vehicle" to refer to incomplete vehicles sold with complete cabs, but lacking a cargo carrying container.

[199] CAA Section 206(a)(1).

[200] The specific test group criteria are described in 40 CFR 86.1827–01, car lines and model types have the meaning given in 40 CFR 86.1803–01.

[201] EPA provides for other groupings in certain circumstances, and can establish its own test groups in cases where the criteria do not apply. *See* 40 CFR 86.1827–01(b), (c) and (d).

certification, manufacturers would use the CO_2 emission level from the Emission Data Vehicle as a surrogate to represent all of the models in the test group. However, following certification further testing would generally be allowed for compliance with the fleet average CO_2 standard as described below. EPA's issuance of a certificate would be conditioned upon the manufacturer's subsequent model level testing and attainment of the actual fleet average, much like light-duty CAFE and GHG compliance requires. Under the current program, complete heavy-duty Otto-cycle vehicles under 14,000 pounds Gross Vehicle Weight Rating are required to chassis certify (*see* 40 CFR 86.1801–01(a)). The current program allows complete heavy-duty diesel vehicles under 14,000 pounds GVWR to optionally chassis certify (*see* 40 CFR 86.1863–07(a)). As discussed earlier, these proposed rules would now require all HD vehicles under 14,000 pounds GVWR to chassis certify except as noted in Section II.

EPA recognizes that the existing heavy-duty chassis test group criteria do not necessarily relate to CO_2 emission levels. *See* 75 FR 25472. For instance, while some of the criteria, such as combustion cycle, engine type and displacement, and fuel metering, may have a relationship to CO_2 emissions, others, such as those pertaining to the some exhaust aftertreatment features, may not. In fact, there are many vehicle design factors that impact CO_2 generation and emissions but are not major factors included in EPA's test group criteria.[202] Most important among these may be vehicle weight, horsepower, aerodynamics, vehicle size, and performance features. To remedy this, EPA is considering allowing manufacturers provisions similar to the LD GHG rule that would yield more accurate CO_2 estimates than only using the test group emission data vehicle CO_2 emissions.

EPA believes that the current test group concept is appropriate for N_2O and CH_4 because the technologies that would be employed to control N_2O and CH_4 emissions may generally be the same as those used to control the criteria pollutants. However, manufacturers would determine if this approach is adequate method for N_2O and CH_4 emissions compliance or if testing on additional vehicles is required to ensure the entire fleet meet applicable standards.

[202] EPA noted this potential lack of connection between fuel economy testing and testing for emissions standard purposes when it first adopted fuel economy test procedures. *See* 41 FR 38677, Sept. 10, 1976.

As just discussed, the "worst case" vehicle a manufacturer selects as the Emissions Data Vehicle to represent a test group under the existing regulations (40 CFR 86.1828–01) may not have the highest levels of CO_2 in that group. For instance, there may be a heavier, more powerful configuration that would have higher CO_2, but may, due to the way the catalytic converter has been matched to the engine, actually have lower NO_X, CO, PM or HC emissions. Therefore, EPA is proposing to require a single Emission Data Vehicle that would represent the test group for both criteria pollutant and CO_2 certification. The manufacturer would be allowed to initially apply the Emission Data Vehicle's CO_2 emissions value to all models in the test group, even if other models in the test group are expected to have higher CO_2 emissions. However, as a condition of the certificate, this surrogate CO_2 emissions value would generally be replaced with actual, model-level CO_2 values based on results from additional testing that occurs later in the model year much like the light-duty CAFE program, or through the use of approved methods for analytically derived fuel economy. This model level data would become the official certification test results (as per the conditioned certificate) and would be used to determine compliance with the fleet average. Only if the test vehicle is in fact the worst case CO_2 vehicle for the test group could the manufacturer elect to apply the Emission Data Vehicle emission levels to all models in the test group for purposes of calculating fleet average emissions. Manufacturers would be unlikely to make this choice, because doing so would ignore the emissions performance of vehicle models in their fleet with lower CO_2 emissions and would unnecessarily inflate their CO_2 fleet average. Testing at the model level would necessarily increase testing burden beyond the minimum Emission Data Vehicle testing.

EPA requests comment regarding whether the existing heavy-duty chassis test group can adequately represent CO_2 emissions for certification purposes, and whether the Emission Data Vehicle's CO_2 emission level is an appropriate surrogate for all vehicles in a test group at the time of certification, given that the certificate would be conditioned upon additional model level testing occurring during the year and that the surrogate CO_2 emission values would be replaced with model-level emissions data from those tests. Comments should also address EPA's desire to minimize the up-front pre-production testing burden and whether the proposed efficiencies would be balanced by the requirement to test all model types in the fleet by the conclusion of the model year in order to establish the fleet average CO_2 levels.

As explained in Sections II and III, there are two standards that the manufacturer would be subject to, the fleet average standard and the in-use standard for the useful life of the vehicle. Compliance with the fleet average standard is based on production weighted averaging of the test data that applies for each model, For each model, the in-use standard is set at 10 percent higher than the level used for that model in calculating the fleet average. The certificate covers both of these standards, and the manufacturer has to demonstrate compliance with both of these standards for purposes of receiving a certificate of conformity. The certification process for the in-use standard is discussed above.

(c) Pre-Model Year (or Compliance Plan) Reporting

EPA and NHTSA are proposing that manufacturers submit a compliance plan for their entire fleet prior to the certification of any test group in a given model year. Preferably, this compliance plan would be submitted at the manufacturer's annual certification preview meeting. This preview meeting is typically held before the earliest date that the model year can begin. The earliest a model year can begin is January 2nd of the calendar year prior to the model year. This plan would include the manufacturer's estimate of its attribute-based standard, along with a demonstration of compliance with the standard based on projected model-level CO_2 emissions and fuel consumption, and production estimates. This information would be similar to the information submitted to NHTSA and EPA in the pre-model year report required for CAFE compliance for light-duty vehicles. Included in the compliance plan, manufacturers seeking to take advantage of credit flexibilities would include these in their compliance demonstration. Similarly, the compliance demonstration would need to include a credible plan for addressing deficits accrued in prior model years. EPA and NHTSA would review the compliance plan for technical viability and conduct a certification preview discussion with the manufacturer. The agencies would view the compliance plan as part of the manufacturer's good faith demonstration, but understands that initial projections can vary considerably from the reality of final production and emission results. In

addition, the compliance plan must be approved by the EPA Administrator prior to any certificate of compliance being issued. The agencies request comment on the proposal to evaluate manufacturer compliance plans prior to the beginning of model year certification.

(d) Demonstrating Compliance With the Proposed Standards

(i) CO_2 and Fuel Consumption Fleet Standards

As noted, attribute-based CO_2 standards result in each manufacturer having a fleet average CO_2 standard unique to its heavy-duty truck fleet of GVWR between 8,500–14,000 pounds and that standard would be separate from the standard for passenger cars, light-trucks, and other heavy-duty trucks. The standards depend on those attributes corresponding to the relative capability, or "work factor", of the vehicle models produced by that manufacturer. The proposed attributes used to determine the stringency of the CO_2 standard are payload and towing capacity as described in Section II.C of this notice. Generally, fleets with a mix of vehicles with increased payloads or greater towing capacity (or utilizing four wheel drive configurations) would face numerically less stringent standards (*i.e.,* higher CO_2 grams/mile standards) than fleets consisting of less powerful vehicles. (However, the standards would be expected to be equally challenging and achieve similar percent reductions.) Although a manufacturer's fleet average standard could be estimated throughout the model year based on projected production volume of its vehicle fleet, the final compliance values would be based on the final model year production figures. A manufacturer's calculation of fleet average emissions at the end of the model year would be based on the production-weighted average emissions of each model in its fleet. The payload and towing capacity inputs used to determine manufacturer compliance with these proposed rules would be the advertised values.

The agencies propose to use the same general vehicle category definitions that are used in the current EPA HD chassis certification (*See* 40 CFR 86.1816–05). The new vehicle category definitions differ slightly from the EPA definitions for Heavy-duty Vehicle definitions for the existing program, as well as other EPA vehicle programs. Mainly, manufacturers would be able to test, and possibly model, more configurations of vehicles than were historically in a given test group. The existing criteria pollutant program requires the worst case configuration be tested for emissions certification. For HD chassis certification, this usually meant only testing the vehicle with the highest ALVW, road-load, and engine displacement within a given test group. This worst case configuration may only represent a small fraction of the test group production volume. By testing the worst case, albeit possibly small volume, vehicle configuration, the EPA had a reasonable expectation that all represented vehicles would pass the given emissions standards. Since CO_2 standards are a fleet standard based on a combination of sales volume and work factor (*i.e.,* payload and towing capability), it may be in a manufacturer's best interest to test multiple configurations within a given test group to more accurately estimate the fleet average CO_2 emission levels and not accept the worst case vehicle test results as representative of all models. Additionally, vehicle models for which a manufacturer desires to use analytically derived fuel economy (ADFE) to estimate CO_2 emission levels may need additional actual test data for vehicle models of similar but not identical configurations. The agencies are requesting comment on allowing the manufacturer to test as many configurations within a test group as the manufacturer requires in order to best represent the volumes of each configuration within that test group. The agencies are also requesting comment on using an ADFE approach similar to that used by light-duty vehicles, as explained in the light-duty vehicle/light-duty truck EPA guidance document CCD–04–06 titled "Updated Analytically Derived Fuel Economy (ADFE) Policy for 2005 MY and Later", but expanded to a greater fraction of possible subconfigurations and using lower confidence limits than used for light-duty vehicles and light-duty trucks.

The agencies are proposing the use of ADFE similar to that allowed for light-duty vehicles in 40 CFR 600.006–08(e). This provision would allow EPA and NHTSA to accept analytical expressions to generate CO_2 and fuel economy that have been approved in advance by the agencies.

For model years 2014 through 2017, or earlier if a manufacturer is certifying in order to generate early credits, EPA is proposing the equation and parameter values as expressed in Section II C or assigning a CO_2 level to an individual vehicle's relevant attributes. These CO_2 values would be production weighted to determine each manufacturer's fleet average. Each parameter would change on an annual basis, resulting in the annual increase in stringency. For the function used to describe the proposed standard, see Section II.C of this notice.

The GHG and fuel economy rulemaking for light-duty vehicles adopted a carbon balance methodology used historically to determine fuel consumption for the light-duty labeling and CAFE programs, whereby the carbon-related combustion products HC and CO are included on an adjusted basis in the compliance calculations, along with CO_2. The resulting carbon-related exhaust emissions (CREE) of each test vehicle is calculated and it is this value, rather than simply CO_2 emissions, that is used in compliance determinations. The difference between the CREE and CO_2 is typically very small.

NHTSA and EPA are not proposing to adopt the CREE methodology for HD pickups and vans, and so are not proposing to adjust CO_2 emissions to further account for additional HC and CO. The basis of the CREE methodology in historical labeling and CAFE programs is not relevant to HD pickups and vans, because these historical programs do not exist for HD vehicles. Furthermore, test data used in this proposal for standards-setting has not been adjusted for this effect, and so it would create an inconsistency, albeit a small one, to apply it for compliance with the numerical standards we are proposing. Finally, it would add complexity to the program with little real world benefit. We request comment on this proposed approach.

(ii) CO_2 In-Use Standards and Testing

Section 202(a)(1) of the CAA requires emission standards to apply to vehicles throughout their statutory useful life. Section II.B(3)(b) of this proposal discusses in-use standards.

Currently, EPA regulations require manufacturers to conduct in-use testing as a condition of certification for heavy-duty trucks between 8,500 and 14,000 gross vehicle weight that are chassis certified. The vehicles are tested to determine the in-use levels of criteria pollutants when they are in their first and third years of service. This testing is referred to as the In-Use Verification Program, which was first implemented as part of EPA's CAP 2000 certification program (*see* 64 FR 23906, May 4, 1999).

EPA is requesting comment on applying the in-use program already set forth in the 2012–2016 MY light-duty vehicle rule to heavy-duty pickups and vans. The In-Use Verification Program for heavy-duty pickups and vans would follow the same general provisions of the light-duty program in regard to

testing, vehicle selection, and reporting. *See* 75 FR 25474–25476.

(e) Cab-Chassis Vehicles and Complete Class 4 Vehicles

As discussed in Section I.C(2)(a), we are proposing to include most cab-chassis Class 2b and 3 vehicles in the complete HD pickup and van program. Because their numbers are relatively small, and to reduce the testing and compliance tracking burden to manufacturers, we would treat these vehicles as equivalent to the complete van or truck product they are derived from. The manufacturer would determine which complete vehicle configuration it produces most closely matches the cab-chassis product leaving its facility, and would include each of these cab-chassis vehicles in the fleet averaging calculations as though it were identical to the corresponding complete vehicle.

Any in-use testing of these vehicles would do likewise, with loading of the tested vehicle to a total weight equal to the ALVW of the corresponding complete vehicle configuration. If the secondary manufacturer had altered or replaced any vehicle components in a way that would substantially affect CO_2 emissions from the tested vehicle (*e.g.,* axle ratio has been changed for a special purpose vehicle), the vehicle manufacturer could request that EPA not test the vehicle or invalidate a test result. Secondary (finisher) manufacturers would not be subject to requirements under this provision, other than to comply with anti-tampering regulations. However, if they modify vehicle components in such a way that GHG emissions and fuel consumption are substantially affected, they become manufacturers subject to the standards under this proposal.

We realize that this approach does not capture the likely loss of aerodynamic efficiency involved in converting these vehicles from standard pickup trucks or vans to ambulances and the like, and thus it could assign them lower GHG emissions and fuel consumption than they deserve. However, we feel that this approach strikes a fair balance between the alternatives—grouping these vehicles with vocational vehicles subject only to engine standards and tire requirements, or creating a complex and burdensome program that forces vehicle manufacturers to track, and perhaps control, a plethora of vehicle configurations they currently do not manage. We request comment on this proposed provision and any suggestions for ways to improve it.

Some complete Class 4 trucks are very similar to complete Class 3 pickup truck models, including their overall vehicle architecture and use of the same basic engines. EPA and NHTSA request comment on whether these vehicles should be regulated as part of the HD pickup and van category and thereby be subject to that regulatory regime (i.e., standard stringency, chassis-based compliance for entire vehicle, credit opportunities limited to HD pickup and van subcategory, etc.), instead of as vocational vehicles as currently proposed. Comment is also requested on whether such chassis certification should be allowed as a manufacturer's option instead, and on whether vehicles so certified for GHG emissions and fuel consumption should also be allowed to certify to chassis-based criteria pollutant standards as well. Commenters are asked to address the environmental impacts of this potential change.

(2) Proposed Labeling Provisions

HD pickups and vans currently have vehicle emission control information labels showing compliance with criteria pollutant standards, similar to emission control information labels for engines. As with engines, we believe this label is sufficient.

(3) Other Certification Issues

(a) Carryover Certification Test Data

EPA's proposed certification program for vehicles allows manufacturers to carry certification test data over from one model year to the next, when no significant changes to models are made. EPA will also apply this policy to CO_2, N_2O and CH_4 certification test data.

(b) Compliance Fees

The CAA allows EPA to collect fees to cover the costs of issuing certificates of conformity for the classes of vehicles and engines covered by this proposal. On May 11, 2004, EPA updated its fees regulation based on a study of the costs associated with its motor vehicle and engine compliance program (69 FR 51402). At the time that cost study was conducted the current rulemaking was not considered.

At this time the extent of any added costs to EPA as a result of this proposal is not known. EPA will assess its compliance testing and other activities associated with the rule and may amend its fees regulations in the future to include any warranted new costs.

C. Heavy-Duty Engines

(1) Proposed Compliance Approach

Section 203 of the CAA requires that all motor vehicles and engines sold in the United States to carry a certificate of conformity issued by the U.S. EPA. For heavy-duty engines, the certificate specifies that the engine meets all requirements as set forth in the regulations (40 CFR part 86, subpart N, for criteria pollutants) including the requirement that the engine be compliant with emission standards. This demonstration is completed through emission testing as well as durability testing to determine the level of emissions deterioration throughout the useful life of the engine. In addition to compliance with emission standards, manufacturers are also required to warrant their products against emission defects, and demonstrate that a service network is in place to correct any such conditions. The engine manufacturer also bears responsibility in the event that an emission-related recall is necessary. Finally, the engine manufacturer is responsible for tracking and ensuring correct installation of any emission related components installed by a second party (*i.e.,* vehicle manufacturer). EPA believes this compliance structure is also valid for administering the proposed GHG regulations for heavy-duty engines.

(a) Certification Process

In order to obtain a certificate of conformity, engine manufacturers must complete a compliance demonstration, normally consisting of test data from relatively new (low-hour) engines as well as supporting documentation, showing that their product meets emission standards and other regulatory requirements. To account for aging effects, low-hour test results are coupled with testing-based deterioration factors (DFs), which provide a ratio (or offset) of end-of-life emissions to low-hour emissions for each pollutant being measured. These factors are then applied to all subsequent low-hour test data points to predict the emissions behavior at the end of the useful life.

For purposes of this compliance demonstration and certification, engines with similar engine hardware and emission characteristics throughout their useful life may be grouped together in engine families, consistent with current criteria-pollutant certification procedures. Examples of such characteristics are the combustion cycle, aspiration method, and aftertreatment system. Under this system, the worst-case engine ("parent rating") is selected based on having the highest fuel feed per engine stroke, and all emissions testing is completed on this model. All other models within the family ("child ratings") are expected to have emissions at or below the parent model and therefore in compliance with emission standards. Any engine within the family

can be subject to selective enforcement audits, in-use, confirmatory, or other compliance testing.

We are proposing to continue to use this approach for the selection of the worst-case engine ("parent rating") for fuel consumption and GHG emissions as well. We believe this is appropriate because this worst case engine configuration would be expected to have the highest in-use fuel consumption and GHG emissions within the family. We note that lower engine ratings contained within this family would be expected to have a higher fuel consumption rate when measured over the Federal Test Procedures as expressed in terms of fuel consumption per brake horsepower hour. This higher fuel consumption rate is misleading in the context of comparing engines within a single engine family. This seeming contradiction can be most easily understood in terms of an example. For a typical engine family a top rating could be 500 horsepower with a number of lower engine ratings down to 400 horsepower or lower included within the family. When installed in identical trucks the 400 and 500 horsepower engines would be expected to operate identically when the demanded power from the engines is 400 horsepower or less. So in the case where in-use driving never included acceleration rates leading to horsepower demand greater than 400 horsepower, the two trucks with the 400 and 500 horsepower engines would give identical fuel consumption and GHG performance. When the desired vehicle acceleration rates were high enough to require more than 400 horsepower, the 500 horsepower truck would accelerate faster than the 400 horsepower truck resulting in higher average speeds and higher fuel consumption and GHG emissions measured on a per mile or per ton-mile basis. Hence, the higher rated engine family would be expected to have the highest in-use fuel consumption and CO_2 emissions.

The reason that the lower engine ratings appear to have worse fuel consumption relates to our use of a brake specific work metric. The brake specific metric measures power produced from the engine and delivered to the vehicle ignoring the parasitic work internal to the engine to overcome friction and air pumping work within the engine. The fuel consumed and GHG emissions produced to overcome this internal work and to produce useful (brake) work are both measured in the test cycle but only the brake work is reflected in the calculation of the fuel consumption rate. This is desirable in the context of reducing fuel consumption as this approach rewards engine designs that minimize this internal work through better engine designs. The less work that is needed internal to the engine, the lower the fuel consumption will be. If we included the parasitic work in the calculation of the rate, we would provide no incentive to reduce internal friction and pumping losses. However, when comparing two engines within the very same family with identical internal work characteristics, this approach gives a misleading comparison between two engines as described above. This is the case because both engines have an identical fuel consumption rate to overcome internal work but different rates of brake work with the higher horsepower rating having more brake work because the test cycle is normalized to 100 percent of the engine's rated power. The fuel consumed for internal work can be thought of as a fixed offset identical between both engines. When this fixed offset is added to the fuel consumed for useful (brake) work over the cycle, it increases the overall fuel consumption (the numerator in the rate) without adding any work to the denominator. This fixed offset identical between the two engines has a bigger impact on the lower engine rating. In the extreme this can be seen easily. As the engine ratings decrease and approach zero, the brake work approaches zero and the calculated brake specific fuel consumption approaches infinity. For these reasons, we are proposing that the same selection criteria, as outlined in 40 CFR part 86, subpart N, be used to define a single engine family designation for both criteria pollutant and GHG emissions. Further, we are proposing that for fuel consumption and CO_2 emissions only any selective enforcement audits, in-use, confirmatory, or other compliance testing would be limited to the parent rating for the family. This approach is being contemplated for administrative convenience and we seek comments on alternatives to address compliance testing. Consistent with the current regulations, manufacturers may electively subdivide a grouping of engines which would otherwise meet the criteria for a single family if they have evidence that the emissions are different over the useful life.

The agency utilizes a 12-digit naming convention for all mobile-source engine families (and test groups for vehicles). This convention is also shared by the California Air Resources Board which allows manufacturers to potentially use a single family name for both EPA and California ARB certification. Of the 12 digits, 9 are EPA-defined and provide identifying characteristics of the engine family. The first digit represents the model year, through use of a predefined code. For example, "A" corresponds to the 2010 model year and "B" corresponds to the 2011 model year. The 5th position corresponds to the industry sector code, which includes such examples as light-duty vehicle (V) and heavy-duty diesel engines (H). The next three digits are a unique alphanumeric code assigned to each manufacturer by EPA. The next four digits describe the displacement of the engine; the units of which are dependent on the industry segment and a decimal may be used when the displacement is in liters. For engine families with multiple displacements, the largest displacement is used for the family name. For on-highway vehicles and engines, the tenth character is reserved for use by California ARB. The final characters (including the 10th character in absence of California ARB guidance) left to the manufacturer to determine, such that the family name forms a unique identifying characteristic of the engine family.

This convention is well understood by the regulated industries, provides sufficient detail, and is flexible enough to be used across a wide spectrum of vehicle and engine categories. In addition, the current harmonization with other regulatory bodies reduces complications for affected manufacturers. For these reasons, we are not proposing any major changes to this naming convention for this proposal. There may be additional categories defined for the 5th character to address heavy-duty vehicle test groups, however that will be discussed later.

As with criteria pollutant standards, the heavy-duty diesel regulatory category is subdivided into three regulatory subcategories, depending on the GVW of the vehicle in which the engine will be used. These regulatory subcategories are defined as light-heavy-duty (LHD) diesel, medium heavy-duty (MHD) diesel, and heavy heavy-duty (HHD) diesel engines. All heavy-duty gasoline engines are grouped into a single subcategory. Each of these regulatory subcategories are expected to be in service for varying amounts of time, so they each carry different regulatory useful lives. For this reason, expectations for demonstrating useful life compliance differ by subcategory, particularly as related to deterioration factors.

Light heavy-duty diesel engines (and all gasoline heavy-duty engines) have

the same regulatory useful life as a light-duty vehicle (110,000 miles), which is significantly shorter than the other heavy-duty regulatory subcategories. Therefore, we believe it is appropriate to maintain commonality with the light-duty GHG rule. During the light-duty GHG rulemaking, the conclusion was reached that no significant deterioration would occur over the useful life. Therefore, EPA is proposing to specify that manufacturers would use assigned DFs for CO_2 and the values would be zero (for additive DFs) and one (for multiplicative DFs). EPA is interested in data that addresses this issue.

For the medium heavy-duty and heavy heavy-duty diesel engine segments, the regulatory useful lives are significantly longer (185,000 and 435,000 miles, respectively). For this reason, the agency is not convinced that engine/aftertreatment wear will not have a negative impact on GHG emissions. To address useful life compliance for MHD and HHD diesel engines certified to GHG standards, we believe the criteria pollutant approach for developing DFs is appropriate. Using CO_2 as an example, many of the engine deterioration concerns previously identified will affect CO_2 emissions. Reduced compression, as a result of wear, will cause higher fuel consumption and increase CO_2 production. In addition, as aftertreatment devices age (primarily particulate traps), regeneration events may become more frequent and take longer to complete. Since regeneration commonly requires an increase in fuel rate, CO_2 emissions would likely increase as well. Finally, any changes in EGR levels will affect heat release rates, peak combustion temperatures, and completeness of combustion. Since these factors could reasonably be expected to change fuel consumption, CO_2 emissions would be expected to change accordingly.

HHD diesel engines may also require some degree of aftertreatment maintenance throughout their useful life. For example, one major heavy-duty engine manufacturer specifies that their diesel particulate filters be removed and cleaned at intervals between 200,000 and 400,000 miles, depending on the severity of service. Another major engine manufacturer requires servicing diesel particulate filters at 300,000 miles. This maintenance or lack thereof if service is neglected, could have serious negative implications to CO_2 emissions. In addition, there may be emissions-related warranty implications for manufacturers to ensure that if rebuilding or specific emissions related maintenance is necessary, it will occur at the prescribed intervals. Therefore, it is imperative that manufacturers are detailed in their maintenance instructions. The agency currently seeks public comment on how to properly address this issue.

Lean-NO_X aftertreatment devices may also facilitate GHG reductions by allowing engines to run with higher engine-out NO_X levels in exchange for more efficient calibrations. In most cases, these aftertreatment devices require a consumable reductant, such as diesel exhaust fluid, which requires periodic maintenance by the vehicle operator. Without such maintenance, the emission control system may be compromised and compliance with emission standards may be jeopardized. Such maintenance is considered to be critical emission related maintenance and manufacturers must therefore demonstrate that it is likely to be completed at the required intervals. One example of such a demonstration is an engine power de-rate strategy that will limit engine power or vehicle speed in absence of this required maintenance.

If the manufacturer determines that maintenance is necessary on critical emission-related components within the useful life period, they must have a reasonable basis for ensuring that this maintenance will be completed as scheduled. This includes any adjustment, cleaning, repair, or replacement of critical emission-related components. Typically, the agency has only allowed manufacturers to schedule such maintenance if the manufacturer can demonstrate that the maintenance is reasonably likely to be done at the recommended intervals. This demonstration may be in the form of survey data showing at least 80 percent of in-use engines get the prescribed maintenance at the correct intervals. Another possibility is to provide the maintenance free of charge. We see no reason to depart from this approach for GHG-related critical emission-related components; however the agency welcomes commentary on this approach.

(b) Demonstrating Compliance With the Proposed Standards

(i) CO_2 Standards

The final test results (adjusted for deterioration, if applicable) form the basis for the Family Certification Limit (FCL), which the manufacturer must specify to be at or above the certification test results. This FCL becomes the emission standard for the family and any certification or confirmatory testing must show compliance with this limit. In addition, manufacturers may choose an FCL at any level above their certified emission level to provide a larger compliance margin. If subsequent certification or confirmatory testing reveals emissions above the FCL, the new, higher result becomes the FCL.

The FCL is also used to determine the Family Emission Limit (FEL), which serves as the emission limit for any subsequent field testing conducted after the time of certification. This would primarily include selective enforcement audits, but also may include in-use testing and/or production line testing for GHGs. The FEL differs from the FCL in that it includes an EPA-defined compliance margin; currently proposed to be 2 percent. Under this scenario the FEL would always be 2 percent higher than the FCL.

Engine Emission Testing

Under current non-GHG engine emissions regulations, manufacturers are required to demonstrate compliance using two test methods: The heavy-duty transient cycle and the heavy-duty steady state test. Each test is an engine speed versus engine torque schedule intended to be run on an engine dynamometer. Over each test, emissions are sampled using the equipment and procedures outlined in 40 CFR part 1065, which includes provisions for measuring CO_2, N_2O, and CH_4. Emissions may be sampled continuously or in a batch configuration (commonly known as "bag sampling") and the total mass of emissions over each cycle are normalized by the engine power required to complete the cycle. Following each test, a validation check is made comparing actual engine speed and torque over the cycle to the commanded values. If these values do not align well, the test is deemed invalid.

The transient Heavy-duty FTP cycle is characteristic of typical urban stop-and-go driving. Also included is a period of more steady state operation that would be typical of short cruise intervals at 45 to 55 miles per hour. Each transient test consists of two 20 minute tests separated by a "soak" period of 20 minutes. The first test is run with the engine in a "cold" state, which involves letting the engine cool to ambient conditions either by sitting overnight or by forced cooling provisions outlined in § 86.1335–90 (or 40 CFR part 1036). This portion of the test is meant to assess the ability of the engine to control emissions during the period prior to reaching normal operating temperature. This is commonly a challenging area in criteria pollutant emission control, as cold combustion chamber surfaces tend to inhibit mixing and vaporization of

fuel and aftertreatment devices do not tend to function well at low temperatures.

Following the first test, the engine is shut off for a period of 20 minutes, during which emission analyzer checks are performed and preparations are made for the second test (also known as the "hot" test). After completion of the second test, the results from the cold and hot tests are weighted and a single composite result is calculated for each pollutant. Based on typical in-use duty cycles, the cold test results are given a 1/7 weighting and the hot test results are given a 6/7 weighting. Deterioration factors are applied to the final weighted results and the results are then compared to the emission standards.

Prior to 2007, compliance only needed to be demonstrated over the Heavy-duty FTP. However, a number of events brought to light the fact that this transient cycle may not be as well suited for engines which spend much of their duty cycle at steady cruise conditions, such as those used in line-haul semi-trucks. As a result, the steady-state SET procedure was added, consisting of 13 steady-state modes. During each mode, emissions were sampled for a period of five minutes. Weighting factors were then applied to each mode and the final weighted results were compared to the emission standards (including deterioration factors). In addition, emissions at each mode could not exceed the NTE emission limits. Alternatively, manufacturers could run the test as a ramped-modal cycle. In this case, the cycle still consists of the same speed/torque modes, however linear progressions between points are added and instead of weighting factors, each mode is sampled for various amounts of time. The result is a continuous cycle lasting approximately 40 minutes. With the implementation of part 1065 test procedures in 2010, manufacturers are now required to run the modal test as a ramped-modal cycle. In addition, the order of the speed/torque modes in the ramped-modal cycle have changed for 2010 and later engines.

It is well known that fuel consumption, and therefore CO_2 emissions, are highly dependent on the drive cycle over which they are measured. Steady cruise conditions, such as highway driving, tend to be more efficient, having lower fuel consumption and CO_2 emissions. In contrast, highly transient operation, such as city driving, tends to lead to lower efficiency and therefore higher fuel consumption and CO_2 emissions. One example of this is the difference between EPA-measured city and highway fuel economy ratings assigned to all new light-duty passenger vehicles.

For this heavy-duty engine and vehicle proposal, we believe it is important to assess CO_2 emissions and fuel consumption over both transient and steady state test cycles, as all vehicles will operate in conditions typical of each cycle at some point in their useful life. However, due to the drive cycle dependence of CO_2 emissions, we do not believe it is reasonable to have a single CO_2 standard which must be met for both cycles. A single CO_2 standard would likely prove to be too lax for steady-state conditions while being too strict for transient conditions. Therefore, the agencies are recommending that all heavy-duty engines be tested over both transient and steady-state tests. However, only the results from either the transient or steady-state test cycles would be used to assess compliance with GHG standards, depending on the type of vehicle in which the engine will be used. Engines that will be used in Class 7 and 8 tractors would use the ramped-modal cycle for GHG certification, and engines used in vocational vehicles would use the Heavy-duty FTP cycle. In both cases, results from the other test cycle would be reported but not used for a compliance decision. Engines will continue to be required to show criteria pollutant compliance over both cycles, in addition to NTE requirements.

The agencies propose that manufacturers submit both composite data sets, as well as modal data for criteria and GHG pollutants for engine certification. This would include submission of discrete mode results from the continuous analyzer data collected during the ramped-modal cycle test. This would also include providing both cold start and hot start transient heavy-duty FTP emissions results, as well as the composite emissions at the time of certification. In an effort to improve the accuracy of the simulation model being used for assessing CO_2 and fuel consumption performance and overall engine emissions performance, gaseous pollutants sampled using continuous analyzers (including but not limited to emissions results for CO_2, CO, and NO_X) would need to provide the constituent data from each of the test modes. The agencies welcome comment on this proposed requirement. As explained above in Section II, the agencies are proposing an alternative standard whereby manufacturers may elect that certain of their engine families meet an alternative percent reduction standard, measured from the engine family's 2011 baseline, instead of the main 2014 MY standard. As part of the certification process, manufacturers electing this standard would not only have to notify the agency of the election but also demonstrate the derivation of the 2011 baseline CO_2 emission level for the engine family. Manufacturers would also have to demonstrate that they have exhausted all credit opportunities.

Durability Testing

Another element of the current certification process is the requirement to complete durability testing to establish DFs. As previously mentioned, manufacturers are required to demonstrate that their engines comply with emission standards throughout the regulatory compliance period of the engine. This demonstration is commonly made through the combination of low-hour test results and testing based deterioration factors.

For engines without aftertreatment devices, deterioration factors primarily account for engine wear as service is accumulated. This commonly includes wear of valves, valve seats, and piston rings, all of which reduce in-cylinder pressure. Oil control seals and gaskets also deteriorate with age, leading to higher lubricating oil consumption. Additionally, flow properties of EGR systems may change as deposits accumulate and therefore alter the mass of EGR inducted into the combustion chamber. These factors, amongst others, may serve to reduce power, increase fuel consumption, and change combustion properties; all of which affect pollutant emissions.

For engines equipped with aftertreatment devices, DFs take into account engine deterioration, as described above, in addition to aging affects on the aftertreatment devices. Oxidation catalysts and other catalytic devices rely on active precious metals to effectively convert and reduce harmful pollutants. These metals may become less active with age and therefore pollutant conversion efficiencies may decrease. Particulate filters may also experience reduced trapping efficiency with age due to ash accumulation and/or degradation of the filter substrate, which may lead to higher tailpipe PM measurements and/or increased regeneration frequency. If a pollutant is predominantly controlled by aftertreatment, deterioration of emission control depends on the continued operation of the aftertreatment device much more so than on consistent engine-out emissions.

At this time, we anticipate that most engine component wear will not have a significant negative impact on CO_2 emissions. However, wear and aging of

aftertreatment devices may or may not have a significant negative impact on CO_2 emissions. In addition, future engine or aftertreatment technologies may experience significant deterioration in CO_2 emissions performance over the useful life of the engine. For these reasons, we believe that the use of DFs for CO_2 emissions is both appropriate and necessary. As with criteria pollutant emissions, these DFs are preferably developed through testing the engine over a representative duty cycle for an extended period of time. This is typically either half or full useful life, depending on the regulatory class. The DFs are then calculated by comparing the high-hour to low-hour emission levels, either by division or subtraction (for multiplicative & additive DFs, respectively).

This testing process may be a significant cost to an engine manufacturer, mainly due to the amount of time and resources required to run the engine out to half or full useful life. For this reason, durability testing for the determination of DFs is not commonly repeated from model year to model year. In addition, some DFs may be allowed to carry over between families sharing a common architecture and aftertreatment system. EPA prefers to have manufacturers develop testing-based DFs for their products, and we are proposing that this be the case for the final rule. However, we do understand that for the reasons stated above, it may be impractical to expect manufacturers to have testing-based deterioration factors available for this proposal. Therefore, we are willing to consider requiring the use of assigned DFs for CO_2. Under this possibility, we suggest that manufacturers would be required to submit any CO_2 data from durability testing to aid in developing more accurate assigned DFs.

IRAFs/Regeneration Impacts on CO_2

Heavy-duty engines may be equipped with exhaust aftertreatment devices which require periodic "regeneration" to return the device to a nominal state. A common example is a diesel particulate filter, which accumulates PM as the engine is operated. When the PM accumulation reaches a threshold such that exhaust backpressure is significantly increased, exhaust temperature is actively increased to oxidize the stored PM. The increase in exhaust temperature is commonly facilitated through late combustion phasing and/or raw fuel injection into the exhaust system upstream of the filter. Both methods impact emissions and therefore must be accounted for at the time of certification. In accordance with § 86.004–28(i), this type of event would be considered infrequent because in most cases they only occur once every 30 to 50 hours of engine operation (rather than once per transient test cycle), and therefore adjustment factors must be applied at certification to account for these effects.

Similar to DFs, these adjustment factors are based off of manufacturer testing; however this testing is far less time consuming. Emission results are measured from two test cycles: With and without regeneration occurring. The differences in emission results are used, along with the frequency at which regeneration is expected to occur, to develop upward and downward adjustment factors. Upward adjustment factors are added to all emission results derived from a test cycle in which regeneration did not occur. Similarly, downward adjustment factors are subtracted from results based on a cycle which did experience a regeneration event. Each pollutant will have a unique set of adjustment factors and additionally, separate factors are commonly developed for transient and steady-state test cycles.

The impact of regeneration events on criteria pollutants varies by pollutant and the aftertreatment device(s) used. In general, the adjustment factor can have a very significant impact on compliance with the NO_X standard. For this reason, heavy-duty vehicle and engine manufacturers are already very well motivated to extend the regeneration frequency to as long an interval as possible and to reduce the regeneration as much as possible. Both of these actions significantly reduce the impact of regeneration on CO_2 emissions and fuel consumption. We do not believe that adding an adjustment factor for infrequent regeneration to the CO_2 or fuel efficiency standards would provide a significant additional motivation for manufacturers to reduce regenerations. Moreover, doing so would add significant and unnecessary uncertainty to our projections of CO_2 and fuel consumption performance in 2014 and beyond. In addressing that uncertainty, the agencies would have to set less stringent fuel efficiency and CO_2 standards for heavy-duty trucks and engines. Therefore, we are not proposing to include an infrequent regeneration adjustment factor for CO_2 or fuel efficiency in this program. The agencies are seeking public commentary on this approach.

Auxiliary Emission Control Devices

As part of the engine control strategy, there may be devices or algorithms which reduce the effectiveness of emission control systems under certain limited circumstances. These strategies are referred to as Auxiliary Emission Control Devices (AECDs). One example would be the reduced use of EGR during cold engine operation. In this case, low coolant temperatures may cause the electronic control unit to reduce EGR flow to improve combustion stability. Once the engine warms up, normal EGR rates are resumed and full NO_X control is achieved.

At the time of certification, manufacturers are required to disclose all AECDs and provide a full explanation of when the AECD is active, which sensor inputs effect AECD activation, and what aspect of the emission control system is affected by the AECD. Manufacturers are further required to attest that their AECDs are not "defeat-devices," which are intentionally targeted at reducing emission control effectiveness.

Several common AECDs disclosed for criteria pollutant certification will have a similarly negative influence on GHG emissions as well. One such example is cold-start enrichment, with provides additional fueling to stabilize combustion shortly after initially starting the engine. From a criteria pollutant perspective, HC emissions can reasonably be expected to increase as a result. From a GHG perspective, the extra fuel does not result in a similar increase in power output and therefore the efficiency of the engine is reduced, which has a negative impact on CO_2 emissions. In addition, there may be AECDs that uniquely reduce GHG emission control effectiveness. Therefore, consistent with today's certification procedures, we are proposing that a comprehensive list of AECDs covering both criteria pollutant, as well as GHG emissions is required at the time of certification.

(ii) EPA's N_2O and CH_4 Standards

In 2009, EPA issued rules requiring manufacturers of mobile-source engines to report the emissions of CO_2, N_2O, and CH_4 (74 FR 56260, October 30, 2009). While CO_2 is commonly measured during certification testing, CH_4 and N_2O are not. CH_4 has traditionally not been included in criteria pollutant regulations because it is a relatively stable molecule and does not contribute significantly to ground-level ozone formation. In addition, N_2O is commonly a byproduct of lean-NO_X aftertreatment systems. Until recently, these types of systems were not widely used on heavy-duty engines and therefore N_2O emissions were insignificant. Both species, while emitted in small quantities relative to

CO_2, have much higher global warming potential than CO_2 and therefore must be considered as part of a comprehensive GHG regulation.

EPA is proposing that CH_4 and N_2O be reported at the time of certification. We are proposing to allow manufacturers to use a compliance statement based on good engineering judgment for the first year of the program in lieu of direct measurement of N_2O. However, beginning in the 2015 model year, the agency is proposing to require the direct measurement of N_2O for certification. The intent of the CH_4 and N_2O standards are more focused on prevention of future increases in these compounds, rather than forcing technologies that reduce these pollutants. As one example, we envision manufacturers satisfying this requirement by continuing to use catalyst designs and formulations that appropriately control N_2O emissions rather than pursuing a catalyst that may increase N_2O. In many ways this becomes a design-based criterion in that the decision of one catalyst over another will effectively determine compliance with N_2O standards over the useful life of the engine. As noted in Section II above, we are not at this time aware of deterioration mechanisms for N_2O and CH_4 that would result in large deterioration factors, but neither do we believe enough is known about these mechanisms to justify proposing assigned factors corresponding to no deterioration. We are therefore asking for comment on this subject.

(c) Additional Compliance Provisions

(i) Warranty & Defect Reporting

Under section 207 of the CAA, engine manufacturers are required to warrant that their product is free from defects that would cause the engine to not comply with emission standards. This warranty must be applicable from when the engine is introduced into commerce through a period generally defined as half of the regulatory useful life (specified in hours and years, whichever comes first). The exact time of this warranty is dependent on the regulatory class of the engine. In addition, components that are considered "high cost" are required to have an extended warranty. Examples of such components would be exhaust aftertreatment devices and electronic control units.

Current warranty provisions in 40 CFR part 86 define the warranty periods and covered components for heavy-duty engines. The current list of components is comprised of any device or system whose failure would result in an increase in criteria pollutant emissions. At this point, we believe this list to be adequate for addressing GHG emissions as well. However, there may be instances where the failure of a component or system may reduce the efficiency of the engine while not increasing criteria pollutant emissions. In this case, the component or system may be inappropriately left off the list of covered components. Therefore we are seeking public comment on what devices and/or systems may need to be added to the warranted component list to adequately address GHG emissions. The following list identifies items commonly defined as critical emission-related components:

- Electronic control units.
- Aftertreatment devices.
- Fuel metering components.
- EGR-System components.
- Crankcase-ventilation valves.
- All components related to charge-air compression and cooling.
- All sensors and actuators associated with any of these components.

When a manufacturer experiences an elevated rate of failure of an emission control device, they are required to submit defect reports to the EPA. These reports will generally have an explanation of what is failing, the rate of failure, and any possible corrections taken by the manufacturer. Based on how successful EPA believes the manufacturer to be in addressing these failures, the manufacturer may need to conduct a product recall. In such an instance, the manufacturer is responsible for contacting all customers with affected units and repairing the defect at no cost to them. We believe this structure for the reporting of criteria pollutant defects, and recalls, is appropriate for components related to complying with GHG emissions as well.

(ii) Maintenance

Engine manufacturers are required to outline maintenance schedules that ensure their product will remain in compliance with emission standards throughout the useful life of the engine. This schedule is required to be submitted as part of the application for certification. Maintenance that is deemed to be critical to ensuring compliance with emission standards is classified as "critical emission-related maintenance." Generally, manufacturers are discouraged from specifying that critical emission-related maintenance is needed within the regulatory useful life of the engine. However, if such maintenance is unavoidable, manufacturers must have a reasonable basis for ensuring it is performed at the correct time. This may be demonstrated through several methods including survey data indicating that at least 80% of engines receive the required maintenance in-use or manufacturers may provide the maintenance at no charge to the user. During durability testing of the engine, manufacturers are required to follow their specified maintenance schedule.

Maintenance relating to components relating to reduction of GHG emissions are not expected to present unique challenges. Therefore, we are not proposing any changes to the provisions for the specification of emission-related maintenance as outlined in 40 CFR part 86.

(2) Proposed Enforcement Provisions

(a) Emission Control Information Labels

Current provisions for engine certification require manufacturers to equip their product with permanent emission control information labels. These labels list important characteristics, parameters, and specifications related to the emissions performance of the engine. These include, but are not limited to, the manufacturer, model, displacement, emission control systems, and tune-up specifications. In addition, this label also provides a means for identifying the engine family name, which can then be referenced back to certification documents. This label provides essential information for field inspectors to determine that an engine is in fact in the certified configuration.

We do not anticipate any major changes needing to be made to emission control information labels as a result of new GHG standards and a single label is appropriate for both criteria pollutant and GHG emissions purposes. Perhaps the most significant addition would be the inclusion of Family Certification Levels or Family Emission Limits for GHG pollutants, if the manufacturer is participating in averaging, banking, and trading. In addition, the label will need to indicate whether the engine is certified for use in vocational vehicles, tractors, or both.

(b) In-Use Standards

In-use testing of engines provides a number of benefits for ensuring useful life compliance. In addition to verifying compliance with emission standards at any given point in the useful life, it can be used along with manufacturer defect reporting, to indentify components failing at a higher than normal rate. In this case, a product recall or other service campaign can be initiated and the problem can be rectified. Another key benefit of in-use testing is the discouragement of control strategies

catered to the certification test cycles. In the past, engine manufacturers were found to be producing engines that performed acceptably over the certification test cycle, while changing to alternate operating strategies "off-cycle" which caused increases in criteria pollutant emissions. While these strategies are clearly considered defeat devices, in-use testing provides a meaningful way of ensuring that such strategies are not active under normal engine operation.

Currently, manufacturers of certified heavy-duty engines are required to conduct in-use testing programs. The intent of these programs is to ensure that their products are continuing to meet criteria pollutant emission standards at various points within the useful life of the engine. Since initial certification is based on engine dynamometer testing, and removing in-use engines from their respective vehicles is often impractical, a unique testing procedure was developed. This includes using portable emission measurement systems (PEMS) and testing the engine over typical in-situ drive routes rather than a prescribed test cycle. To assess compliance, emission results from a well defined area of the speed/torque map of the engine, known as the NTE zone, are compared to the emission standards. To account for potential increases in measurement and operational variability, certain allowances are applied to the standard which results in the standard for NTE measurements (NTE limit) to be at or above the duty cycle emission standards.

In addition, EPA also conducts an annual in-use testing program of heavy-duty engines. Testing procured vehicles with specific engines over well-defined drive routes using a constant trailer load allows for a consistent comparison of in-use emissions performance. If potential problems are identified in-situ, the engine may be removed from the vehicle and tested using an engine dynamometer over the certification test cycles. If deficiencies are confirmed the agency will either work with the manufacturer to take corrective action or proceed with enforcement action against the manufacturer.

The GHG reporting rule requires manufacturers to submit CO_2 data from all engine testing (beginning in the 2011 model year), which we believe is equally applicable to in-use measurements. Methods of CO_2 in-situ measurement are well established and most, if not all, PEMS devices measure and record CO_2 along with criteria pollutants. CH_4 and N_2O present in-situ measurement challenges that may be impractical to overcome for this testing, and therefore it is not recommended that they be included in in-use testing requirements at this time. While measurement of CO_2 may be practical and important, implementing an NTE emission standard for CO_2 is challenging. As previously discussed, CO_2 emissions are highly dependent on the drive cycle of the vehicle, which does not lend itself well to the NTE-based test procedure. Therefore, we propose that manufacturers be required to submit CO_2 data from in-use testing, in both g/bhp-hr and g/ton-mile, but these data will be used for reference purposes only (there would be no NTE limit/standard for CO_2).

(3) Other Certification Provisions

(a) Carryover/Carry Across Certification Test Data

EPA's current certification program for heavy-duty engines allows manufacturers to carry certification test data over and across certification testing from one model year to the next, when no significant changes to models are made. EPA is proposing to also apply this policy to CO_2, N_2O and CH_4 certification test data.

(b) Certification Fees

The CAA allows EPA to collect fees to cover the costs of issuing certificates of conformity for the classes of engines covered by this proposal. On May 11, 2004, EPA updated its fees regulation based on a study of the costs associated with its motor vehicle and engine compliance program (69 FR 51402). At the time that cost study was conducted, the current rulemaking was not considered. At this time the extent of any added costs to EPA as a result of this proposal is not known. EPA will assess its compliance testing and other activities associated with the rule and may amend its fees regulations in the future to include any warranted new costs.

(c) Onboard Diagnostics

Beginning in the 2013 model year, manufacturers will be required to equip heavy-duty engines with on-board diagnostic systems. These systems monitor the activity of the emission control system and issue alerts when faults are detected. These diagnostic systems are currently being developed based around components and systems that influence criteria pollutant emissions. Consistent with the light-duty vehicle GHG rule, we believe that monitoring of these components and systems for criteria pollutant emissions will have an equally beneficial effect on CO_2 emissions. Therefore, we do not anticipate the necessity of having any unique onboard diagnostic provisions for heavy-duty GHG emissions. We are seeking comment on this topic, however.

(d) Applicability of Current High Altitude Provisions to Greenhouse Gases

EPA is proposing that engines covered by this proposal must meet CO_2, N_2O and CH_4 standards at elevated altitudes. The CAA requires emission standards under section 202 for heavy-duty engines to apply at all altitudes. EPA does not expect engine CO_2, CH_4, or N_2O emissions to be significantly different at high altitudes based on engine calibrations commonly used at all altitudes. Therefore, EPA proposes that it retain its current high altitude regulations so manufacturers will not normally be required to submit engine CO_2 test data for high altitude. Instead, they will be required to submit an engineering evaluation indicating that common calibration approaches will be utilized at high altitude. Any deviation in emission control practices employed only at altitude will need to be included in the AECD descriptions submitted by manufacturers at certification. In addition, any AECD specific to high altitude will be required to include emissions data to allow EPA evaluate and quantify any emission impact and validity of the AECD.

(e) Emission-Related Installation Instructions

Engine manufacturers are currently required to provide detailed installation instructions to vehicle manufacturers. These instructions outline how to properly install the engine, aftertreatment, and other supporting systems, such that the engine will operate in its certified configuration. At the time of certification, manufacturers may be required to submit these instructions to EPA to verify that sufficient detail has been provided to the vehicle manufacturer.

We do not anticipate any major changes to this documentation as a result of regulating GHG emissions. The most significant impact will be the addition of language prohibiting vehicle manufacturers from installing engines into vehicle categories in which they are not certified for. An example would be a tractor manufacturer installing an engine certified for only vocational vehicle use. Explicit instructions on behalf of the engine manufacturer that such acts are prohibited will serve as sufficient notice to the vehicle manufacturers and failure to follow

such instructions will in the vehicle manufacturer being in non-compliance.

(f) Alternate CO_2 Emission and Fuel Consumption Standards

Under the proposed rule, engine manufacturers have the option of certifying to CO_2 emission and fuel consumption standards that are 5 percent below a baseline value established from their 2011 model-year products. If a manufacturer elects to participate in this program they must indicate this on their certification application. In addition, sufficient details must be submitted regarding the baseline engine such that the agency can verify that the correct optional CO_2 emission and fuel consumption standards have been calculated. This data will need to include the engine family name of the baseline engine, so references to the original certification application can be made, as well as test data showing the CO_2 emissions and fuel consumption of the baseline engine.

D. Class 7 and 8 Combination Tractors

(1) Proposed Compliance Approach

In addition to requiring engine manufacturers to certify their engines, manufacturers of Class 7 and 8 combination tractors must also certify that their vehicles meet the proposed CO_2 emission and fuel consumption standards. This vehicle certification will ensure that efforts beyond just engine efficiency improvements are undertaken to reduce GHG emissions and fuel consumption. Some examples include aerodynamic improvements, rolling resistance reduction, idle reduction technologies, and vehicle speed limiting systems.

Unlike engine certification however, this certification would be based on a load-specific basis (g/ton-mile or gal/1,000 ton-mile as opposed to work-based, or g/bhp-hr). This would take into account the anticipated vehicle loading that would be experienced in use and the associated affects on fuel consumption and CO_2 emissions. Vehicle manufacturers would also be required to warrant their products against emission defects, and demonstrate that a service network is in place to correct any such conditions. The vehicle manufacturer also bears responsibility in the event that an emission-related recall is necessary.

(a) Certification Process

In order to obtain a certificate of conformity for the tractor, vehicle manufacturers would complete a compliance demonstration, showing that their product meets emission standards as well as other regulatory requirements. For purposes of this demonstration, vehicles with similar emission characteristics throughout their useful life are grouped together in test groups, similar to EPA's light-duty emissions certification program. Examples of characteristics that would define a test group for heavy-duty vehicles are wheel and tire package, aerodynamic profile, tire rolling resistance, and engine model. Under this system, the worst-case vehicle would be selected based on having the highest fuel consumption, and all other models within the family are assumed to have emissions and fuel consumption at or below the parent model and therefore in compliance with CO_2 emission and fuel consumption standards. Any vehicle within the family can be subject to selective enforcement auditing in addition to confirmatory or other administrator testing.

We anticipate test groups for Class 7 and 8 combination tractors to utilize the standardized 12-digit naming convention, as outlined in the engine certification section of this chapter. As with engines, each certifying vehicle manufacturer will have a unique three digit code assigned to them. Currently, there is no 5th digit (industry sector) code for this class of vehicles, for which we propose to use the next available character, "2." Since we are proposing that the engine is one of several test-group defining features, we still believe it is appropriate to include engine displacement in the family name. If the test-group consists includes multiple engine models with varying displacements, the largest would be specified in the test-group name, consistent with current practices. The remaining characters would remain available for California ARB and/or manufacturer use, such that the result is a unique test-group name.

Class 7 and 8 tractors share several common traits, such as the trailer attachment provisions, number of wheels, and general construction. However, further inspection reveals key differences related to GHG emissions. Payloads hauled by Class 7 tractors are significantly less than Class 8 tractors. In addition, Class 8 vehicles may have provisions for hoteling ("sleeper cabs"), which results in an increase in size as well as the addition of comfort features like power and climate control for use while the truck is parked. Both segments may have various degrees of roof fairing to provide better aerodynamic matching to the trailer being pulled. This is a feature which can help reduce CO_2 emissions significantly when properly matched to the trailer, but can also increase CO_2 emissions if improperly matched. Based on these differences, it is reasonable to expect differences in CO_2 emissions, and therefore these properties form the basis for the proposed combination tractor regulatory subcategories.

The various combinations of payload, cab size, and roof profile result in nine proposed regulatory subcategories for Class 7 and 8 trucks. These include Class 7 (day cabs), Class 8 (day cabs), and Class 8 (sleeper cabs), each with high, mid, and low roof profiles. The Class 7 tractors would have a regulatory useful life of 185,000 miles while Class 8 tractors would have a regulatory life of 435,000 miles and must meet CO_2 emission standards throughout this period.

(b) Demonstrating Compliance With the Proposed Standards

(i) CO_2 and Fuel Consumption Standards

Consistent with existing certification processes for light-duty vehicles and heavy-duty pickups and vans, emissions testing of the complete vehicle would be the preferred method for demonstrating compliance with vehicle emission standards. However, vehicle-level certification is new to the heavy-duty vehicle segment above 14,000 lb. Therefore, most vehicle manufacturers are not adequately equipped to conduct vehicle-level emission testing for Class 7 and 8 combination tractors. Chassis dynamometers, emission sampling equipment, and staff engineering support are a few of the factors that would add significant cost to vehicle development in a relatively short amount of time, which may make the prospect of vehicle testing quite onerous. In addition to the infrastructure and testing facilities the industry would need to add, the agencies have not completed the extensive work ultimately desirable for us to propose new test procedures and standards based on the use of a chassis test procedure. Moreover, as explained in Section II.C, because of the enormous numbers of truck configurations that have an impact on fuel consumption, we do not believe that it would be reasonable, at least initially, to require testing of many combinations of tractor model configurations on a chassis dynamometer. Recognizing these constraints related to time, staffing, and capital, we are proposing only a vehicle simulation model option for demonstrating compliance at the time of certification. However, we do believe that a chassis based test procedure as

currently utilized for vehicles below 14,000 pounds could be a better long-term approach to regulate all heavy-duty vehicles and we are seeking comment on a chassis based approach.

Model

Vehicle modeling will be conducted using the agencies' simulation model, GEM, which is described in detail in Chapter 4 of the draft RIA. Basically, this model functions by defining a vehicle configuration and then exercises the model over various drive cycles. Several initialization files are needed to define a vehicle, which include mechanical attributes, control algorithms, and driver inputs. The majority of these inputs will be predetermined by EPA and NHTSA for the purposes of vehicle certification. The net results from GEM are CO_2 emissions and fuel consumption values over the proposed drive cycles. The CO_2 emission result will be used for demonstrating compliance with vehicle CO_2 standards while the fuel consumption result will be used for demonstrating compliance with the fuel consumption standards.

The vehicle manufacturer will be responsible for entering aerodynamic properties of the vehicle, the weight reduction, tire properties, idle reduction systems, and vehicle speed limiting systems. For GEM inputs relating to weight reduction and aerodynamics, the agencies are proposing the use of lookup tables based on typical performance levels across the industry. These lookup tables do not have data directly related to CO_2, but rather provide the appropriate coefficients for the model to assess CO_2- and fuel consumption-related performance. The agencies will enter the appropriate engine map reflecting use of a certified engine in the truck (and will enter the same value even if an engine family is certified to the temporary percent reduction alternative standard, in order to evaluate vehicle performance independently of engine performance.) We believe this approach reduces the testing burden placed upon manufacturers, yet adequately assesses improvements associated with select technologies. The model will be publicly available and will be found on EPA's Web site.

The agency reserves the right to independently evaluate the inputs to the model via Administrator testing to validate those model inputs. The agency also reserves the right to evaluate vehicle performance using the inputs to the model provided by the manufacturer to confirm the performance of the system using GEM. This could include generating emissions results using the GEM and the inputs as provided by the manufacturer based on the agency's own runs. This could also include conducting comparable testing to verify the inputs provided by the manufacturer. In the event of such testing or evaluation, the Administrator's results become the official certification results. The exception being that the manufacturer may continue to use their data as initially submitted, provided it represents a worst-case condition over the Administrator's results.

To better facilitate the entry of only the appropriate parameters, the agencies will provide a graphical user interface in the model for entering data specific to each vehicle. This graphical user interface allows the end user to avoid interacting directly with the model and any associated coding. It is expected that this template will be submitted to EPA as part of the certification process for each certified vehicle configuration.

For certification, the model will exercise the vehicle over three test cycles; one transient and two steady-state. For the transient test, we are proposing to use the heavy-heavy-duty diesel truck (HHDDT) transient test cycle, which was developed by the California Air Resources Board and West Virginia University to evaluate heavy-duty vehicles. The transient mode simulates urban, start-stop driving, featuring 1.8 stops per mile over the 2.9 mile duration. The two steady state test points are reflective of the tendency for some of these vehicles to operate for extended periods at highway speeds. Based on data from the EPA's MOVES database, and common highway speed limits, we are proposing these two points to be 55 and 65 mph.

The model will predict the total emissions results from each segment using the unique properties entered for each vehicle. These results are then normalized to the payload and distance covered, so as to yield a gram/ton-mile result, as well as a fuel consumption (gal/1,000 ton-mile) result for each test cycle. As with engine and vehicle testing, certification will be based on a parent rating for the test group, representing the worst-case fuel consumption and CO_2 emissions. However, vehicle manufacturers will also have the opportunity to model sub-configurations to determine any benefits that are available on only a select number of vehicles within a test group.

The results from all three tests are then combined using weighting factors, which reflect typical usage patterns. The typical usage characteristics of Class 7 and 8 tractors with day cabs differ significantly from Class 8 tractors with sleeper cabs. The trucks with day cabs tend to operate in more urban areas, have a limited travel range, and tend to return to a common depot at the end of each shift. Class 8 sleeper cabs, however, are typically used for long distance trips which consist of mostly highway driving in an effort to cover the highest mileage in the shortest time. For these reasons, we propose that the cycles are weighted differently for these two groups of vehicles. For Class 7 and 8 trucks with day cabs, we propose weights of 64%, 17%, and 19% (65 mph, 55 mph, and transient, resp.). For Class 8 with sleeper cabs, the high speed cruise tendency results in proposed weights of 86%, 9%, and 5% (65 mph, 55 mph, and transient, respectively). These final, weighted emission results are compared to the emission standard to assess compliance.

Durability Testing

As with engine certification, a manufacturer must provide evidence of compliance through the regulatory useful life of the vehicle. Factors influencing vehicle-level GHG performance over the life of the vehicle fall into two basic categories: Vehicle attributes and maintenance items. Each category merits different treatment from the perspective of assessing useful life compliance, as each has varying degrees of manufacturer versus owner/operator responsibility.

The category of vehicle attributes generally refers to aerodynamic features, such as fairings, side-skirts, air dams, air foils, *etc,* which are installed by the manufacturer to reduce aerodynamic drag on the vehicle. These features have a significant impact on GHG emissions and their emission reduction properties are assessed early in the useful life (at the time of certification). These features are expected to last the full life of the vehicle without becoming detached, cracked/broken, misaligned, or otherwise not in the original state. In the absence of the aforementioned failure modes, the performance of these features is not expected to degrade over time and the benefit to reducing GHG emissions is expected to last for the life of the vehicle with no special maintenance requirements. To assess useful life compliance, we recommend a design-based approach which would ensure that the manufacturer has robustly designed these features so they can reasonably be expected to last the useful life of the vehicle.

The category of maintenance items refers to items that are replaced, renewed, cleaned, inspected, or otherwise addressed in the preventative maintenance schedule specified by the

vehicle manufacturer. Items that have a direct influence on GHG emissions are primarily lubricants. Synthetic engine oil may be used by vehicle manufacturers to reduce the GHG emissions of their vehicles. Manufacturers may specify that these fluids be changed throughout the useful life of the vehicle. If this is the case, the manufacturer should have a reasonable basis that the owner/operator will use fluids having the same properties. This may be accomplished by requiring (in service documentation, labeling, *etc*) that only these fluids can be used as replacements.

If the vehicle remains in its original certified condition throughout its useful life, it is not believed that GHG emissions would increase as a result of service accumulation. This is based on the assumption that as components wear, the rolling resistance due to friction is likely to stay the same or decrease. With all other components remaining equal (tires, aerodynamics, *etc*), the overall drag force would stay the same or decrease, thus not significantly changing GHG emissions at the end of useful life. It is important to remember however, that this vehicle assessment does not take into account any engine-related wear affects, which may in fact increase GHG emissions over time.

For the reasons explained above, we believe that for the first phase of this program, it is most important to ensure that the vehicle remain in its certified configuration throughout the useful life. This can most effectively be accomplished through engineering analysis and specific maintenance instructions provided by the vehicle manufacturer. The vehicle manufacturer would be primarily responsible for providing engineering analysis demonstrating that vehicle attributes will last for the full life of the vehicle. In addition they will be required to submit the recommended maintenance schedule (and other service related documentation), showing that fluids meeting original equipment properties are required as replacements.

(ii) EPA's Air Conditioning Leakage Standards

Heavy-duty vehicle air conditioning systems contribute to GHG emissions in two ways. First, operation of the air conditioning unit places an accessory load on the engine, which increases fuel consumption. Second, most modern refrigerants are HFC-based, which have significant global warming potential (GWP = 1430). For heavy-duty vehicles, the load added by the air conditioning system is comparatively small compared to other power requirements of the vehicle. Therefore, we are not targeting any GHG reduction due to decreased air conditioning usage or higher efficiency A/C units for this proposal. However, refrigerant leakage, even in very small quantities, can have significant adverse effects on GHG emissions.

Refrigerant leakage is a concern for heavy-duty vehicles, similar to light-duty vehicles. To address this, EPA is proposing a design-based standard for reducing refrigerant leakage from heavy-duty vehicles. This standard is based off using the best practices for material selection and interface sealing, as outlined in SAE publication J2727. Based on design criteria in this publication, a leakage "score" can be assessed and an estimated annual leak rate can be made for the A/C system based on the refrigerant capacity.

At the time of certification, manufacturers would be required to outline the design of their system, including specifying materials and construction methods. They will also need to supply the leakage score developed using SAE J2727 and the refrigerant volume of their system to determine the leakage rate per year. If the certifying manufacturer does not complete installation of the air conditioning unit, detailed instructions must be provided to the final installer which ensures that the A/C system is assembled to meet the low-leakage standards. These instructions will also need to be provided at the time of certification, and manufacturers must retain all records relating to auditing of the final assembler.

(c) In-Use Standards

As previously addressed, the drive-cycle dependence of CO_2 emissions makes NTE-based in-use testing impractical. In addition, we believe the reporting of CO_2 data from the criteria pollutant in-use testing program will be helpful in future rulemaking efforts. For these reasons, we are not proposing an NTE-based in-use testing program for Class 7 and 8 combination tractors during this proposal.

In the absence of NTE-based in-use testing, provisions are necessary for verifying that production vehicles are in the certified configuration, and remain so throughout the useful life. Perhaps the easiest method for doing this is to verify the presence of installed emission-related components. This would basically consist of a vehicle audit against what is claimed in the certification application. This includes verifying the presence of aerodynamic components, such as fairings, side-skirts, and gap-reducers. In addition, the presence of idle-reduction and speed limiting devices would be verified. The presence of LRR tires could be verified at the point of initial sale; however verification at other points throughout the useful life would be non-enforceable for the reasons mentioned previously.

The category of wear items primarily relates to tires. It is expected that vehicle manufacturers will equip their trucks with LRR tires, as they may provide a substantial reduction in GHG emissions. The tire replacement intervals for this class of vehicle is normally in the range of 50,000 to 100,000 miles, which means the owner/operator will be replacing the tires at several points within the useful life of the vehicle. We believe that as LRR tires become more common on new equipment, the aftermarket prices of these tires will also decrease. Along with decreasing tire prices, the fuel savings realized through use of LRR tires will ideally provide enough incentive for owner/operators to continue purchasing these tires. The inventory modeling in this proposal reflects the continued use of LRR tires through the life of the vehicle. We seek comment on this and all aspects of our inventory modeling.

(2) Proposed Enforcement Provisions

As identified above, a significant amount of vehicle-level GHG reduction is anticipated to come from the use of components specifically designed to reduce GHG emissions. Examples of such components include LRR tires, aerodynamic fairings, idle reduction systems, and vehicle speed limiters. At the time of certification, vehicle manufacturers will specify which components will be on their vehicle when introduced into commerce. Based on this list of components reported to EPA the GHG performance of the vehicle will be assessed, typically through modeling, and a certificate of conformity may be issued. As described in the in-use testing section, it is important to have the ability to determine if the vehicle is in the certified configuration both at the time of sale, as well as at any point within the useful life.

Perhaps the most practical and basic method of verifying that a vehicle is in its certified configuration is through a vehicle emissions control information label, similar to that used for engines and light-duty vehicles. This label would list identifying features of the vehicle, including model year, vehicle model, certified engine family, vehicle manufacturer, test group, and GHG emissions category. In addition, this label would list emission-related

components that an inspector could reference in the event of a field inspection. Possible examples may include LRR (for LRR tires), ARF (aerodynamic roof fairing), and ARM (aerodynamic rearview mirrors). With this information, inspectors could verify the presence and condition of attributes listed as part of the certified configuration.

Similarly, on current emission control information labels, manufacturers list abbreviations, which are defined in SAE J1930, for each emission control device. Examples include three-way catalyst (TWC), electronic control (EC), and heated oxygen sensor (HO_2S). Unfortunately we are not aware of a similar, existing list of vehicle emission control devices and features likely to be used on heavy-duty vehicles. At this point, it is also difficult to develop such a list due to the wide array of devices and features vehicle manufacturers may use in the future. Therefore, we are currently seeking comment on how to best define a list of emission control devices and features for use in this vehicle GHG certification label.

At the time of certification, manufacturers will be required to submit an example of their vehicle emission control label such that EPA can verify that all critical elements are present. Such elements include the vehicle family/test group name, emission control system identifiers described above, regulatory sub-category of the vehicle, and Family Emission Limits to which the vehicle is certified to. In addition to the label, manufacturers will also need to describe where the unique vehicle identification number and date of production can be found on the vehicle.

(3) Other Certification Provisions

(a) Warranty

Section 207 of the CAA requires manufacturers to warrant their products to be free from defects that would otherwise cause non-compliance with emission standards. In addition, this warranty must ensure that the vehicle remains in this configuration throughout its useful life. For purposes of this regulation, vehicle manufacturers must warrant all components installed which act to reduce CO_2 emissions at the time of initial sale. This includes all aerodynamic features, tires, idle reduction systems, speed limiting system, and other equipment added to reduce CO_2 emissions. In addition, the manufacturer must ensure these components and systems remain functional for the useful life of the vehicle. The exception being tires, which are only required to be warranted for the first life of the tires (vehicle manufacturers are not expected to cover replacement tires). For aerodynamic features, such as fairings or side-skirts, the manufacturer must warrant against failures which are not the result operator damage. However, these components should be designed to withstand possible damage from normal driving, which may include stone impingement and other minor impact with small debris.

The vehicle manufacturer is also required to warrant the A/C system for the useful life of the vehicle against design or manufacturing defects causing refrigerant leakage in excess of the standard.

At the time of certification, manufacturers must supply a copy of the warranty statement that will be supplied to the end customer. This document should outline what is covered under the GHG emissions related warranty as well as the length of coverage. Customers must also have clear access to the terms of the warranty, the repair network, and the process for obtaining warranty service.

(b) Maintenance

Vehicle manufacturers are required to outline maintenance schedules that ensure their product will remain in compliance with emission standards throughout the useful life of the vehicle. For heavy-duty vehicles, such maintenance may include fluid/lubricant service, fairing adjustments, or service to the GHG emission control system. This schedule is required to be submitted as part of the application for certification. Maintenance that is deemed to be critical to ensuring compliance with emission standards is classified as "critical emission-related maintenance." Generally, manufacturers are discouraged from specifying that critical emission-related maintenance is needed within the regulatory useful life of the engine. However, if such maintenance is unavoidable, manufacturers must have a reasonable basis for ensuring it is performed at the correct time. This may be demonstrated through several methods including survey data indicating that at least 80% of engines receive the required maintenance in-use or manufacturers may provide the maintenance at no charge to the user.

(c) Certification Fees

Similar to engine certification, the agency will assess certification fees for heavy-duty vehicles. The proceeds from these fees are used to fund the compliance and certification activities related to GHG regulation for this regulatory category. In addition to the certification process, other activities funded by certification fees include EPA-administered in-use testing, selective enforcement audits, and confirmatory testing. At this point, the exact costs associated with the heavy-duty vehicle GHG compliance are not well known. EPA will assess its compliance program associated with this proposal and assess the appropriate level of fees. We anticipate that fees will be applied based on test groups, following the light-duty vehicle approach.

(d) Requirements For Conducting Aerodynamic Assessment Using Allowed Methods

The requirements for conducting aerodynamic assessment using allowed methods includes two key components: Adherence to a minimum set of standardized criteria for each allowed method and submittal of aerodynamic values and supporting information on an annual basis for the purposes of certifying vehicles to a particular aerodynamic bin as discussed in the Section II.

First, we are proposing requirements for conducting each of the allowed aerodynamic assessment methods. We will cite approved and published standards and practices, where feasible, but will attempt to propose criteria where none exists or where more current research indicates otherwise. We are requesting comment on the proposed requirements for each allowed method, standards and practices that should be used, and any unique criteria that we are proposing. A description of the requirements for each method is discussed later in this section. The manufacturer would be required to provide information showing that they meet these requirements and attest to the accuracy of the information provided.

Second, to ensure continued compliance, manufacturers would be required to provide a minimum set of information on an annual basis at certification time (1) to support continued use of an aerodynamic assessment method and (2) to assign an aerodynamic value based on the applicable aerodynamic bins. The information supplied to the agencies should be based on an approved aerodynamic assessment method and adhere to the requirements for conducting aerodynamic assessment mentioned above.

Regardless of the method, all testing should be performed with a tractor-trailer combination to mimic real world

usage. Accordingly, it is important to match the type of tractor with the correct trailer. Although, as discussed elsewhere in this proposal, the correct tractor-trailer combination is not always present or tractor-only operation may occur, the majority of operation in the real world involves correctly matched tractor-trailer combinations and we will attempt to reflect that here. Therefore, the following guidelines should be used when performing an aerodynamic assessment:

- For a Class 7 and 8 tractor truck with a low roof, a standard flatbed trailer must be used;
- For a Class 7 and 8 tractor truck with a mid roof, a standard tanker trailer must be used;
- For a Class 7 and 8 tractor truck with a high roof, a standard box trailer must be used.

The definitions of each standard trailer are proposed in § 1037.501(g). This ensures consistency and continuity in the aerodynamic assessments, and maintains the overlap with real world operation.

Standardized Criteria for Aerodynamic Assessment Methods

(i) Coastdown Procedure Requirements

For coastdown testing, the test runs should be conducted in a manner consistent with SAE J2263 with additional modifications as described in the 40 CFR part 1066, subpart C, and in Chapter 3 of the draft RIA using the mixed model analysis method. The agencies seek comment on the use of these protocols and the modifications that are described.

Since the coastdown procedure is the primary aerodynamic assessment method, the manufacturer would be required to conduct the coastdown procedure according to the requirements in this proposal and supply the following to the agency for approval:

- Facility information: Name and location, description and/or background/history, equipment and capability, track and facility elevation, and track size/length;
- Test conditions for each test result including date and time, wind speed and direction, ambient temperature and humidity, vehicle speed, driving distance, manufacturer name, test vehicle/model type, model year, applicable model engine family, tire type and rolling resistance, test weight and driver name(s) and/or ID(s);
- Average Cd result as calculated in 40 CFR 1037.520(b) from valid tests including, at a minimum, ten valid test results, with no maximum number, standard deviation, calculated error and error bands, and total number of tests, including number of voided or invalid tests.

(ii) Wind Tunnel Testing Requirements

Wind tunnel testing would conform to the following procedures and modifications, where applicable, including:

- SAE J1252, "SAE WIND TUNNEL TEST PROCEDURE FOR TRUCKS AND BUSES" (July 1981) except that article 5.2 that specifies a minimum Reynolds number of 0.7×10^6 is not included and is superseded, for the purposes of this rulemaking, by a minimum Reynolds number of 1.0×10^6 and, for reduced-scale wind tunnel testing, a one-eighth (⅛th) or larger scale model of a heavy-duty tractor and trailer must be used and of sufficient design to simulate airflow through the radiator inlet grill;
- J1594, "VEHICLE AERODYNAMICS TERMINOLOGY" (December 1994); and
- J2071, "AERODYNAMIC TESTING OF ROAD VEHICLES—OPEN THROAT WIND TUNNEL ADJUSTMENT" (June 1994).

In addition, the wind tunnel used for aerodynamic assessment would be a recognized facility by the Subsonic Aerodynamic Testing Association. The agencies seek comment on the use of these protocols and the modifications described and the need for membership in this testing association.

For wind tunnel testing, we are proposing that manufacturers perform wind tunnel testing and the coastdown procedure, according to the requirements proposed in this notice, on the same tractor model and provide the results for both methods. The wind tunnel tests should be conducted at a zero yaw angle and, if so equipped, utilizing the moving/rolling floor (*i.e.,* the moving/rolling floor should be on during the test as opposed to static) for comparison to the coastdown procedure, which corrects to a zero yaw angle for the oncoming wind. The manufacturer would be required to supply the following:

- Facility information: Name and location, description and background/history, layout, wind tunnel type, diagram of wind tunnel layout, structural and material construction;
- Wind tunnel design details: Corner turning vane type and material, air settling, mesh screen specification, air straightening method, tunnel volume, surface area, average duct area, and circuit length;
- Wind tunnel flow quality: Temperature control and uniformity, airflow quality, minimum airflow velocity, flow uniformity, angularity and stability, static pressure variation, turbulence intensity, airflow acceleration and deceleration times, test duration flow quality, and overall airflow quality achievement;
- Test/Working section information: Test section type (*e.g.,* open, closed, adaptive wall) and shape (*e.g.,* circular, square, oval), length, contraction ratio, maximum air velocity, maximum dynamic pressure, nozzle width and height, plenum dimensions and net volume, maximum allowed model scale, maximum model height above road, strut movement rate (if applicable), model support, primary boundary layer slot, boundary layer elimination method and photos and diagrams of the test section;
- Fan section description: Fan type, diameter, power, maximum rotational speed, maximum tip speed, support type, mechanical drive, sectional total weight;
- Data acquisition and control (where applicable): Acquisition type, motor control, tunnel control, model balance, model pressure measurement, wheel drag balances, wing/body panel balances, and model exhaust simulation;
- Moving ground plane or Rolling Road (if applicable): Construction and material, yaw table and range, moving ground length and width, belt type, maximum belt speed, belt suction mechanism, platen instrumentation, temperature control, and steering; and
- Facility correction factors and purpose.

(iii) CFD Requirements

Currently, there is no existing standard, protocol or methodology governing the use of CFD. Therefore, we are coupling the use of CFD with empirical measurements from coastdown and wind tunnel procedures. However, we think it is important to require a minimum set of criteria that all CFD analysis should follow for the purpose of these rules and to produce a consistent set of results to maintain compliance. Since there are primarily two-types of CFD software code, Navier-Stokes based and Lattice-Boltzman based, we are outlining two sets of criteria to address both types. Therefore, the agencies propose that manufacturers use commercially-available CFD software code with a turbulence model enabled and Navier-Stokes formula solver, where applicable. Further details and criteria for each type of commercially-available CFD software code follows immediately and general criteria for all CFD analysis are subsequently described.

For Navier-Stokes based CFD code, manufacturers must perform an

unstructured, time-accurate analysis using a mesh grid size with total surface elements greater than or equal to 5 million cells/nodes, a near-vehicle cell size of less than or equal to 10 millimeters (mm), a near-wall cell size of less than or equal to 1mm,[203] and a volume element size of less than or equal to 5 mm; using hexagonal or polyhedral mesh cell shapes. All Navier-Stokes based CFD analysis should be performed with a k-epsilon (k-ε) or a shear stress transport k-omega (SST k-ω) turbulence model and mesh deformation enabled with boundary layer resolution of +/− 95%. Finally, Navier-Stokes based CFD analysis for the purposes of determining the Cd should be performed once result convergence is achieved and manufacturers should be able to demonstrate convergence by supplying multiple, successive convergence values.

For Lattice-Boltzman based CFD code, the agencies propose that manufacturers perform an unstructured, time-accurate analysis using a mesh grid size with total surface elements greater than or equal to 5 million cells/nodes, a near-vehicle cell size of less than or equal to 10 millimeters (mm), a near-wall cell size of less than or equal to 1mm, and a volume element size of less than or equal to 5 mm; using cubic volume elements and triangle and/or quadrilateral surface elements.

Finally, in general for CFD, all analysis should be conducted assuming zero yaw angle for comparison to the coastdown test procedure. In addition, the ambient conditions assumed for the CFD analysis should be defined according to the environmental conditions that the manufacturer is seeking to simulate. For simulating a wind tunnel test, the CFD analysis should accurately model that wind tunnel and assume a wind tunnel blockage ratio consistent with SAE J1252 or that matches the selected wind tunnel, whichever is lower. For simulation of open road conditions similar to that experienced during coastdown test procedures, the CFD analysis should assume a blockage ratio of less than or equal 0.2%.

The agencies seek comment on the use of CFD commercial or open source code and the criteria set forth above for conducting the analysis.

Finally, in general for each of the allowed aerodynamic assessment methods, we are requesting comment on the list of information that must be provided for facilities and test conditions.

Annual Testing and Data Submittal for Aerodynamic Assessment

Once the manufacturer has performed acceptance demonstration, the aerodynamic assessment can be used to generate Cd values for all vehicle models the manufacturer plans to certify and introduce into commerce. For each model, the manufacturer would supply a predicted Cd based for each of the other models in the manufacturer's fleet and the other conditions used to determine the base Cd. This reduces burden on the manufacturer to perform aerodynamic assessment but provides data for all the models in a manufacturer's fleet. If a manufacturer has previously performed aerodynamic assessment on the other models, the manufacturer may submit an experimental Cd in lieu of a predicted Cd.

The aerodynamic assessment data would be used by the manufacturer who would input the Cd value from the look-up table, based on the results from the aerodynamic assessment, into GEM and determine a GHG emissions and fuel consumption level.

Since the agency may input the data into the model, manufacturers would provide the information described above for acceptance demonstration for the purposes of annual certification. In addition, the manufacturer would supply manufacturer fleet information to the agency for annual certification purposes along with the acceptance demonstration parameters: manufacturer name, model year, model line (if different than manufacturer name), model name, engine family, engine displacement, transmission name and type, number of axles, axle ratio, vehicle dimensions, including frontal area, predicted or measured coefficient of drag, assumptions used in developing the predicted or measured Cd. justification for carry-across of aerodynamic assessment data, photos of the model line-up, if available, and model applications and usage options.

We are requesting comment on the annual testing requirements and the burden on manufacturers to satisfy the requirements.

(e) Aerodynamic Assessment Validation and Compliance

Although the procedures above should ensure accuracy in the aerodynamic assessment, it is always beneficial to perform confirmation or validation post-certification. The agencies would like to ensure a level playing field among the manufacturers and the different aerodynamic assessment methods. The agencies hope to finalize a method for doing so after working through the comments from all stakeholders in a collaborative manner.

The agencies envision that a program for aerodynamic assessment could consist of two parts: (1) Validation of the manufacturer source data by performing an audit of the manufacturer's aerodynamic assessment methods and tools as described in this proposal using a reference truck and/or (2) vehicle confirmatory evaluation using a vehicle recruited from the in-use fleet and performing the aerodynamic assessment discussed in this proposal, either using the manufacturer's facility and tools or using the agency's facility and tools. We are seeking comment on the all aspects of an aerodynamic assessment validation and compliance.

E. Class 2b–8 Vocational Vehicles

(1) Proposed Compliance Approach

Like Class 7 and 8 combination tractors, heavy-duty vocational vehicles would be required to have both engine and complete vehicle certificates of conformity. As discussed in the engine certification section, engines that will be used in vocational vehicles would need to be certified using the Heavy-duty FTP cycle for GHG pollutants and show compliance through the useful life of the engine. This certification is in addition to the current requirements for obtaining a certificate of conformity for criteria pollutant emissions.

For this proposal, the majority of the GHG reduction for vocational vehicles is expected to come from the use of LRR tires as well as increased utilization of hybrid powertrain systems. Other technologies such as aerodynamic improvements and vehicle speed limiting systems are not as relevant for this class of vehicles, since the typical duty cycle is much more urban, consisting of lower speeds and frequent stopping. Idle reduction strategies are expected to be encompassed by hybrid technology, which we anticipate will ultimately handle PTO operation. Therefore, for this initial proposal, certification of heavy-duty vocational vehicles with conventional powertrains will focus on quantifying GHG benefits due to the use of LRR tires.

[203] *See* Lecture Notes in Applied and Computational Mechanics, The Aerodynamics of Heavy Vehicles II: Trucks, Buses, and Trains; DOI: 10.1007/978–3–540–85070–0_33; "Applicability of Commercial CFD tools for assessment of heavy vehicle aerodynamic characteristics" as created by the University of Chicago as Operator of Argonne National Laboratory ("Argonne") under contract No. W–31–109–ENG–38 with the U.S. Department of Energy.

(a) Certification Process

Vehicles would be divided into test groups for purposes of certification. As with Class 7 and 8 combination tractors, these are groups of vehicles within a given regulatory category that are expected to share common emission characteristics. Vocational vehicle regulatory subcategories share the same structure as those used for heavy-duty engine criteria pollutant certification and are based on GVWR. This includes light-heavy (LHD) with a GVWR at or below 19,500 pounds, medium-heavy (MHD) with a GVWR above 19,500 pounds and at or below 33,000 pounds, and heavy-heavy (HHD) with a GVWR above 33,000 pounds. Other test group features may include the type of tires used, intended application, and number of wheels.

As with Class 7 and 8 combination tractors, we anticipate using the standardized 12-digit naming convention to identify vocational vehicle test groups. As with engines and Class 7 and 8 combination tractors, each certifying vehicle manufacturer would have a unique three digit code assigned to them. Currently, there is no 5th digit (industry sector) code for this class of vehicles, for which we propose to use the next available character, "3." Since we are proposing that the engine is one of several test-group defining features, we still believe it is appropriate to include engine displacement in the family name. If the test-group consists includes multiple engine models with varying displacements, the largest would be specified in the test-group name, consistent with current practices. The remaining characters would remain available for California ARB and/or manufacturer use, such that the result is a unique test-group name.

Each test group would need to demonstrate compliance with emission standards using the GEM approach. Additional provisions are available for certification of hybrid vehicles or vehicles using unique technologies, which was detailed in Section IV. If the test group consists of multiple models, only result from the worst-case model is necessary for certification. However, manufacturers would need to submit an engineering evaluation demonstrating that the test group has been assembled appropriately and that the test model indeed reflects the worst-case model. Also, manufacturers should plan on submitting tire rolling resistance properties to EPA at the time of certification. Finally the data from each of the certification cycles described below will need to be submitted at the time of certification.

(b) Demonstrating Compliance With the Proposed Standards

(i) CO_2 and Fuel Consumption Standards

Model

For this proposal, the agencies are proposing that demonstrating compliance with GHG and fuel consumption standards would primarily involve demonstrating the use of LRR tires and quantifying the associated CO_2 and fuel consumption benefit. Similar to Class 7 and 8 combination tractors, this will be done using GEM. However, the input parameters entered by the vehicle manufacturer would be limited to the properties of the tires. GEM will use the tire data, along with inputs reflecting a baseline truck and engine, to generate a complete vehicle model. The test weight used in the model will be based on the vehicle class, as identified above. Light-heavy-duty vehicles will have a test weight of 16,000 pounds; 25,150 pounds for medium heavy-duty vehicles; and heavy heavy-duty vocational vehicles will use a test weight of 67,000 pounds. The model would then be exercised over the HHDDT transient cycle as well as 55 and 65 mph steady-state cruise conditions. The results of each of the three tests would be weighted at 37%, 21%, and 42% for 65 mph, 55 mph, and transient tests, respectively.

It may seem more expedient and just as accurate to require manufacturers use tires meeting certain industry standards for qualifying tires as having LRR. In addition, CO_2 and fuel consumption benefits could be quantified for different ranges of coefficients of rolling resistance to provide a means for comparison to the standard. However, we believe that as technology advances, other aspects of vocational vehicles may warrant inclusion in future rulemakings. For this reason, we believe it is important to have the certification framework in place to accommodate such additions. While the modeling approach may seem to be overly complicated for this phase of the rules, it also serves to create a certification pathway for future rulemakings and therefore we believe this is the best approach. Should innovative technologies be considered that are currently beyond the scope of the model, it would be necessary for the manufacturer to conduct A to B testing which reflects the improvement associated with the new technology. The test protocol to be used and the basis of this assessment will require a public vetting process which would likely include notice and comment.

In-use Standards

The category of wear items primarily relates to tires. It is expected that vehicle manufacturers will equip their trucks with LRR (LRR) tires, since the proposed vehicle standard is predicated on LRR tires' performance. The tire replacement intervals for this class of vehicle is normally in the range of 50,000 to 100,000 miles, which means the owner/operator will be replacing the tires at several points within the useful life of the vehicle. We believe that as LRR tires become more common on new equipment, the aftermarket prices of these tires will also decrease. Along with decreasing tire prices, the fuel savings realized through use of LRR tires will ideally provide enough incentive for owner/operators to continue purchasing these tires. The inventory modeling in this proposal reflects the continued use of LRR tires through the life of the vehicle. We seek comment on this and all aspects of our inventory modeling.

(ii) Evaporative Emission Standards

Evaporative and refueling emissions from heavy-duty highway engines and vehicles are currently regulated under 40 CFR part 86. Even though these emission standards apply to the same engines and vehicles that must meet exhaust emission standards, we require a separate certificate for complying with evaporative and refueling emission standards. An important related point to note is that the evaporative and refueling emission standards always apply to the vehicle, while the exhaust emission standards may apply to either the engine or the vehicle. For vehicles other than pickups and vans, the standards proposed in this notice to address greenhouse gas emissions apply separately to engines and to vehicles. Since we plan to apply both greenhouse gas standards and evaporative/refueling emission standards to vehicle manufacturers, we believe it would be advantageous to have the regulations related to their certification requirements written together as much as possible. EPA regards these proposed changes as discrete, minimal, and for the most part clarifications to the existing standards. Except as specifically proposed here, EPA is not soliciting comment on, or otherwise considering whether to make changes to those standards. Accordingly, EPA will not consider any comments directed to any aspect of these standards other than those specifically proposed here.

We are generally not proposing to change the evaporative or refueling emission standards, but we have come

across several provisions that warrant clarification or correction:

- When adopting the most recent evaporative emission change we did not carry through the changes to the regulatory text applying evaporative emission standards for methanol-fueled compression-ignition engine. The proposed regulations correct this by applying the new standards to all fuels that are subject to standards.
- We are proposing provisions to address which standards apply when an auxiliary (nonroad) engine is installed in a motor vehicle, which is currently not directly addressed in the highway regulation. The proposed approach would require testing complete vehicles with any auxiliary engines (and the corresponding fuel-system components). Incomplete vehicles would be tested without the auxiliary engines, but any such engines and the corresponding fuel-system components would need to meet the standards that apply under our nonroad program as specified in 40 CFR part 1060.
- We are proposing to remove the option for secondary vehicle manufacturers to use a larger fuel tank capacity than is specified by the certifying manufacturer without re-certifying the vehicle. Secondary vehicle manufacturers needing a greater fuel tank capacity would need to either work with the certifying manufacturer to include the larger tank, or go through the effort to re-certify the vehicle itself. Our understanding is that this provision has not been used and would be better handled as part of certification rather than managing a separate process. We are proposing corresponding changes to the emission control information label.
- Rewriting the regulations in a new part in conjunction with the greenhouse gas standards allows for some occasions of improved organization and clarity, as well as updating various provisions. For example, we are proposing a leaner description of evaporative emission families that does not reference sealing methods for carburetors or air cleaners. We are also clarifying how evaporative emission standards affect engine manufacturers and proposing more descriptive provisions related to certifying vehicles above 26,000 pounds GVWR using engineering analysis.
- Since we adopted evaporative emission standards for gaseous-fuel vehicles, we have developed new approaches for design-based certification (*see,* for example, 40 CFR 1060.240). We request comment on changing the requirements related to certifying gaseous-fuel vehicles to design-based certification. This would allow for a simpler assessment for certifying these vehicles without changing the standards that apply.

(2) Proposed Labeling Provisions

It is crucial that a means exist for allowing field inspectors to identify whether a vehicle is certified, and if so, whether it is in the certified configuration. As with engines and tractors, we believe an emission control information label is a logical first step in facilitating this identification. For vocational vehicles, the engine will have a label that is permanently affixed to the engine and identify the engine as certified for use in a certain regulatory subcategory of vehicle (*i.e.,* MHD, *etc.*).

The vehicle will also have a label listing the test group, engine family, and range of tire rolling resistances that the vehicle is certified to use. In addition, if any other emission related components are present, such as hybrid powertrains, key components will also need to be specified on the label. Like the engine label, this will need to be permanently affixed to the vehicle in an area that is clearly accessible to the owner/operator.

At the time of certification, manufacturers will be required to submit an example of their vehicle emission control label such that EPA can verify that all critical elements are present. Such elements include the vehicle family/test group name, emission control system identifiers described above, regulatory sub-category of the vehicle, and Family Emission Limits to which the vehicle is certified to. In addition to the label, manufacturers will also need to describe where the unique vehicle identification number and date of production can be found on the vehicle.

(3) Other Certification Issues

Warranty

As with other heavy-duty engine and vehicle regulatory categories, vocational vehicle chassis manufacturers would be required to warrant their product to be free from defects that would adversely affect emissions. This warranty also covers the failure of emission related components for the useful life of the vehicle. For vocational chassis, the key emission related component addressed in this proposal is the tires.

Manufacturers of chassis for vocational vehicles would be required to warrant tires to be free from defects at the time of initial sale. As with Class 7 and 8 combination tractors, we expect the chassis manufacturer to only warrant tires the original tires against manufacturing or design-related defects. This tire warranty would not cover replacement tires or damage from road hazards or improper inflation.

As with Class 7 and 8 combination tractors, all warranty documentation would be submitted to EPA at the time of certification. This should include the warranty statement provided to the owner/operator, description of the service repair network, list of covered components (both conventional and high-cost), and length of coverage.

EPA Certification Fees

Similar to engine and tractor-trailer vehicle certification, the agency will assess certification fees for vocational vehicles. The proceeds from these fees are used to fund the compliance and certification activities related to GHG regulation for this industry segment. In addition to the certification process, other activities funded by certification fees include EPA-administered in-use testing, selective enforcement audits, and confirmatory testing. At this point, the exact costs associated with the heavy-duty vehicle GHG compliance are not well known. EPA will assess its compliance program associated with this proposal and assess the appropriate level of fees. We anticipate that fees will be applied based on test groups, following the light-duty vehicle approach.

Maintenance

Vehicle manufacturers are required to outline maintenance schedules that ensure their product will remain in compliance with emission standards throughout the useful life of the vehicle. For heavy-duty vehicles, such maintenance may include fluid/lubricant service, fairing adjustments, or service to the GHG emission control system. This schedule is required to be submitted as part of the application for certification. Maintenance that is deemed to be critical to ensuring compliance with emission standards is classified as "critical emission-related maintenance." Generally, manufacturers are discouraged from specifying that critical emission-related maintenance is needed within the regulatory useful life of the engine. However, if such maintenance is unavoidable, manufacturers must have a reasonable basis for ensuring it is performed at the correct time. This may be demonstrated through several methods including survey data indicating that at least 80% of engines receive the required maintenance in-use or manufacturers may provide the maintenance at no charge to the user.

F. General Regulatory Provisions

(1) Statutory Prohibited Acts

Section 203 of the CAA describes acts that are prohibited by law. This section and associated regulations apply equally to the greenhouse gas standards as to any other regulated emission. Acts that are prohibited by section 203 of the CAA include the introduction into commerce or the sale of an engine or vehicle without a certificate of conformity, removing or otherwise defeating emission control equipment, the sale or installation of devices designed to defeat emission controls, and other actions. In addition, vehicle manufacturers, or any other party, may not make changes to the certified engine that would result in it not being in the certified configuration.

EPA proposes to apply § 86.1854–12 to heavy-duty vehicles and engines; this codifies the prohibited acts spelled out in the statute. Although it is not legally necessary to repeat what is in the CAA, EPA believes that including this language in the regulations provides clarity and improves the ease of use and completeness of the regulations. Since this change merely codifies provisions that already apply, there is no burden associated with the change.

(2) Regulatory Amendments Related to Heavy-Duty Engine Certification

We are proposing to adopt the new engine-based greenhouse gas standards in 40 CFR part 1036 and the new vehicle-based standards in 40 CFR part 1037. We are proposing to continue to rely on 40 CFR parts 85 and 86 for conventional certification and compliance provisions related to criteria pollutants, but the proposed regulations include a variety of amendments that would affect the provisions that apply with respect to criteria pollutants. We are not intending to change the stringency of, or otherwise substantively change any existing standards.

The introduction of new parts in the CFR is part of a long-term plan to migrate all the regulatory provisions related to highway and nonroad engine and vehicle emissions to a portion of the CFR called Subchapter U, which consists of 40 CFR parts 1,000 through 1299. We have already adopted emission standards, test procedures, and compliance provisions for several types of engines in 40 CFR parts 1033 through 1074. We intend eventually to capture all the regulatory requirements related to heavy-duty highway engines and vehicles in these new parts. Moving regulatory provisions to the new parts allows us to publish the regulations in a way that is better organized, reflects updates to various certification and compliance procedures, provides consistency with other engine programs, and is written in plain language. We have already taken steps in this direction for heavy-duty highway engines by adopting the engine-testing procedures in 40 CFR part 1065 and the provisions for selective enforcement audits in 40 CFR part 1068.

EPA solicits comment on these proposed drafting changes and additions. This solicitation relates solely to the appropriate migration, translation, and enhancement of existing provisions. EPA is not soliciting comment on the substance of these existing rules, and is not proposing to amend, reconsider, or otherwise re-examine these provisions' substantive effect.

The rest of this section describes the most significant of these proposed redrafting changes. The proposal includes several changes to the certification and compliance procedures, including the following:

- We propose to require that engine manufacturers provide installation instructions to vehicle manufacturers (*see* § 1036.130). We expect this is already commonly done; however, the regulatory language spells out a complete list of information we believe is necessary to properly ensure that vehicle manufacturers install engines in a way that is consistent with the engine's certificate of conformity.
- § 1036.30, § 1036.250, and § 1036.825 spell out several detailed provisions related to keeping records and submitting information to us.
- We wrote the greenhouse gas regulations to divide heavy-duty engines into "spark-ignition" and "compression-ignition" engines, rather than "Otto-cycle" and "diesel" engines, to align with our terminology in all our nonroad programs. This will likely involve no effective change in categorizing engines except for natural gas engines. To address this concern, we would include a provision in § 1036.150 to allow manufacturers to meet standards for spark-ignition engines if they were regulated as Otto-cycle engines in 40 CFR part 86, and vice versa.
- § 1036.205 describes a new requirement for imported engines to describe the general approach to importation (such as identifying authorized agents and ports of entry), and identifying a test lab in the United States where EPA can perform testing on certified engines. These steps are part of our ongoing effort to ensure that we have a compliance and enforcement program that is as effective for imported engines as for domestically produced engines. We have already adopted these same provisions for several types of nonroad engines.
- § 1036.210 specifies a process by which manufacturers are able to get preliminary approval for EPA decisions for questions that require lead time for preparing an application for certification. This might involve, for example, preparing a plan for durability testing, establishing engine families, identifying adjustable parameters, and creating a list of scheduled maintenance items.
- § 1036.225 describes how to amend an application for certification.
- We are proposing to apply the exemption and recall provisions as written in 40 CFR part 1068 instead of the comparable provisions in 40 CFR part 85. This involves only minor changes relative to current practice.

We are aware that it may be appropriate to move several additional provisions in 40 CFR parts 85 and 86 to subchapter U. For example, highway engine manufacturers may find it preferable to use the same parameters specified for defining nonroad engine families for certifying highway engines. To the extent that the nonroad provisions would apply appropriately for highway engines, we and the manufacturers would benefit from a consistent approach to certifying both types of engines in a way that does not compromise the degree of emission control achieved under the existing standards.

Another area of particular interest is defect reporting. Existing regulations require manufacturers to report defects to EPA whenever the same defect occurs at least 25 times. This approach can be somewhat onerous for manufacturers making high-volume products. For example, for an engine model with annual sales above 25,000, this represents a defect rate of less than 0.1 percent. In contrast, the approach to defect reporting in § 1068.501 accommodates the high sales volumes associated with highway engines, basing requirements on a *percentage* of defective products, rather than setting a fixed number for all engine families. This flexibility is paired with the explicit direction for the manufacturer to actively monitor warranty claims, customer complaints, and other sources of information to evaluate and track potential defects. We believe this aligns both with the manufacturers' interest in producing quality products and EPA's interest in addressing any quality concerns that arise from the need to repair in-use engines and vehicles.

(3) Test Procedures For Measuring Emissions From Heavy-Duty Vehicles

We are proposing a new part 1066 that would contain a general chassis-based test procedures in for measuring emissions from a variety of vehicles, including vehicles over 14,000 pounds GVWR. However, we are not proposing to apply these procedures broadly at this time. The test procedures in 40 CFR part 86 would continue to apply for vehicles under 14,000 pounds GVWR. Rather, the proposed part 1066 procedures would apply only for any testing that would be required for larger vehicles. This could include "A to B" hybrid vehicle testing and coastdown testing. Nevertheless, we will likely consider in the future applying these procedures also for other heavy-duty vehicle testing and for light-duty vehicles, highway motorcycles, and/or nonroad recreational vehicles that rely on chassis-based testing.

As noted above, engine manufacturers are already using the test procedures in 40 CFR part 1065 instead of those originally adopted in 40 CFR part 86. The new procedures are written to apply generically for any type of engine and include the current state of technology for measurement instruments, calibration procedures, and other practices. We are proposing the chassis-based test procedures in part 1066 to have a similar structure.

The proposed procedures in part 1066 reference large portions of part 1065 to align test specifications that apply equally to engine-based and vehicle-based testing, such as CVS and analyzer specifications and calibrations, test fuels, calculations, and definitions of many terms. Since several highway engine manufacturers were involved in developing the full range of specified procedures in part 1065, we are confident that many of these provisions are appropriate without modification for vehicle testing.

The remaining test specifications needed in part 1066 are mostly related to setting up, calibrating, and operating a chassis dynamometer. This also includes the coastdown procedures that are required for establishing the dynamometer load settings to ensure that the dynamometer accurately simulates in-use driving.

Current testing requirements related to dynamometer specifications rely on a combination of regulatory provisions, EPA guidance documents, and extensive know-how from industry experience that has led to a good understanding of best practices for operating a vehicle in the laboratory to measure emissions. We attempted in this proposal to capture this range of material, organizing these specifications and verification and calibration procedures to include a complete set of provisions to ensure that a dynamometer meeting these specifications would allow for carefully controlled vehicle operation such that emission measurements are accurate and repeatable. We request comment on the range of proposed requirements related to designing, building, and operating chassis dynamometers. For example, we believe that the proposed verification and calibration procedures in part 1066, subpart B, for diameter, speed, torque, acceleration, base inertia, friction loss, and other parameters are all necessary to ensure proper dynamometer operation. It may be that some of these checks are redundant, or could be achieved with different procedures. There may also be additional checks needed to remove possibilities for inadequate accuracy or precision.

The procedures are written with the understanding that heavy-duty highway manufacturers have, and need to have, single-roll electric dynamometers for testing. We are aware that this is not the case for other applications, such as all-terrain vehicles. We are not adopting specific provisions for testing with hydrokinetic dynamometers, we are already including a provision acknowledging that we may approve the use of dynamometers meeting alternative specifications if that is appropriate for the type of vehicle being tested and for the level of stringency represented by the corresponding emission standards.

Drafting a full set of test specifications highlights the mixed use of units for testing. Some chassis-based standards and procedures are written based largely on the International System of Units (SI), such as gram per kilometer (g/km) standards and kilometers per hour (kph) driving, while others are written based largely on English units (g/mile standards and miles per hour driving). The proposal includes a mix of SI and English units with instructions about converting units appropriately. However, most of the specifications and examples are written in English units. While this seems to be the prevailing practice for testing in the United States, we understand that vehicle testing outside the United States is almost universally done in SI units. In any case, dynamometers are produced with the capability of operating in either English or SI units. We believe there would be a substantial advantage toward the goal of achieving globally harmonized test procedures if we would write the test procedures based on SI units. This would also in several cases allow for more straightforward calculations, and reduced risk of rounding errors. For comparison, part 1065 is written almost exclusively in SI units. We request comment on the use of units throughout part 1066.

A fundamental obstacle toward using SI units is the fact that some duty cycles are specified based on speeds in miles per hour. To address this, it would be appropriate to convert the applicable driving schedules to meter-per-second (m/s) values. Converting speeds to the nearest 0.01 m/s would ensure that the prescribed driving cycle does not change with respect to driving schedules that are specified to the nearest 0.1 mph. The regulations would include the appropriate mph (or kph) speeds to allow for a ready understanding of speed values (*see* 40 CFR part 1037, Appendix I). This would, for example, allow for drivers to continue to follow a mph-based speed trace. The ± 2 mph tolerance on driving speeds could be converted to ± 1.0 m/s, which corresponds to an effective speed tolerance of ± 2.2 mph. This may involve a tightening or loosening of the existing speed tolerance, depending on whether manufacturers used the full degree of flexibility allowed for a mph tolerance value that is specified without a decimal place. Similarly, the Cruise cycles for heavy-duty vehicles could be specified as 24.5 ± 0.5 m/s (54.8 ± 1.1 mph) and 29.0 ± 0.5 m/s (64.9 ± 1.1 mph).

G. Penalties

As part of the fuel efficiency improvement program to be created through this rulemaking, NHTSA is proposing civil penalties for non-compliance with fuel consumption standards. NHTSA's authority under EISA, as codified at 49 U.S.C. 32902(k), requires the agency to determine appropriate measurement metrics, test procedures, standards, and compliance and enforcement protocols for HD vehicles. NHTSA interprets its authority to develop an enforcement program to include the authority to determine and assess civil penalties for non-compliance, that would impose penalties determined based on the discussion that follows.

NHTSA proposes that in cases of non-compliance, the agency would establish civil penalties based on consideration of the following factors:

- Actual fuel consumption performance related to the applicable standard.
- Estimated cost to comply with the regulation and applicable standard.

- Quantity of vehicles or engines not complying.
- Manufacturer's history of non-compliance.
- The civil penalty should act as a deterrent.
- The financial condition of the manufacturer.
- Civil penalties paid for non-compliance of the same vehicles under the EPA GHG program.

NHTSA recognizes that EPA also has authority to impose civil penalties for non-compliance with GHG regulations. It is not the intent of either agency to impose duplicative civil penalties, and in the case of non-compliance with fuel consumption regulations, NHTSA intends to give consideration to civil penalties imposed by EPA for GHG non-compliance, as EPA would give consideration to civil penalties imposed by NHTSA in the case of non-compliance with GHG regulations.[204]

The proposed civil penalty amount NHTSA could impose would not exceed the limit that EPA is authorized to impose under the CAA. The potential maximum civil penalty for a manufacturer would be calculated as follows in Equation V–1:

Equation V–1: Aggregate Maximum Civil Penalty

Aggregate Maximum Civil Penalty for a Non-Compliant Regulatory Category = (CAA Limit) × (production volume within the regulatory category)

NHTSA seeks comments related to this proposal for a civil penalty program under EISA.

EPA has occasionally in the past conducted rulemakings to provide for nonconformance penalties—monetary penalties that allow a manufacturer to sell engines or vehicles that do not meet an emissions standard. Nonconformance penalties are authorized for heavy-duty engines and vehicles under section 206(g) of the CAA. Three basic criteria have been established by rulemaking for determining the eligibility of emissions standards for nonconformance penalties in any given model year: (1) The emissions standard in question must become more difficult to meet, (2) substantial work must be required in order to meet the standard, and (3) a technological laggard must be likely to develop (40 CFR 86.1103–87). A technological laggard is a manufacturer who cannot meet a particular emissions standard due to technological (not economic) difficulties and who, in the absence of nonconformance penalties, might be forced from the marketplace. The process to determine if these criteria are met and to establish penalty amounts and conditions is carried out via rulemaking, as required by the CAA. The CAA (in section 205) also lays out requirements for the assessment of civil penalties for noncompliance with emissions standards.

As discussed in detail in Section III, the agencies have determined that the proposed GHG and fuel consumption standards are readily feasible, and we do not believe a technological laggard will emerge in any sector covered by these proposed standards. In addition to the standards being premised on use of already-existing, cost-effective technologies, there are a number of flexibilities and alternative standards built into the proposal. However, we do request comment regarding this assessment and on whether or not it would be appropriate for EPA and NHTSA to initiate rulemaking activity to set nonconformance penalties for the proposed standards, subject to their respective statutory authorities. Should nonconformance penalties be warranted, the benefits of establishing them would be threefold: (1) The EPA and NHTSA programs would continue to be equivalent, allowing manufacturers to sell the same vehicles and engines to satisfy both programs, (2) competitiveness in the affected HD sector would be maintained, preserving jobs and consumer choices, and (3) nonconformance penalties would be set through a transparent public process, involving notice and public hearing.

VI. How would this proposed program impact fuel consumption, GHG emissions, and climate change?

A. What methodologies did the agencies use to project GHG emissions and fuel consumption impacts?

EPA and NHTSA used EPA's official mobile source emissions inventory model named Motor Vehicle Emissions Simulator (MOVES2010),[205], to estimate emission and fuel consumption impacts of these proposed rules. MOVES has capability to take in user inputs to modify default data to better estimate emissions for different scenarios, such as different regulatory alternatives, state implementation plans (SIPs), geographic locations, vehicle activity, and microscale projects.

The agencies performed multiple MOVES runs to establish reference case and control case emission inventories and fuel consumption values. The agencies ran MOVES with user input databases that reflected characteristics of the proposed rules, such as emissions improvements and recent sales projections. Some post-processing of the model output was required to ensure proper results. The agencies ran MOVES for non-GHGs, CO_2, CH_4, and N_2O for calendar years 2005, 2018, 2030, and 2050. Additional runs were performed for just the three greenhouse gases and for fuel consumption for every calendar year from 2014 to 2050, inclusive, which fed the economy-wide modeling, monetized benefits estimation, and climate impacts analysis.

The agencies also used MOVES to estimate emissions and fuel consumption impacts for the other alternatives considered and described in Section IX.

B. MOVES Analysis

(1) Inputs and Assumptions

(a) Reference Run Updates

Since MOVES2010 vehicle sales and activity data were developed from AEO2006, EPA first updated these data using sales and activity estimates from AEO2010. EPA also updated the fuel supply information in MOVES to reflect a 100% E10 "gasoline" fuel supply to reflect the Renewable Fuels Standard.[206] MOVES2010 defaults were used for all other parameters to estimate the reference case emissions inventories.

(b) Control Run Updates

EPA developed additional user input data for MOVES runs to estimate control case inventories. To account for improvements of engine and vehicle efficiency, EPA developed several user inputs to run the control case in MOVES. Since MOVES does not operate based on Heavy-duty FTP cycle results, EPA used the percent reduction in engine CO_2 emissions expected due to the proposed rules to develop energy inputs for the control case runs. Also, EPA used the percent reduction in aerodynamic drag coefficient and tire rolling resistance coefficient expected from the proposed rules to develop road load input for the control case. The fuel supply update used in the reference case was used in the control case. Details of all the MOVES runs, input

[204] EPA discussed a similar situation concerning consideration of civil penalties imposed by NHTSA for CAFE violations for light-duty vehicles, in the final rule establishing the 2012–2016 MY standards. *See* 75 FR 25324 and 25482, May 7, 2010.

[205] MOVES homepage: *http://www.epa.gov/otaq/models/moves/index.htm.* Version MOVES2010 was used for emissions impacts analysis for this proposal. Current version as of September 14, 2010 is an updated version named MOVES2010a, available directly from the MOVES homepage. To replicate results from this proposal, MOVES2010 must be used.

[206] Renewable Fuels Standard available at *http://www.epa.gov/otaq/fuels/renewablefuels/index.htm.*

data tables, and post-processing are available in the docket (EPA–HQ–OAR–2010–0162).

Table VI–1 and Table VI–2 describe the estimated expected reductions from these proposed rules, which were input into MOVES for estimating control case emissions inventories.

Table VI-1: Estimated Reductions in Engine CO_2 Emission Rates[207]

GVWR Class	Fuel	Model Years	CO_2 Reduction from 2010 MY
HHD (8a-8b)	Diesel	2014-2016	3%
		2017+	6%
MHD (6-7) and LHD 4-5	Diesel	2014-2016	5%
		2017+	9%
	Gasoline	2016+	5%

Table VI-2: Estimated Reductions in Rolling Resistance and Aerodynamic Drag Coefficients

Truck type	Reduction in tire rolling resistance coefficient from 2010 MY	Reduction in Cd from 2010 MY
Combination long-haul	8.4%	7.2%
Combination short-haul	7.0%	5.3%
Straight trucks, refuse trucks, motor homes, transit buses, and other vocational vehicles	10.0%	0%

Since nearly all HD pickup trucks and vans will be certified on a chassis dynamometer, the CO_2 reductions for these vehicles will not be represented as engine and road load reduction components, but total vehicle CO_2 reductions. These estimated reductions are described in Table VI–3.

Table VI-3: Estimated Total Vehicle CO_2 Reductions for HD Pickup Trucks and Vans

GVWR Class	Fuel	Model year	CO_2 Reduction from Baseline
HD Pickup Trucks and Vans	Gasoline	2014	1.5%
		2015	2%
		2016	4%
		2017	6%
		2018+	10%
	Diesel	2014	2.3%
		2015	3%
		2016	6%
		2017	9%
		2018+	15%

[207] Section II discusses an alternative engine standard proposed for the HD diesel engines in the 2014, 2015, and 2016 model years. To the extent that engines using this alternative would be expected to have baseline emissions greater than the industry average, the reduction from the industry average projected in this proposal could be reduced.

(C) What are the projected reductions in fuel consumption and GHG emissions?

EPA and NHTSA expect significant reductions in GHG emissions and fuel consumption from these proposed rules—emission reductions from both downstream (tailpipe) and upstream (fuel production and distribution) sources, and fuel consumption reductions from more efficient vehicles. Increased vehicle efficiency and reduced vehicle fuel consumption would also reduce GHG emissions from upstream sources. The following subsections summarize the GHG emissions and fuel consumption reductions expected from these proposed rules.

(1) Downstream (Tailpipe)

EPA used MOVES to estimate downstream GHG inventories from these proposed rules. We expect reductions in CO_2 from all heavy-duty vehicle categories. The reductions come from engine and vehicle improvements. EPA expects CH_4 and N_2O emissions to increase very slightly because of a rebound in vehicle miles traveled (VMT) and because significant vehicle reductions of these two GHGs are not expected from these proposed rules. Overall, downstream GHG emissions will be reduced significantly, and is described in the following subsections.

For CO_2 and fuel consumption, the total energy consumption "pollutant" was run in MOVES rather than CO_2 itself. The energy was converted to fuel consumption based on fuel heating values assumed in the Renewable Fuels Standard and used in the development of MOVES emission and energy rates. These values are 117,250 kJ/gallon for E10 [208] and 138,451 kJ/gallon for diesel.[209] To calculate CO_2, the agencies assumed a CO_2 content of 8,576 g/gallon for E10 and 10,180 g/gallon for diesel. Table VI–4 shows the fleet-wide GHG reductions and fuel savings from reference case to control case through the lifetime of model year 2014 through 2018 heavy-duty vehicles. Table VI–5 shows the downstream GHG emissions reductions and fuel savings in 2018, 2030, and 2050.

Table VI-4 Model Year 2014 through 2018 Lifetime GHG Reductions and Fuel Savings by Heavy-duty Truck Category

	Downstream GHG Reductions (MMT CO_2eq)	Fuel Savings (billion gallons)
HD pickups/vans	21	2.2
Vocational	35	3.4
Combination short-haul (Day cabs)	45	4.4
Combination long-haul (Sleeper cabs)	106	10.4

Table VI-5: Annual Downstream GHG Emissions Reductions and Fuel Savings in 2018, 2030, and 2050

	Downstream GHG Reductions (MMT CO_2eq)	Diesel Savings (million gallons)	Gasoline Savings (million gallons)
2018	20	1,861	71
2030	58	5,412	352
2050	91	8,453	570

(2) Upstream (Fuel Production and Distribution)

Upstream GHG emission reductions associated with the production and distribution of fuel were projected using emission factors from DOE's "Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation" (GREET1.8) model, with some modifications consistent with the Light-Duty Greenhouse Gas rulemaking. More information regarding these modifications can be found in the draft RIA Chapter 5. These estimates include both international and domestic emission reductions, since reductions in foreign exports of finished gasoline and/or crude would make up a significant share of the fuel savings resulting from the GHG standards. Thus, significant portions of the upstream GHG emission reductions will occur outside of the United States; a breakdown and discussion of projected international versus domestic reductions is included in the draft RIA Chapter 5. GHG emission reductions from upstream sources can be found in Table VI–6.

[208] Renewable Fuels Standards assumptions of 115,000 BTU/gallon gasoline (E0) and 76,330 BTU/gallon ethanol (E100) weighted 90% and 10%, respectively, and converted to kJ at 1.055 kJ/BTU.

[209] MOVES2004 Energy and Emission Inputs. EPA420–P–05–003, March 2005. *http://www.epa.gov/otaq/models/ngm/420p05003.pdf.*

Table VI-6: Annual Upstream GHG Emissions Reductions in 2018, 2030, and 2050

	CO_2 (MMT)	CH_4 (MMT CO_2eq)	N_2O (MMT CO_2eq)	Total GHG (MMT CO_2eq)
2018	4.5	0.8	0.02	5.3
2030	11.8	1.8	0.06	13.7
2050	16.7	2.6	0.08	19.3

(3) HFC Emissions

Based on projected HFC emission reductions due to the proposed AC leakage standards, EPA estimates the HFC reductions to be 118,885 metric tons of CO_2eq in 2018, 355,576 metric tons of CO_2eq emissions in 2030 and 417,584 metric tons CO_2eq in 2050, as detailed in draft RIA Chapter 5.3.4.

(4) Total (Upstream + Downstream + HFC)

Table VI–7 combines downstream results from Table VI–5, upstream results Table VI–6, and HFC results to show total GHG reductions for calendar years 2018, 2030, and 2050.

Table VI-7: Annual Total GHG Emissions Reductions in 2018, 2030, and 2050

	GHG Reductions (MMT CO_2eq)
2018	25
2030	72
2050	110

D. Overview of Climate Change Impacts From GHG Emissions

Once emitted, GHGs that are the subject of this regulation can remain in the atmosphere for decades to centuries, meaning that (1) their concentrations become well-mixed throughout the global atmosphere regardless of emission origin, and (2) their effects on climate are long lasting. GHG emissions come mainly from the combustion of fossil fuels (coal, oil, and gas), with additional contributions from the clearing of forests and agricultural activities. Transportation activities, in aggregate, are the second largest contributor to total U.S. GHG emissions (27 percent) despite a decline in emissions from this sector during 2008.[210]

This section provides a summary of observed and projected changes in GHG emissions and associated climate change impacts. The source document for the section below is the Technical Support Document (TSD) [211] for EPA's Endangerment and Cause or Contribute Findings Under the Clean Air Act (74 FR 66496, December 15, 2009). Below is the Executive Summary of the TSD which provides technical support for the endangerment and cause or contribute analyses concerning GHG emissions under section 202(a) of the CAA. The TSD reviews observed and projected changes in climate based on current and projected atmospheric GHG concentrations and emissions, as well as the related impacts and risks from climate change that are projected in the absence of GHG mitigation actions, including this proposal and other U.S. and global actions. The TSD was updated and revised based on expert technical review and public comment as part of EPA's rulemaking process for the final Endangerment Findings. The key findings synthesized here and the information throughout the TSD are primarily drawn from the assessment reports of the Intergovernmental Panel on Climate Change (IPCC), the U.S. Climate Change Science Program (CCSP), the U.S. Global Change Research Program (USGCRP), and NRC.[212]

In May 2010, the NRC published its comprehensive assessment, "Advancing the Science of Climate Change." [213] It concluded that "climate change is occurring, is caused largely by human activities, and poses significant risks for—and in many cases is already affecting—a broad range of human and natural systems." Furthermore, the NRC stated that this conclusion is based on findings that are "consistent with the conclusions of recent assessments by the U.S. Global Change Research Program, the Intergovernmental Panel on Climate Change's Fourth Assessment Report, and other assessments of the state of scientific knowledge on climate change." These are the same assessments that served as the primary scientific references underlying the Administrator's Endangerment Finding. Importantly, this recent NRC assessment represents another independent and critical inquiry of the state of climate change science, separate and apart from the previous IPCC and USGCRP assessments. The NRC assessment is a clear affirmation that the scientific underpinnings of the Administrator's Endangerment Finding are robust, credible, and appropriately characterized by EPA.

(1) Observed Trends in Greenhouse Gas Emissions and Concentrations

The primary long-lived GHGs directly emitted by human activities include CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6. Greenhouse gases have a warming effect by trapping heat in the atmosphere that would otherwise escape to space. In 2007, U.S. GHG emissions were 7,150

[210] U.S. EPA (2010) Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2007. EPA–430–R–10–006, Washington, DC.

[211] *See* Endangerment TSD, Note 9 above.

[212] For a complete list of core references from IPCC, USGCRP/CCSP, NRC and others relied upon for development of the TSD for EPA's Endangerment and Cause or Contribute Findings see section 1(b), specifically, Table 1.1 of the TSD Docket: EPA–HQ–OAR–2009–0171–11645.

[213] National Research Council (NRC) (2010). Advancing the Science of Climate Change. National Academy Press. Washington, DC.

teragrams [214] of CO_2 equivalent [215] ($TgCO_2eq$). The dominant gas emitted is CO_2, mostly from fossil fuel combustion. Methane is the second largest component of U.S. emissions, followed by N2O and the fluorinated gases (HFCs, PFCs, and SF6). Electricity generation is the largest emitting sector (34% of total U.S. GHG emissions), followed by transportation (27%) and industry (19%).

Transportation sources under section 202(a) [216] of the CAA (passenger cars, light-duty trucks, other trucks and buses, motorcycles, and passenger cooling) emitted 1,649 $TgCO_2eq$ in 2007, representing 23% of total U.S. GHG emissions. U.S. transportation sources under section 202(a) made up 4.3% of total global GHG emissions in 2005,[217] which, in addition to the United States as a whole, ranked only behind total GHG emissions from China, Russia, and India but ahead of Japan, Brazil, Germany, and the rest of the world's countries. In 2005, total U.S. GHG emissions were responsible for 18% of global emissions, ranking only behind China, which was responsible for 19% of global GHG emissions. The scope of this proposal focuses on GHG emissions under section 202(a) from heavy-duty source categories (*see* Section V).

The global atmospheric CO_2 concentration has increased about 38% from pre-industrial levels to 2009, and almost all of the increase is due to anthropogenic emissions. The global atmospheric concentration of CH_4 has increased by 149% since pre-industrial levels (through 2007); and the N_2O concentration has increased by 23% (through 2007). The observed concentration increase in these gases can also be attributed primarily to anthropogenic emissions. The industrial fluorinated gases, HFCs, PFCs, and SF_6, have relatively low atmospheric concentrations but the total radiative forcing due to these gases is increasing rapidly; these gases are almost entirely anthropogenic in origin.

Historic data show that current atmospheric concentrations of the two most important directly emitted, long-lived GHGs (CO_2 and CH_4) are well above the natural range of atmospheric concentrations compared to at least the last 650,000 years. Atmospheric GHG concentrations have been increasing because anthropogenic emissions have been outpacing the rate at which GHGs are removed from the atmosphere by natural processes over timescales of decades to centuries.

(2) Observed Effects Associated With Global Elevated Concentrations of GHGs

Greenhouse gases, at current (and projected) atmospheric concentrations, remain well below published exposure thresholds for any direct adverse health effects and are not expected to pose exposure risks (*i.e.,* breathing/inhalation).

The global average net effect of the increase in atmospheric GHG concentrations, plus other human activities (*e.g.,* land-use change and aerosol emissions), on the global energy balance since 1750 has been one of warming. This total net heating effect, referred to as forcing, is estimated to be +1.6 (+0.6 to +2.4) watts per square meter (W/m^2), with much of the range surrounding this estimate due to uncertainties about the cooling and warming effects of aerosols. However, as aerosol forcing has more regional variability than the well-mixed, long-lived GHGs, the global average might not capture some regional effects. The combined radiative forcing due to the cumulative (*i.e.,* 1750 to 2005) increase in atmospheric concentrations of CO_2, CH_4, and N_2O is estimated to be +2.30 (+2.07 to +2.53) W/m^2. The rate of increase in positive radiative forcing due to these three GHGs during the industrial era is very likely to have been unprecedented in more than 10,000 years.

Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level. Global mean surface temperatures have risen by 1.3 ± 0.32 °F (0.74 ± 0.18 °C) over the last 100 years. Eight of the 10 warmest years on record have occurred since 2001. Global mean surface temperature was higher during the last few decades of the 20th century than during any comparable period during the preceding four centuries.

Most of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic GHG concentrations. Climate model simulations suggest natural forcing alone (*i.e.,* changes in solar irradiance) cannot explain the observed warming.

U.S. temperatures also warmed during the 20th and into the 21st century; temperatures are now approximately 1.3 °F (0.7 °C) warmer than at the start of the 20th century, with an increased rate of warming over the past 30 years. Both the IPCC [218] and the CCSP reports attributed recent North American warming to elevated GHG concentrations. In the CCSP (2008) report,[219] the authors find that for North America, "more than half of this warming [for the period 1951–2006] is likely the result of human-caused greenhouse gas forcing of climate change."

Observations show that changes are occurring in the amount, intensity, frequency and type of precipitation. Over the contiguous United States, total annual precipitation increased by 6.1% from 1901 to 2008. It is likely that there have been increases in the number of heavy precipitation events within many land regions, even in those where there has been a reduction in total precipitation amount, consistent with a warming climate.

There is strong evidence that global sea level gradually rose in the 20th century and is currently rising at an increased rate. It is not clear whether the increasing rate of sea level rise is a reflection of short-term variability or an increase in the longer-term trend. Nearly all of the Atlantic Ocean shows sea level rise during the last 50 years with the rate of rise reaching a maximum (over 2 millimeters [mm] per year) in a band along the U.S. east coast running east-northeast.

Satellite data since 1979 show that annual average Arctic sea ice extent has shrunk by 4.1% per decade. The size and speed of recent Arctic summer sea ice loss is highly anomalous relative to the previous few thousands of years.

[214] One teragram (Tg) = 1 million metric tons. 1 metric ton = 1,000 kilograms = 1.102 short tons = 2,205 pounds.

[215] Long-lived GHGs are compared and summed together on a CO_2-equivalent basis by multiplying each gas by its global warming potential (GWP), as estimated by IPCC. In accordance with United Nations Framework Convention on Climate Change (UNFCCC) reporting procedures, the U.S. quantifies GHG emissions using the 100-year timeframe values for GWPs established in the IPCC Second Assessment Report.

[216] Source categories under Section 202(a) of the CAA are a subset of source categories considered in the transportation sector and do not include emissions from non-highway sources such as boats, rail, aircraft, agricultural equipment, construction/mining equipment, and other off-road equipment.

[217] More recent emission data are available for the United States and other individual countries, but 2005 is the most recent year for which data for all countries and all gases are available.

[218] Hegerl, G.C. *et al.* (2007) Understanding and Attributing Climate Change. In: *Climate Change 2007: The Physical Science Basis.* Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor, and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

[219] CCSP (2008) *Reanalysis of Historical Climate Data for Key Atmospheric Features: Implications for Attribution of Causes of Observed Change.* A Report by the U.S. Climate Change Science Program and the Subcommittee on Global Change Research [Randall Dole, Martin Hoerling, and Siegfried Schubert (eds.)]. National Oceanic and Atmospheric Administration, National Climatic Data Center, Asheville, NC, 156 pp.

Widespread changes in extreme temperatures have been observed in the last 50 years across all world regions, including the United States. Cold days, cold nights, and frost have become less frequent, while hot days, hot nights, and heat waves have become more frequent.

Observational evidence from all continents and most oceans shows that many natural systems are being affected by regional climate changes, particularly temperature increases. However, directly attributing specific regional changes in climate to emissions of GHGs from human activities is difficult, especially for precipitation.

Ocean CO_2 uptake has lowered the average ocean pH (increased acidity) level by approximately 0.1 since 1750. Consequences for marine ecosystems can include reduced calcification by shell-forming organisms, and in the longer term, the dissolution of carbonate sediments.

Observations show that climate change is currently affecting U.S. physical and biological systems in significant ways. The consistency of these observed changes in physical and biological systems and the observed significant warming likely cannot be explained entirely due to natural variability or other confounding non-climate factors.

(3) Projections of Future Climate Change With Continued Increases in Elevated GHG Concentrations

Most future scenarios that assume no explicit GHG mitigation actions (beyond those already enacted) project increasing global GHG emissions over the century, with climbing GHG concentrations. Carbon dioxide is expected to remain the dominant anthropogenic GHG over the course of the 21st century. The radiative forcing associated with the non-CO_2 GHGs is still significant and increasing over time.

Future warming over the course of the 21st century, even under scenarios of low-emission growth, is very likely to be greater than observed warming over the past century. According to climate model simulations summarized by the IPCC,[220] through about 2030, the global warming rate is affected little by the choice of different future emissions scenarios. By the end of the 21st century, projected average global warming (compared to average temperature around 1990) varies significantly depending on the emission scenario and climate sensitivity assumptions, ranging from 3.2 to 7.2 °F (1.8 to 4.0 °C), with an uncertainty range of 2.0 to 11.5 °F (1.1 to 6.4 °C).

All of the United States is very likely to warm during this century, and most areas of the United States are expected to warm by more than the global average. The largest warming is projected to occur in winter over northern parts of Alaska. In western, central and eastern regions of North America, the projected warming has less seasonal variation and is not as large, especially near the coast, consistent with less warming over the oceans.

It is very likely that heat waves will become more intense, more frequent, and longer lasting in a future warm climate, whereas cold episodes are projected to decrease significantly.

Increases in the amount of precipitation are very likely in higher latitudes, while decreases are likely in most subtropical latitudes and the southwestern United States, continuing observed patterns. The mid-continental area is expected to experience drying during summer, indicating a greater risk of drought.

Intensity of precipitation events is projected to increase in the United States and other regions of the world. More intense precipitation is expected to increase the risk of flooding and result in greater runoff and erosion that has the potential for adverse water quality effects.

It is likely that hurricanes will become more intense, with stronger peak winds and more heavy precipitation associated with ongoing increases of tropical sea surface temperatures. Frequency changes in hurricanes are currently too uncertain for confident projections.

By the end of the century, global average sea level is projected by IPCC[221] to rise between 7.1 and 23 inches (18 and 59 centimeter [cm]), relative to around 1990, in the absence of increased dynamic ice sheet loss. Recent rapid changes at the edges of the Greenland and West Antarctic ice sheets show acceleration of flow and thinning. While an understanding of these ice sheet processes is incomplete, their inclusion in models would likely lead to increased sea level projections for the end of the 21st century.

Sea ice extent is projected to shrink in the Arctic under all IPCC emissions scenarios.

(4) Projected Risks and Impacts Associated With Future Climate Change

Risk to society, ecosystems, and many natural Earth processes increase with increases in both the rate and magnitude of climate change. Climate warming may increase the possibility of large, abrupt regional or global climatic events (*e.g.,* disintegration of the Greenland Ice Sheet or collapse of the West Antarctic Ice Sheet). The partial deglaciation of Greenland (and possibly West Antarctica) could be triggered by a sustained temperature increase of 2 to 7 °F (1 to 4° C) above 1990 levels. Such warming would cause a 13 to 20 feet (4 to 6 meter) rise in sea level, which would occur over a time period of centuries to millennia.

The CCSP[222] reports that climate change has the potential to accentuate the disparities already evident in the American health care system, as many of the expected health effects are likely to fall disproportionately on the poor, the elderly, the disabled, and the uninsured. The IPCC[223] states with very high confidence that climate change impacts on human health in U.S. cities will be compounded by population growth and an aging population.

Severe heat waves are projected to intensify in magnitude and duration over the portions of the United States where these events already occur, with potential increases in mortality and morbidity, especially among the elderly, young, and frail.

Some reduction in the risk of death related to extreme cold is expected. It is not clear whether reduced mortality from cold will be greater or less than increased heat-related mortality in the United States due to climate change.

[220] Meehl, G.A. *et al.* (2007) Global Climate Projections. In: *Climate Change 2007: The Physical Science Basis*. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

[221] IPCC (2007) Summary for Policymakers. In: *Climate Change 2007: The Physical Science Basis*. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

[222] Ebi, K.L., J. Balbus, P.L. Kinney, E. Lipp, D. Mills, M.S. O'Neill, and M. Wilson (2008) Effects of Global Change on Human Health. In: *Analyses of the effects of global change on human health and welfare and human systems*. A Report by the U.S. Climate Change Science Program and the Subcommittee on Global Change Research. [Gamble, J.L. (ed.), K.L. Ebi, F.G. Sussman, T.J. Wilbanks, (Authors)]. U.S. Environmental Protection Agency, Washington, DC, USA, pp. 2–1 to 2–78.

[223] Field, C.B. *et al.* (2007) North America. In: *Climate Change 2007: Impacts, Adaptation and Vulnerability*. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

Increases in regional ozone pollution relative to ozone levels without climate change are expected due to higher temperatures and weaker circulation in the United States and other world cities relative to air quality levels without climate change. Climate change is expected to increase regional ozone pollution, with associated risks in respiratory illnesses and premature death. In addition to human health effects, tropospheric ozone has significant adverse effects on crop yields, pasture and forest growth, and species composition. The directional effect of climate change on ambient particulate matter levels remains uncertain.

Within settlements experiencing climate change, certain parts of the population may be especially vulnerable; these include the poor, the elderly, those already in poor health, the disabled, those living alone, and/or indigenous populations dependent on one or a few resources. Thus, the potential impacts of climate change raise environmental justice issues.

The CCSP [224] concludes that, with increased CO_2 and temperature, the life cycle of grain and oilseed crops will likely progress more rapidly. But, as temperature rises, these crops will increasingly begin to experience failure, especially if climate variability increases and precipitation lessens or becomes more variable. Furthermore, the marketable yield of many horticultural crops (*e.g.*, tomatoes, onions, fruits) is very likely to be more sensitive to climate change than grain and oilseed crops.

Higher temperatures will very likely reduce livestock production during the summer season in some areas, but these losses will very likely be partially offset by warmer temperatures during the winter season.

Cold-water fisheries will likely be negatively affected; warm-water fisheries will generally benefit; and the results for cool-water fisheries will be mixed, with gains in the northern and losses in the southern portions of ranges.

Climate change has very likely increased the size and number of forest fires, insect outbreaks, and tree mortality in the interior West, the Southwest, and Alaska, and will continue to do so. Over North America, forest growth and productivity have been observed to increase since the middle of the 20th century, in part due to observed climate change. Rising CO_2 will very likely increase photosynthesis for forests, but the increased photosynthesis will likely only increase wood production in young forests on fertile soils. The combined effects of expected increased temperature, CO_2, nitrogen deposition, ozone, and forest disturbance on soil processes and soil carbon storage remain unclear.

Coastal communities and habitats will be increasingly stressed by climate change impacts interacting with development and pollution. Sea level is rising along much of the U.S. coast, and the rate of change will very likely increase in the future, exacerbating the impacts of progressive inundation, storm-surge flooding, and shoreline erosion. Storm impacts are likely to be more severe, especially along the Gulf and Atlantic coasts. Salt marshes, other coastal habitats, and dependent species are threatened by sea level rise, fixed structures blocking landward migration, and changes in vegetation. Population growth and rising value of infrastructure in coastal areas increases vulnerability to climate variability and future climate change.

Climate change will likely further constrain already over-allocated water resources in some regions of the United States, increasing competition among agricultural, municipal, industrial, and ecological uses. Although water management practices in the United States are generally advanced, particularly in the West, the reliance on past conditions as the basis for current and future planning may no longer be appropriate, as climate change increasingly creates conditions well outside of historical observations. Rising temperatures will diminish snowpack and increase evaporation, affecting seasonal availability of water. In the Great Lakes and major river systems, lower water levels are likely to exacerbate challenges relating to water quality, navigation, recreation, hydropower generation, water transfers, and binational relationships. Decreased water supply and lower water levels are likely to exacerbate challenges relating to aquatic navigation in the United States.

Higher water temperatures, increased precipitation intensity, and longer periods of low flows will exacerbate many forms of water pollution, potentially making attainment of water quality goals more difficult. As waters become warmer, the aquatic life they now support will be replaced by other species better adapted to warmer water. In the long term, warmer water and changing flow may result in deterioration of aquatic ecosystems.

Ocean acidification is projected to continue, resulting in the reduced biological production of marine calcifiers, including corals.

Climate change is likely to affect U.S. energy use and energy production and physical and institutional infrastructures. It will also likely interact with and possibly exacerbate ongoing environmental change and environmental pressures in settlements, particularly in Alaska where indigenous communities are facing major environmental and cultural impacts. The U.S. energy sector, which relies heavily on water for hydropower and cooling capacity, may be adversely impacted by changes to water supply and quality in reservoirs and other water bodies. Water infrastructure, including drinking water and wastewater treatment plants, and sewer and stormwater management systems, will be at greater risk of flooding, sea level rise and storm surge, low flows, and other factors that could impair performance.

Disturbances such as wildfires and insect outbreaks are increasing in the United States and are likely to intensify in a warmer future with warmer winters, drier soils, and longer growing seasons. Although recent climate trends have increased vegetation growth, continuing increases in disturbances are likely to limit carbon storage, facilitate invasive species, and disrupt ecosystem services.

Over the 21st century, changes in climate will cause species to shift north and to higher elevations and fundamentally rearrange U.S. ecosystems. Differential capacities for range shifts and constraints from development, habitat fragmentation, invasive species, and broken ecological connections will alter ecosystem structure, function, and services.

(5) Present and Projected U.S. Regional Climate Change Impacts

Climate change impacts will vary in nature and magnitude across different regions of the United States.

Sustained high summer temperatures, heat waves, and declining air quality are projected in the Northeast,[225]

[224] Backlund, P., A. Janetos, D.S. Schimel, J. Hatfield, M.G. Ryan, S.R. Archer, and D. Lettenmaier (2008) Executive Summary. In: *The Effects of Climate Change on Agriculture, Land Resources, Water Resources, and Biodiversity in the United States.* A Report by the U.S. Climate Change Science Program and the Subcommittee on Global Change Research. Washington, DC., USA, 362 pp.

[225] Northeast includes West Virginia, Maryland, Delaware, Pennsylvania, New Jersey, New York, Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire, and Maine.

Southeast,[226] Southwest,[227] and Midwest.[228] Projected climate change would continue to cause loss of sea ice, glacier retreat, permafrost thawing, and coastal erosion in Alaska.

Reduced snowpack, earlier spring snowmelt, and increased likelihood of seasonal summer droughts are projected in the Northeast, Northwest,[229] and Alaska. More severe, sustained droughts and water scarcity are projected in the Southeast, Great Plains,[230] and Southwest.

The Southeast, Midwest, and Northwest in particular are expected to be impacted by an increased frequency of heavy downpours and greater flood risk.

Ecosystems of the Southeast, Midwest, Great Plains, Southwest, Northwest, and Alaska are expected to experience altered distribution of native species (including local extinctions), more frequent and intense wildfires, and an increase in insect pest outbreaks and invasive species.

Sea level rise is expected to increase storm surge height and strength, flooding, erosion, and wetland loss along the coasts, particularly in the Northeast, Southeast, and islands.

Warmer water temperatures and ocean acidification are expected to degrade important aquatic resources of islands and coasts such as coral reefs and fisheries.

A longer growing season, low levels of warming, and fertilization effects of carbon dioxide may benefit certain crop species and forests, particularly in the Northeast and Alaska. Projected summer rainfall increases in the Pacific islands may augment limited freshwater supplies. Cold-related mortality is projected to decrease, especially in the Southeast. In the Midwest in particular, heating oil demand and snow-related traffic accidents are expected to decrease.

Climate change impacts in certain regions of the world may exacerbate problems that raise humanitarian, trade, and national security issues for the United States. The IPCC[231] identifies the most vulnerable world regions as the Arctic, because of the effects of high rates of projected warming on natural systems; Africa, especially the sub-Saharan region, because of current low adaptive capacity as well as climate change; small islands, due to high exposure of population and infrastructure to risk of sea level rise and increased storm surge; and Asian mega-deltas, such as the Ganges-Brahmaputra and the Zhujiang, due to large populations and high exposure to sea level rise, storm surge and river flooding. Climate change has been described as a potential threat multiplier with regard to national security issues.

E. Changes in Atmospheric CO_2 Concentrations, Global Mean Temperature, Sea Level Rise, and Ocean pH Associated with the Proposal's GHG Emissions Reductions

EPA examined[232] the reductions in CO_2 and other GHGs associated with this proposal and analyzed the projected effects on atmospheric CO_2 concentrations, global mean surface temperature, sea level rise, and ocean pH which are common variables used as indicators of climate change. The analysis projects that the preferred alternative of this proposal will reduce atmospheric concentrations of CO_2, global climate warming and sea level rise. Although the projected reductions and improvements are small in overall magnitude by themselves, they are quantifiable and would contribute to reducing the risks associated with climate change.

EPA determines that the projected reductions in atmospheric CO_2, global mean temperature and sea level rise are meaningful in the context of this proposal. In addition, EPA has conducted an analysis to evaluate the projected changes in ocean pH in the context of the changes in emissions from this proposal. The results for projected atmospheric CO_2 concentrations are estimated to be reduced by 0.693 to 0.784 part per million by volume (ppmv) (average of 0.732 ppmv), global mean temperature is estimated to be reduced by 0.002 to 0.004°C, sea-level rise is projected to be reduced by approximately 0.012–0.048 cm based on a range of climate sensitivities, and ocean pH will increase by 0.0003 pH units by 2100.

(1) Estimated Projected Reductions in Atmospheric CO_2 Concentration, Global Mean Surface Temperatures, Sea Level Rise, and Ocean pH

EPA estimated changes in the atmospheric CO_2 concentration, global mean temperature, and sea level rise out to 2100 resulting from the emissions reductions in this proposal using the GCAM (Global Change Assessment Model, formerly MiniCAM), integrated assessment model[233] coupled with the Model for the Assessment of Greenhouse Gas Induced Climate Change (MAGICC, version 5.3v2).[234] GCAM was used to create the globally and temporally consistent set of climate relevant variables required for running MAGICC. MAGICC was then used to estimate the projected change in these variables over time. Given the magnitude of the estimated emissions reductions associated with the rule, a simple climate model such as MAGICC is reasonable for estimating the atmospheric and climate response. This widely-used, peer reviewed modeling tool was also used to project temperature and sea level rise under different emissions scenarios in the Third and Fourth Assessments of the IPCC.

The integrated impact of the following pollutant and greenhouse gas emissions changes are considered: CO_2, CH_4, N_2O, NO_X, CO_2 and SO2, and volatile organic compounds (VOC). For CO, SO_2, and NO_X, emissions reductions were estimated for 2018, 2030, and 2050 (provided in Section VII.A). For CO_2, CH_4, and N_2O an annual time-series of

[226] Southeast includes Kentucky, Virginia, Arkansas, Tennessee, North Carolina, South Carolina, southeast Texas, Louisiana, Mississippi, Alabama, Georgia, and Florida.

[227] Southwest includes California, Nevada, Utah, western Colorado, Arizona, New Mexico (except the extreme eastern section), and southwest Texas.

[228] The Midwest includes Minnesota, Wisconsin, Michigan, Iowa, Illinois, Indiana, Ohio, and Missouri.

[229] The Northwest includes Washington, Idaho, western Montana, and Oregon.

[230] The Great Plains includes central and eastern Montana, North Dakota, South Dakota, Wyoming, Nebraska, eastern Colorado, Nebraska, Kansas, extreme eastern New Mexico, central Texas, and Oklahoma

[231] Parry, M.L. *et al.* (2007) Technical Summary. In: *Climate Change 2007: Impacts, Adaptation and Vulnerability.* Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden, and C.E. Hanson (eds.)], Cambridge University Press, Cambridge, United Kingdom, pp. 23S78.

[232] Using the Model for the Assessment of Greenhouse Gas Induced Climate Change (MAGICC) 5.3v2, *http://www.cgd.ucar.edu/cas/wigley/magicc/*), EPA estimated the effects of this proposal's greenhouse gas emissions reductions on global mean temperature and sea level. Please refer to Chapter 8.4 of the RIA for additional information.

[233] GCAM is a long-term, global integrated assessment model of energy, economy, agriculture and land use, that considers the sources of emissions of a suite of GHG's, emitted in 14 globally disaggregated regions, the fate of emissions to the atmosphere, and the consequences of changing concentrations of greenhouse related gases for climate change. GCAM begins with a representation of demographic and economic developments in each region and combines these with assumptions about technology development to describe an internally consistent representation of energy, agriculture, land-use, and economic developments that in turn shape global emissions.

Brenkert A, S. Smith, S. Kim, and H. Pitcher, 2003: Model Documentation for the MiniCAM. PNNL–14337, Pacific Northwest National Laboratory, Richland, Washington.

[234] Wigley, T.M.L. 2008. MAGICC 5.3.v2 User Manual. *UCAR*—Climate and Global Dynamics Division, Boulder, Colorado. *http://www.cgd.ucar.edu/cas/wigley/magicc/.*

(upstream + downstream) emissions reductions estimated from the proposal were input directly. The GHG emissions reductions, from Section VI.C, were applied as net reductions to a global reference case (or baseline) emissions scenario in GCAM to generate an emissions scenario specific to this proposal. EPA linearly scaled emissions reductions between a zero input value in 2013 and the value supplied for 2018 to produce the reductions for 2014–2018. A similar scaling was used for 2019–2029 and 2031–2050. The emissions reductions past 2050 were scaled with total U.S. road transportation fuel consumption from the GCAM reference scenario. Road transport fuel consumption past 2050 does not change significantly and thus emissions reductions remain relatively constant from 2050 through 2100. Specific details about the reference case scenario and how the emissions reductions were applied to generate the scenario can be found in the proposal's RIA, Chapter 8.4.

MAGICC is a global model and is primarily concerned with climate, therefore the impact of short-lived climate forcing agents (*e.g.*, O_3) are not explicitly simulated as in regional air quality models. While many precursors related to short-lived climate forcers such as ozone are considered, MAGICC simulates the longer term effect on climate from long-lived GHGs. The impacts to ground-level ozone and other non-GHGs are discussed in Section VII of this proposal and the draft RIA Chapter 8.2. Some aerosols, such as black carbon, cause a positive forcing or warming effect by absorbing incoming solar radiation. There remain some significant scientific uncertainties about black carbon's total climate effect,[235] as well as concerns about how to treat the short-lived black carbon emissions alongside the long-lived, well-mixed greenhouse gases in a common framework (*e.g.*, what are the appropriate metrics to compare the warming and/or climate effects of the different substances, given that, unlike greenhouse gases, the magnitude of aerosol effects can vary immensely with location and season of emissions). Further, estimates of the direct radiative forcing of individual species are less certain than the total direct aerosol radiative forcing.

There is no single accepted methodology for transforming black carbon emissions into temperature change or CO_2eq emissions. The interaction of black carbon (and other co-emitted aerosol species) with clouds is especially poorly quantified, and this factor is key to any attempt to estimate the net climate impacts of black carbon. While black carbon is likely to be an important contributor to climate change, it would be premature to include quantification of black carbon climate impacts in an analysis of the proposed standards at this time.

Changes in atmospheric CO_2 concentration, global mean temperature, and sea level rise for both the reference case and the emissions scenarios associated with this proposal were computed using MAGICC. To calculate the reductions in the atmospheric CO_2 concentrations as well as in temperature and sea level resulting from this proposal, the output from the policy scenario associated with the preferred approach of this proposal was subtracted from an existing Global Change Assessment Model (GCAM, formerly MiniCAM) reference emission scenario. To capture some key uncertainties in the climate system with the MAGICC model, changes in atmospheric CO_2, global mean temperature and sea level rise were projected across the most current IPCC range of climate sensitivities which ranges from 1.5 °C to 6.0 °C.[236] This range reflects the uncertainty for equilibrium climate sensitivity for how much global mean temperature would rise if the concentration of carbon dioxide in the atmosphere were to double. The information for this range come from constraints from past climate change on various time scales, and the spread of results for climate sensitivity from ensembles of models.[237] Details about this modeling analysis can be found in the draft RIA Chapter 8.4.

The results of this modeling, summarized in Table VI–8, show small but quantifiable reductions in atmospheric CO_2 concentrations, projected global mean temperature and sea level resulting from this proposal, across all climate sensitivities. As a result of the emission reductions from the proposed standards for this proposal, the atmospheric CO_2 concentration is projected to be reduced by an average of 0.732 ppmv, the global mean temperature is projected to be reduced by approximately 0.002–0.004 °C by 2100, and global mean sea level rise is projected to be reduced by approximately 0.012–0.050 cm by 2100. The range of reductions in global mean temperature and sea level rise is larger because CO_2 concentrations are not tightly coupled to climate sensitivity, whereas the magnitude of temperature change response to CO_2 changes (and therefore sea level rise) is tightly coupled to climate sensitivity in the MAGICC model.

[235] The range of uncertainty in the current magnitude of black carbon's climate forcing effect is evidenced by the ranges presented by the IPCC Fourth Assessment Report (2007) and the more recent study by Ramanathan, V. and Carmichael, G. (2008) Global and regional climate changes due to black carbon. Nature Geoscience, 1(4): 221–227.

[236] In IPCC reports, equilibrium climate sensitivity refers to the equilibrium change in the annual mean global surface temperature following a doubling of the atmospheric equivalent carbon dioxide concentration. The IPCC states that climate sensitivity is "likely" to be in the range of 2 °C to 4.5 °C, "very unlikely" to be less than 1.5 °C, and "values substantially higher than 4.5° C cannot be excluded." IPCC WGI, 2007, *Climate Change 2007—The Physical Science Basis*, Contribution of Working Group I to the Fourth Assessment Report of the IPCC, *http://www.ipcc.ch/*.

[237] Meehl, G.A. et al. (2007) Global Climate Projections. In: *Climate Change 2007: The Physical Science Basis*. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

Table VI-8: Impact of GHG Emissions Reductions on Projected Changes in Global Climate Associated with the Proposal (Based on a range of climate sensitivities from 1.5-6°C)

Variable	Units	Year	Projected Change
Atmospheric CO_2 Concentration	ppmv	2100	-0.693 to -0.784
Global Mean Surface Temperature	º C	2100	-0.002 to -0.004
Sea Level Rise	cm	2100	-0.012 to -0.048
Ocean pH	pH units	2100	0.0003[a]

Notes:

[a] The value for projected change in ocean pH is based on a climate sensitivity of 3.0.

The reductions are small relative to the IPCC's 2100 "best estimates" [238] for global mean temperature increases (1.1—6.4 °C) and sea level rise (0.18–0.59m) for all global GHG emissions sources for a range of emissions scenarios.[239] These "best estimates" are assessed from a hierarchy of models that encompass a simple climate model, several Earth Models of Intermediate Complexity, and a large number of Atmosphere-Ocean Global Circulation Models and are based on the six major scenarios described in the Special Report on Emissions Scenarios, not including dynamical ice sheet behavior that would lead to an increase in sea level rise. Further discussion of EPA's modeling analysis is found in the draft RIA, Chapter 8.

EPA used the Program CO2SYS,[240] version 1.05 to estimate projected changes in ocean pH for tropical waters based on the atmospheric CO_2 concentration change (reduction) resulting from this proposal. The program performs calculations relating parameters of the CO_2 system in seawater. EPA used the program to calculate ocean pH as a function of atmospheric CO_2 concentrations, among other specified input conditions. Based on the projected atmospheric CO_2 concentration reductions (0.731 ppmv by 2100 for a climate sensitivity of 3.0) that would result from this proposal, the program calculates an increase in ocean pH of 0.0003 pH units. Thus, this analysis indicates the projected decrease in atmospheric CO_2 concentrations from the preferred approach associated with this proposal would result in an increase in ocean pH. For additional validation, results were generated from the atmospheric CO_2 concentration change for each climate sensitivity case (1.5 to 6.0) and using different known constants from the literature. A comprehensive discussion of the modeling analysis associated with ocean pH is provided in the draft RIA, Chapter 8.

(2) Proposal's Effect on Climate

As a substantial portion of CO_2 emitted into the atmosphere is not removed by natural processes for millennia, each unit of CO_2 not emitted into the atmosphere avoids essentially permanent climate change on centennial time scales. Reductions in emissions in the near-term are important in determining long-term climate stabilization and associated impacts experienced not just over the next decades but in the coming centuries and millennia.[241] Though the magnitude of the avoided climate change projected here is small, these reductions would represent a reduction in the adverse risks associated with climate change (though these risks were not formally estimated for this proposal) across a range of equilibrium climate sensitivities.

EPA's analysis of the proposal's impact on global climate conditions is intended to quantify these potential reductions using the best available science. While EPA's modeling results of the effect of this proposal alone show small differences in climate effects (CO_2 concentration, temperature, sea-level rise, ocean pH), when expressed in terms of global climate endpoints and global GHG emissions, yield results that are repeatable and consistent within the modeling frameworks used.

VII. How Would This Proposal Impact Non-GHG Emissions and Their Associated Effects?

A. Emissions Inventory Impacts

(1) Upstream Impacts of the Program

Increasing efficiency in heavy-duty vehicles would result in reduced fuel demand and therefore reductions in the emissions associated with all processes involved in getting petroleum to the pump. These projected upstream emission impacts on criteria pollutants are summarized in Table VII–1. Table VII–2 shows the corresponding projected impacts on upstream air toxic emissions in 2030.

[238] IPCC's "best estimates" at the end of the 21st century from Table TS.6 in the Technical Summary: Contribution of Working Group I (Solomon *et al.*, 2007).

[239] IPCC (2007) Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor, and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

[240] Lewis, E., and D. W. R. Wallace. 1998. Program Developed for CO_2 System Calculations. ORNL/CDIAC–105. Carbon Dioxide Information Analysis Center, Oak Ridge National Laboratory, U.S. Department of Energy, Oak Ridge, Tennessee.

[241] National Research Council (NRC) (2010). Climate Stabilization Targets. Committee on Stabilization Targets for Atmospheric Greenhouse Gas Concentrations; Board on Atmospheric Sciences and Climate, Division of Earth and Life Sciences, National Academy Press. Washington, DC.

Table VII-1: Overall estimated upstream impacts on criteria pollutants for calendar years 2018, 2030, and 2050 (short tons)

Calendar Year	NO_X	VOC	CO	$PM_{2.5}$
2018	-5,683	-1,679	-1,945	-852
2030	-9,623	-4,419	-3,214	-1,331
2050	-14,692	-6,880	-4,942	-2,034

Table VII-2: Overall estimated upstream impacts on air toxics for calendar years 2018, 2030, and 2050 (short tons)

Calendar Year	Benzene	1,3-butadiene	Formaldehyde	Acetaldehyde	Acrolein
2018	-11	-1	-10	-2	0
2030	-19	-1	-25	-4	-1
2050	-30	-1	-36	-5	-1

To project these impacts, EPA estimated the impact of reduced petroleum volumes on the extraction and transportation of crude oil as well as the production and distribution of finished gasoline and diesel. For the purpose of assessing domestic-only emission reductions it was necessary to estimate the fraction of fuel savings attributable to domestic finished gasoline and diesel, and of this fuel what fraction is produced from domestic crude. For this analysis EPA estimated that 50 percent of fuel savings is attributable to domestic finished gasoline and diesel and that 90 percent of this gasoline and diesel originated from imported crude. Emission factors for most upstream emission sources are based on the GREET1.8 model, developed by DOE's Argonne National Laboratory but in some cases the GREET values were modified or updated by EPA to be consistent with the National Emission Inventory. These updates are consistent with those used for the upstream analysis included in the Light-Duty GHG rulemaking. More information on the development of the emission factors used in this analysis can be found in draft RIA Chapter 5.

(2) Downstream Impacts of the Program

While these proposed rules do not regulate non-GHG pollutants, EPA expects reductions in downstream emissions of most non-GHG pollutants. These pollutants include NO_X, SO_2, CO, and HC. The primary reason for this is the improvements in road load (aerodynamics and tire rolling resistance) under the proposal. Another reason is that emissions from certain pollutants (*e.g.,* SO_2) are proportional to fuel consumption. For vehicle types not affected by road load improvements, non-GHG emissions may increase very slightly due to VMT rebound. EPA also anticipates the use of APUs in combination tractors for GHG reduction purposes during extended idling. These units exhibit different non-GHG emissions characteristics compared to the on-road engines they would replace during extended idling. EPA used MOVES to determine non-GHG emissions inventories for baseline and control cases. Further information about the MOVES analysis is available in Section VI and RIA Chapter 5. The improvements in road load, use of APUs, and VMT rebound were included in the MOVES runs and post-processing. Table VII–3 summarizes the downstream criteria pollutant impacts of this proposal. Most of the impacts shown are through projected increased APU use. Because APUs are required to meet much less stringent $PM_{2.5}$ standards than on-road engines, the projected widespread use of APUs leads to higher $PM_{2.5}$. Table VII–4 summarizes the downstream air toxics impacts of this proposal.

Table VII-3: Overall Estimated Downstream Impacts on Criteria Pollutants (short tons)

Calendar Year	Downstream NO_X	Downstream VOC	Downstream CO	Downstream $PM_{2.5}$ [a]
2018	-96,764	-10,404	-23,329	714
2030	-231,631	-25,121	-53,709	1,694
2050	-326,491	-35,648	-75,083	2,416

Note:
[a] Positive number means emissions would increase from baseline to control case. $PM_{2.5}$ from tire wear and brake wear is included.

Table VII-4: Overall Estimated Downstream Impacts on Air Toxics (short tons)

Calendar Year	Benzene	1,3-butadiene	Formaldehyde	Acetaldehyde	Acrolein
2018	-143	0	-2,607	-796	-109
2030	-339	0	-6,227	-1,899	-261
2050	-477	1	-8,774	-2,676	-368

(3) Total Impacts of the Program

As shown in Table VII–5 and Table VII–6, the agencies estimate that this program would result in reductions of NO_X, VOC, CO, SO_X, and air toxics. For NO_X, VOC, and CO, much of the net reductions are realized through the use of APUs, which emit these pollutants at a lower rate than on-road engines during extended idle operation. Additional reductions are achieved in all pollutants through reduced road load (improved aerodynamics and tire rolling resistance), which reduces the amount of work required to travel a given distance. For SO_X, downstream emissions are roughly proportional to fuel consumption; therefore a decrease is seen in both upstream and downstream sources. The downstream increase in $PM_{2.5}$ due to APU use is mostly negated by upstream $PM_{2.5}$ reductions, though our calculations show a slight net increase in 2030 and 2050.[242]

Table VII-5: Overall Estimated Total Impacts (Upstream Plus Downstream) on Criteria Pollutants Results are shown in both short tons and percent change from baseline to control case.

CY	NO_X		VOC		CO		$PM_{2.5}$	
	short tons	%	short tons	%	short tons	%	short tons	%
2018	-102,447	-5.0%	-12,083	-4.0%	-25,274	-0.79%	-138	-0.17%
2030	-241,254	-19.6%	-29,540	-14.8%	-56,923	-2.13%	363	0.98%
2050	-341,183	-21.7%	-42,528	-17.0%	-80,025	-2.46%	382	0.80%

Table VII-6: Overall Estimated Total Impacts (Upstream Plus Downstream) Impacts on Air Toxics

CY	Benzene		1,3-butadiene		Formaldehyde		Acetaldehyde		Acrolein	
	short tons	%	short tons	%	short tons	%	short tons	%	short tons	%
2018	-154	-3.6	-1	-0.1	-2,617	-15.3	-798	-11.3	-109	-10.2
2030	-358	-13.0	-1	-0.1	-6,252	-44.0	-1,903	-37.8	-262	-37.7
2050	-507	-15.2	0	0.0	-8,810	-46.4	-2,681	-41.2	-369	-41.6

[242] Although the net impact is small when aggregated to the national level, it is unlikely that the geographic location of increases in downstream $PM_{2.5}$ emissions will coincide with the location of decreases in upstream $PM_{2.5}$ emissions. Impacts of the emissions changes will be included in the air quality modeling that will be completed for the final rulemaking.

B. Health Effects of Non-GHG Pollutants

In this section we discuss health effects associated with exposure to some of the criteria and air toxic pollutants impacted by the proposed heavy-duty vehicle standards.

(1) Particulate Matter

(a) Background

Particulate matter is a generic term for a broad class of chemically and physically diverse substances. It can be principally characterized as discrete particles that exist in the condensed (liquid or solid) phase spanning several orders of magnitude in size. Since 1987, EPA has delineated that subset of inhalable particles small enough to penetrate to the thoracic region (including the tracheobronchial and alveolar regions) of the respiratory tract (referred to as thoracic particles). Current National Ambient Air Quality Standards (NAAQS) use $PM_{2.5}$ as the indicator for fine particles (with $PM_{2.5}$ referring to particles with a nominal mean aerodynamic diameter less than or equal to 2.5 μm), and use PM_{10} as the indicator for purposes of regulating the coarse fraction of PM_{10} (referred to as thoracic coarse particles or coarse-fraction particles; generally including particles with a nominal mean aerodynamic diameter greater than 2.5 μm and less than or equal to 10 μm, or $PM_{10–2.5}$). Ultrafine particles are a subset of fine particles, generally less than 100 nanometers (0.1 μm) in aerodynamic diameter.

Fine particles are produced primarily by combustion processes and by transformations of gaseous emissions (*e.g.,* SO_X, NO_X, and VOC) in the atmosphere. The chemical and physical properties of $PM_{2.5}$ may vary greatly with time, region, meteorology, and source category. Thus, $PM_{2.5}$ may include a complex mixture of different pollutants including sulfates, nitrates, organic compounds, elemental carbon and metal compounds. These particles can remain in the atmosphere for days to weeks and travel hundreds to thousands of kilometers.

(b) Health Effects of PM

Scientific studies show ambient PM is associated with a series of adverse health effects. These health effects are discussed in detail in EPA's Integrated Science Assessment for Particulate Matter (ISA).[243] Further discussion of health effects associated with PM can also be found in the draft RIA for this proposal. The ISA summarizes evidence associated with $PM_{2.5}$, $PM_{10–2.5}$, and ultrafine particles.

The ISA concludes that health effects associated with short-term exposures (hours to days) to ambient $PM_{2.5}$ include mortality, cardiovascular effects, such as altered vasomotor function and hospital admissions and emergency department visits for ischemic heart disease and congestive heart failure, and respiratory effects, such as exacerbation of asthma symptoms in children and hospital admissions and emergency department visits for chronic obstructive pulmonary disease and respiratory infections.[244] The ISA notes that long-term exposure to $PM_{2.5}$ (months to years) is associated with the development/progression of cardiovascular disease, premature mortality, and respiratory effects, including reduced lung function growth, increased respiratory symptoms, and asthma development.[245] The ISA concludes that the currently available scientific evidence from epidemiologic, controlled human exposure, and toxicological studies supports a causal association between short- and long-term exposures to $PM_{2.5}$ and cardiovascular effects and mortality. Furthermore, the ISA concludes that the collective evidence supports likely causal associations between short- and long-term PM2.5 exposures and respiratory effects. The ISA also concludes that the scientific evidence is suggestive of a causal association for reproductive and developmental effects and cancer, mutagenicity, and genotoxicity and long-term exposure to $PM_{2.5}$.[246]

For $PM_{10–2.5}$, the ISA concludes that the current evidence is suggestive of a causal relationship between short-term exposures and cardiovascular effects, such as hospitalization for ischemic heart disease. There is also suggestive evidence of a causal relationship between short-term $PM_{10–2.5}$ exposure and mortality and respiratory effects. Data are inadequate to draw conclusions regarding the health effects associated with long-term exposure to $PM_{10–2.5}$.[247]

For ultrafine particles, the ISA concludes that there is suggestive evidence of a causal relationship between short-term exposures and cardiovascular effects, such as changes in heart rhythm and blood vessel function. It also concludes that there is suggestive evidence of association between short-term exposure to ultrafine particles and respiratory effects. Data are inadequate to draw conclusions regarding the health effects associated with long-term exposure to ultrafine particles.[248]

(2) Ozone

(a) Background

Ground-level ozone pollution is typically formed by the reaction of VOC and NO_X in the lower atmosphere in the presence of sunlight. These pollutants, often referred to as ozone precursors, are emitted by many types of pollution sources, such as highway and nonroad motor vehicles and engines, power plants, chemical plants, refineries, makers of consumer and commercial products, industrial facilities, and smaller area sources.

The science of ozone formation, transport, and accumulation is complex. Ground-level ozone is produced and destroyed in a cyclical set of chemical reactions, many of which are sensitive to temperature and sunlight. When ambient temperatures and sunlight levels remain high for several days and the air is relatively stagnant, ozone and its precursors can build up and result in more ozone than typically occurs on a single high-temperature day. Ozone can be transported hundreds of miles downwind from precursor emissions, resulting in elevated ozone levels even in areas with low local VOC or NO_X emissions.

(b) Health Effects of Ozone

The health and welfare effects of ozone are well documented and are assessed in EPA's 2006 Air Quality Criteria Document and 2007 Staff Paper.[249] [250] People who are more susceptible to effects associated with exposure to ozone can include children, the elderly, and individuals with respiratory disease such as asthma. Those with greater exposures to ozone, for instance due to time spent outdoors (*e.g.,* children and outdoor workers), are of particular concern. Ozone can irritate the respiratory system, causing coughing, throat irritation, and breathing discomfort. Ozone can reduce

[243] U.S. EPA (2009) Integrated Science Assessment for Particulate Matter (Final Report). U.S. Environmental Protection Agency, Washington, DC, EPA/600/R–08/139F, Docket EPA–HQ–OAR–2010–0162.

[244] *See* U.S. EPA, 2009 Final PM ISA, Note 243, at Section 2.3.1.1.

[245] *See* U.S. EPA 2009 Final PM ISA, Note 243, at page 2–12, Sections 7.3.1.1 and 7.3.2.1.

[246] *See* U.S. EPA 2009 Final PM ISA, Note 243, at Section 2.3.2.

[247] *See* U.S. EPA 2009 Final PM ISA, Note 243, at Section 2.3.4, Table 2–6.

[248] *See* U.S. EPA 2009 Final PM ISA, Note 243, at Section 2.3.5, Table 2–6.

[249] U.S. EPA. (2006). Air Quality Criteria for Ozone and Related Photochemical Oxidants (Final). EPA/600/R–05/004aF–cF. Washington, DC: U.S. EPA. Docket EPA–HQ–OAR–2010–0162.

[250] U.S. EPA. (2007). Review of the National Ambient Air Quality Standards for Ozone: Policy Assessment of Scientific and Technical Information, OAQPS Staff Paper. EPA–452/R–07–003. Washington, DC, U.S. EPA. Docket EPA–HQ–OAR–2010–0162.

lung function and cause pulmonary inflammation in healthy individuals. Ozone can also aggravate asthma, leading to more asthma attacks that require medical attention and/or the use of additional medication. Thus, ambient ozone may cause both healthy and asthmatic individuals to limit their outdoor activities. In addition, there is suggestive evidence of a contribution of ozone to cardiovascular-related morbidity and highly suggestive evidence that short-term ozone exposure directly or indirectly contributes to non-accidental and cardiopulmonary-related mortality, but additional research is needed to clarify the underlying mechanisms causing these effects. In a recent report on the estimation of ozone-related premature mortality published by NRC, a panel of experts and reviewers concluded that short-term exposure to ambient ozone is likely to contribute to premature deaths and that ozone-related mortality should be included in estimates of the health benefits of reducing ozone exposure.[251] Animal toxicological evidence indicates that with repeated exposure, ozone can inflame and damage the lining of the lungs, which may lead to permanent changes in lung tissue and irreversible reductions in lung function. The respiratory effects observed in controlled human exposure studies and animal studies are coherent with the evidence from epidemiologic studies supporting a causal relationship between acute ambient ozone exposures and increased respiratory-related emergency room visits and hospitalizations in the warm season. In addition, there is suggestive evidence of a contribution of ozone to cardiovascular-related morbidity and non-accidental and cardiopulmonary mortality.

(3) Nitrogen Oxides and Sulfur Oxides

(a) Background

Nitrogen dioxide (NO_2) is a member of the NO_X family of gases. Most NO_2 is formed in the air through the oxidation of nitric oxide (NO) emitted when fuel is burned at a high temperature. SO_2, a member of the sulfur oxide (SO_X) family of gases, is formed from burning fuels containing sulfur (*e.g.,* coal or oil derived), extracting gasoline from oil, or extracting metals from ore.

SO_2 and NO_2 can dissolve in water droplets and further oxidize to form sulfuric and nitric acid which react with ammonia to form sulfates and nitrates, both of which are important components of ambient PM. The health effects of ambient PM are discussed in Section VII. B. (1) (b) of this preamble. NO_X and NMHC are the two major precursors of ozone. The health effects of ozone are covered in Section VII. B. (2)(b).

(b) Health Effects of NO_2

Information on the health effects of NO_2 can be found in the EPA Integrated Science Assessment (ISA) for Nitrogen Oxides.[252] The EPA has concluded that the findings of epidemiologic, controlled human exposure, and animal toxicological studies provide evidence that is sufficient to infer a likely causal relationship between respiratory effects and short-term NO_2 exposure. The ISA concludes that the strongest evidence for such a relationship comes from epidemiologic studies of respiratory effects including symptoms, emergency department visits, and hospital admissions. The ISA also draws two broad conclusions regarding airway responsiveness following NO_2 exposure. First, the ISA concludes that NO_2 exposure may enhance the sensitivity to allergen-induced decrements in lung function and increase the allergen-induced airway inflammatory response following 30-minute exposures of asthmatics to NO_2 concentrations as low as 0.26 ppm. In addition, small but significant increases in non-specific airway hyperresponsiveness were reported following 1-hour exposures of asthmatics to 0.1 ppm NO_2. Second, exposure to NO_2 has been found to enhance the inherent responsiveness of the airway to subsequent nonspecific challenges in controlled human exposure studies of asthmatic subjects. Enhanced airway responsiveness could have important clinical implications for asthmatics since transient increases in airway responsiveness following NO_2 exposure have the potential to increase symptoms and worsen asthma control. Together, the epidemiologic and experimental data sets form a plausible, consistent, and coherent description of a relationship between NO_2 exposures and an array of adverse health effects that range from the onset of respiratory symptoms to hospital admission.

Although the weight of evidence supporting a causal relationship is somewhat less certain than that associated with respiratory morbidity, NO_2 has also been linked to other health endpoints. These include all-cause (nonaccidental) mortality, hospital admissions or emergency department visits for cardiovascular disease, and decrements in lung function growth associated with chronic exposure.

(c) Health Effects of SO_2

Information on the health effects of SO_2 can be found in the EPA Integrated Science Assessment for Sulfur Oxides.[253] SO_2 has long been known to cause adverse respiratory health effects, particularly among individuals with asthma. Other potentially sensitive groups include children and the elderly. During periods of elevated ventilation, asthmatics may experience symptomatic bronchoconstriction within minutes of exposure. Following an extensive evaluation of health evidence from epidemiologic and laboratory studies, the EPA has concluded that there is a causal relationship between respiratory health effects and short-term exposure to SO_2. Separately, based on an evaluation of the epidemiologic evidence of associations between short-term exposure to SO_2 and mortality, the EPA has concluded that the overall evidence is suggestive of a causal relationship between short-term exposure to SO_2 and mortality.

(4) Carbon Monoxide

Information on the health effects of CO can be found in the EPA Integrated Science Assessment (ISA) for Carbon Monoxide.[254] The ISA concludes that ambient concentrations of CO are associated with a number of adverse health effects.[255] This section provides a summary of the health effects associated with exposure to ambient concentrations of CO.[256]

[251] National Research Council (NRC), 2008. *Estimating Mortality Risk Reduction and Economic Benefits from Controlling Ozone Air Pollution.* The National Academies Press: Washington, DC Docket EPA–HQ–OAR–2010–0162

[252] U.S. EPA (2008). *Integrated Science Assessment for Oxides of Nitrogen—Health Criteria (Final Report).* EPA/600/R–08/071. Washington, DC: U.S.EPA. Docket EPA–HQ–OAR–2010–0162 .

[253] U.S. EPA. (2008). *Integrated Science Assessment (ISA) for Sulfur Oxides—Health Criteria (Final Report).* EPA/600/R–08/047F. Washington, DC: U.S. Environmental Protection Agency. Docket EPA–HQ–OAR–2010–0162.

[254] U.S. EPA, 2010. Integrated Science Assessment for Carbon Monoxide (Final Report). U.S. Environmental Protection Agency, Washington, DC, EPA/600/R–09/019F, 2010. *Available at http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=218686.* Docket EPA-HQ-OAR-2010-0162.

[255] The ISA evaluates the health evidence associated with different health effects, assigning one of five "weight of evidence" determinations: causal relationship, likely to be a causal relationship, suggestive of a causal relationship, inadequate to infer a causal relationship, and not likely to be a causal relationship. For definitions of these levels of evidence, please refer to Section 1.6 of the ISA.

[256] Personal exposure includes contributions from many sources, and in many different environments. Total personal exposure to CO includes both ambient and nonambient components; and both components may contribute to adverse health effects.

Human clinical studies of subjects with coronary artery disease show a decrease in the time to onset of exercise-induced angina (chest pain) and electrocardiogram changes following CO exposure. In addition, epidemiologic studies show associations between short-term CO exposure and cardiovascular morbidity, particularly increased emergency room visits and hospital admissions for coronary heart disease (including ischemic heart disease, myocardial infarction, and angina). Some epidemiologic evidence is also available for increased hospital admissions and emergency room visits for congestive heart failure and cardiovascular disease as a whole. The ISA concludes that a causal relationship is likely to exist between short-term exposures to CO and cardiovascular morbidity. It also concludes that available data are inadequate to conclude that a causal relationship exists between long-term exposures to CO and cardiovascular morbidity.

Animal studies show various neurological effects with in-utero CO exposure. Controlled human exposure studies report inconsistent neural and behavioral effects following low-level CO exposures. The ISA concludes the evidence is suggestive of a causal relationship with both short- and long-term exposure to CO and central nervous system effects.

A number of epidemiologic and animal toxicological studies cited in the ISA have evaluated associations between CO exposure and birth outcomes such as preterm birth or cardiac birth defects. The epidemiologic studies provide limited evidence of a CO-induced effect on preterm births and birth defects, with weak evidence for a decrease in birth weight. Animal toxicological studies have found associations between perinatal CO exposure and decrements in birth weight, as well as other developmental outcomes. The ISA concludes these studies are suggestive of a causal relationship between long-term exposures to CO and developmental effects and birth outcomes.

Epidemiologic studies provide evidence of effects on respiratory morbidity such as changes in pulmonary function, respiratory symptoms, and hospital admissions associated with ambient CO concentrations. A limited number of epidemiologic studies considered copollutants such as ozone, SO_2, and PM in two-pollutant models and found that CO risk estimates were generally robust, although this limited evidence makes it difficult to disentangle effects attributed to CO itself from those of the larger complex air pollution mixture. Controlled human exposure studies have not extensively evaluated the effect of CO on respiratory morbidity. Animal studies at levels of 50–100 ppm CO show preliminary evidence of altered pulmonary vascular remodeling and oxidative injury. The ISA concludes that the evidence is suggestive of a causal relationship between short-term CO exposure and respiratory morbidity, and inadequate to conclude that a causal relationship exists between long-term exposure and respiratory morbidity.

Finally, the ISA concludes that the epidemiologic evidence is suggestive of a causal relationship between short-term exposures to CO and mortality. Epidemiologic studies provide evidence of an association between short-term exposure to CO and mortality, but limited evidence is available to evaluate cause-specific mortality outcomes associated with CO exposure. In addition, the attenuation of CO risk estimates which was often observed in copollutant models contributes to the uncertainty as to whether CO is acting alone or as an indicator for other combustion-related pollutants. The ISA also concludes that there is not likely to be a causal relationship between relevant long-term exposures to CO and mortality.

(5) Air Toxics

Heavy-duty vehicle emissions contribute to ambient levels of air toxics known or suspected as human or animal carcinogens, or that have noncancer health effects. The population experiences an elevated risk of cancer and other noncancer health effects from exposure to the class of pollutants known collectively as "air toxics."[257] These compounds include, but are not limited to, benzene, 1,3-butadiene, formaldehyde, acetaldehyde, acrolein, diesel particulate matter and exhaust organic gases, polycyclic organic matter, and naphthalene. These compounds were identified as national or regional risk drivers in past National-scale Air Toxics Assessments and have significant inventory contributions from mobile sources.[258]

(a) Diesel Exhaust

Heavy-duty diesel engines emit diesel exhaust, a complex mixture composed of carbon dioxide, oxygen, nitrogen, water vapor, carbon monoxide, nitrogen compounds, sulfur compounds and numerous low-molecular-weight hydrocarbons. A number of these gaseous hydrocarbon components are individually known to be toxic, including aldehydes, benzene and 1,3-butadiene. The diesel particulate matter present in diesel exhaust consists of fine particles (< 2.5 μm), including a subgroup with a large number of ultrafine particles (< 0.1 μm). These particles have a large surface area which makes them an excellent medium for adsorbing organics and their small size makes them highly respirable. Many of the organic compounds present in the gases and on the particles, such as polycyclic organic matter, are individually known to have mutagenic and carcinogenic properties.

Diesel exhaust varies significantly in chemical composition and particle sizes between different engine types (heavy-duty, light-duty), engine operating conditions (idle, accelerate, decelerate), and fuel formulations (high/low sulfur fuel). Also, there are emissions differences between on-road and nonroad engines because the nonroad engines are generally of older technology. After being emitted in the engine exhaust, diesel exhaust undergoes dilution as well as chemical and physical changes in the atmosphere. The lifetime for some of the compounds present in diesel exhaust ranges from hours to days.[259]

(i) Diesel Exhaust: Potential Cancer Effects

In EPA's 2002 Diesel Health Assessment Document (Diesel HAD),[260] exposure to diesel exhaust was classified as likely to be carcinogenic to humans by inhalation from environmental exposures, in accordance with the revised draft 1996/1999 EPA cancer guidelines. A number of other agencies (National Institute for Occupational Safety and Health, the International Agency for Research on Cancer, the World Health Organization, California EPA, and the U.S. Department of Health and Human Services) have made similar classifications. However, EPA also concluded in the Diesel HAD that it is not possible currently to calculate a cancer unit risk for diesel exhaust due to a variety of factors that limit the

[257] U.S. EPA. 2002 National-Scale Air Toxics Assessment. *http://www.epa.gov/ttn/atw/nata1 2002/risksum.html.* Docket EPA–HQ–OAR–2010–0162.

[258] U.S. EPA 2009. National-Scale Air Toxics Assessment for 2002. *http://www.epa.gov/ttn/atw/nata2002/.* Docket EPA–HQ–OAR–2010–0162.

[259] U.S. EPA (2002). *Health Assessment Document for Diesel Engine Exhaust.* EPA/600/8–90/057F Office of Research and Development, Washington DC. Retrieved on March 17, 2009 from *http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=29060.* Docket EPA–HQ–OAR–2010–0162.

[260] *See* U.S. EPA (2002) Diesel HAD, Note 259, at pp. 1–1, 1–2.

current studies, such as limited quantitative exposure histories in occupational groups investigated for lung cancer.

For the Diesel HAD, EPA reviewed 22 epidemiologic studies on the subject of the carcinogenicity of workers exposed to diesel exhaust in various occupations, finding increased lung cancer risk, although not always statistically significant, in 8 out of 10 cohort studies and 10 out of 12 case-control studies within several industries. Relative risk for lung cancer associated with exposure ranged from 1.2 to 1.5, although a few studies show relative risks as high as 2.6. Additionally, the Diesel HAD also relied on two independent meta-analyses, which examined 23 and 30 occupational studies respectively, which found statistically significant increases in smoking-adjusted relative lung cancer risk associated with exposure to diesel exhaust of 1.33 to 1.47. These meta-analyses demonstrate the effect of pooling many studies and in this case show the positive relationship between diesel exhaust exposure and lung cancer across a variety of diesel exhaust-exposed occupations.[261] [262]

In the absence of a cancer unit risk, the Diesel HAD sought to provide additional insight into the significance of the diesel exhaust-cancer hazard by estimating possible ranges of risk that might be present in the population. An exploratory analysis was used to characterize a possible risk range by comparing a typical environmental exposure level for highway diesel sources to a selected range of occupational exposure levels. The occupationally observed risks were then proportionally scaled according to the exposure ratios to obtain an estimate of the possible environmental risk. A number of calculations are needed to accomplish this, and these can be seen in the EPA Diesel HAD. The outcome was that environmental risks from diesel exhaust exposure could range from a low of 10^{-4} to 10^{-5} to as high as 10^{-3}, reflecting the range of occupational exposures that could be associated with the relative and absolute risk levels observed in the occupational studies. Because of uncertainties, the analysis acknowledged that the risks could be lower than 10^{-4} or 10^{-5}, and a zero risk from diesel exhaust exposure was not ruled out.

(ii) Diesel Exhaust: Other Health Effects

Noncancer health effects of acute and chronic exposure to diesel exhaust emissions are also of concern to the EPA. EPA derived a diesel exhaust reference concentration (RfC) from consideration of four well-conducted chronic rat inhalation studies showing adverse pulmonary effects.[263] [264] [265] [266] The RfC is 5 μg/m^3 for diesel exhaust as measured by diesel particulate matter. This RfC does not consider allergenic effects such as those associated with asthma or immunologic effects. There is growing evidence, discussed in the Diesel HAD, that exposure to diesel exhaust can exacerbate these effects, but the exposure-response data are presently lacking to derive an RfC. The EPA Diesel HAD states, "With [diesel particulate matter] being a ubiquitous component of ambient PM, there is an uncertainty about the adequacy of the existing [diesel exhaust] noncancer database to identify all of the pertinent [diesel exhaust]-caused noncancer health hazards." (p. 9–19). The Diesel HAD concludes "that acute exposure to [diesel exhaust] has been associated with irritation of the eye, nose, and throat, respiratory symptoms (cough and phlegm), and neurophysiological symptoms such as headache, lightheadedness, nausea, vomiting, and numbness or tingling of the extremities." [267]

(iii) Ambient $PM_{2.5}$ Levels and Exposure to Diesel Exhaust PM

The Diesel HAD also briefly summarizes health effects associated with ambient PM and discusses the EPA's annual $PM_{2.5}$ NAAQS of 15 μg/m^3. There is a much more extensive body of human data showing a wide spectrum of adverse health effects associated with exposure to ambient PM, of which diesel exhaust is an important component. The $PM_{2.5}$ NAAQS is designed to provide protection from the noncancer and premature mortality effects of $PM_{2.5}$ as a whole.

(iv) Diesel Exhaust PM Exposures

Exposure of people to diesel exhaust depends on their various activities, the time spent in those activities, the locations where these activities occur, and the levels of diesel exhaust pollutants in those locations. The major difference between ambient levels of diesel particulate and exposure levels for diesel particulate is that exposure accounts for a person moving from location to location, proximity to the emission source, and whether the exposure occurs in an enclosed environment.

Occupational Exposures

Occupational exposures to diesel exhaust from mobile sources can be several orders of magnitude greater than typical exposures in the non-occupationally exposed population.

Over the years, diesel particulate exposures have been measured for a number of occupational groups. A wide range of exposures have been reported, from 2 μg/m^3 to 1,280 μg/m^3, for a variety of occupations. As discussed in the Diesel HAD, the National Institute of Occupational Safety and Health has estimated a total of 1,400,000 workers are occupationally exposed to diesel exhaust from on-road and nonroad vehicles.

Elevated Concentrations and Ambient Exposures in Mobile Source-Impacted Areas

Regions immediately downwind of highways or truck stops may experience elevated ambient concentrations of directly-emitted $PM_{2.5}$ from diesel engines. Due to the unique nature of highways and truck stops, emissions from a large number of diesel engines are concentrated in a small area. Studies near roadways with high truck traffic indicate higher concentrations of components of diesel PM than other locations.[268] [269] [270] High ambient particle

[261] Bhatia, R., Lopipero, P., Smith, A. (1998). Diesel exposure and lung cancer. *Epidemiology,* 9(1), 84–91. Docket EPA–HQ–OAR–2010–0162.

[262] Lipsett, M. Campleman, S. (1999). Occupational exposure to diesel exhaust and lung cancer: a meta-analysis. *Am J Public Health, 80(7),* 1009–1017. Docket EPA–HQ–OAR–2010–0162.

[263] Ishinishi, N. Kuwabara, N. Takaki, Y., *et al.* (1988). Long-term inhalation experiments on diesel exhaust. In: *Diesel exhaust and health risks.* Results of the HERP studies. Ibaraki, Japan: Research Committee for HERP Studies; pp. 11–84. Docket EPA–HQ–OAR–2010–0162.

[264] Heinrich, U., Fuhst, R., Rittinghausen, S., *et al.* (1995). Chronic inhalation exposure of Wistar rats and two different strains of mice to diesel engine exhaust, carbon black, and titanium dioxide. *Inhal Toxicol,* 7, 553–556. Docket EPA–HQ–OAR–2010–0162.

[265] Mauderly, J.L., Jones, R.K., Griffith, W.C., *et al.* (1987). Diesel exhaust is a pulmonary carcinogen in rats exposed chronically by inhalation. *Fundam. Appl. Toxicol.,* 9, 208–221. Docket EPA–HQ–OAR–2010–0162.

[266] Nikula, K.J., Snipes, M.B., Barr, E.B., *et al.* (1995). Comparative pulmonary toxicities and carcinogenicities of chronically inhaled diesel exhaust and carbon black in F344 rats. *Fundam. Appl. Toxicol,* 25, 80–94. Docket EPA–HQ–OAR–2010–0162.

[267] *See* U.S. EPA (2002), Diesel HAD at Note 259, at p. 9–9.

[268] Zhu, Y.; Hinds, W.C.; Kim, S.; Shen, S.; Sioutas, C. (2002). Study of ultrafine particles near a major highway with heavy-duty diesel traffic. Atmospheric Environment 36: 4323–4335. Docket EPA–HQ–OAR–2010–0162.

[269] Lena, T.S; Ochieng, V.; Holguín-Veras, J.; Kinney, P.L. (2002). Elemental carbon and $PM^{2.5}$ levels in an urban community heavily impacted by truck traffic. Environ Health Perspect 110: 1009–1015. Docket EPA–HQ–OAR–2010–0162.

[270] Soliman, A.S.M.; Jacko, J.B.; Palmer, G.M. (2006). Development of an empirical model to

Continued

concentrations have also been reported near trucking terminals, truck stops, and bus garages.[271] [272] [273] Additional discussion of exposure and health effects associated with traffic is included below in Section VII.B.(5)(j).

(b) Benzene

The EPA's Integrated Risk Information System (IRIS) database lists benzene as a known human carcinogen (causing leukemia) by all routes of exposure, and concludes that exposure is associated with additional health effects, including genetic changes in both humans and animals and increased proliferation of bone marrow cells in mice.[274] [275] [276] EPA states in its IRIS database that data indicate a causal relationship between benzene exposure and acute lymphocytic leukemia and suggest a relationship between benzene exposure and chronic non-lymphocytic leukemia and chronic lymphocytic leukemia. The International Agency for Research on Carcinogens (IARC) has determined that benzene is a human carcinogen and the U.S. Department of Health and Human Services (DHHS) has characterized benzene as a known human carcinogen.[277] [278]

A number of adverse noncancer health effects including blood disorders, such as preleukemia and aplastic anemia, have also been associated with long-term exposure to benzene.[279] [280] The most sensitive noncancer effect observed in humans, based on current data, is the depression of the absolute lymphocyte count in blood.[281] [282] In addition, recent work, including studies sponsored by the Health Effects Institute (HEI), provides evidence that biochemical responses are occurring at lower levels of benzene exposure than previously known.[283] [284] [285] [286] EPA's IRIS program has not yet evaluated these new data.

(c) 1,3-Butadiene

EPA has characterized 1,3-butadiene as carcinogenic to humans by inhalation.[287] [288] The IARC has determined that 1,3-butadiene is a human carcinogen and the U.S. DHHS has characterized 1,3-butadiene as a known human carcinogen.[289] [290] There are numerous studies consistently demonstrating that 1,3-butadiene is metabolized into genotoxic metabolites by experimental animals and humans. The specific mechanisms of 1,3-butadiene-induced carcinogenesis are unknown; however, the scientific evidence strongly suggests that the carcinogenic effects are mediated by genotoxic metabolites. Animal data suggest that females may be more sensitive than males for cancer effects associated with 1,3-butadiene exposure; there are insufficient data in humans from which to draw conclusions about sensitive subpopulations. 1,3-butadiene also causes a variety of reproductive and developmental effects in mice; no human data on these effects are available. The most sensitive effect was ovarian atrophy observed in a lifetime bioassay of female mice.[291]

(d) Formaldehyde

Since 1987, EPA has classified formaldehyde as a probable human carcinogen based on evidence in humans and in rats, mice, hamsters, and monkeys.[292] EPA is currently reviewing recently published epidemiological data. For instance, research conducted by the National Cancer Institute found an increased risk of nasopharyngeal cancer and lymphohematopoietic malignancies such as leukemia among workers exposed to formaldehyde.[293] [294]

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estimate real-world fine particulate matter emission factors: the Traffic Air Quality model. J Air & Waste Manage Assoc 56: 1540–1549. Docket EPA–HQ–OAR–2010–0162.

[271] Davis, M.E.; Smith, T.J.; Laden, F.; Hart, J.E.; Ryan, L.M.; Garshick, E. (2006). Modeling particle exposure in U.S. trucking terminals. Environ Sci Techol 40: 4226–4232. Docket EPA–HQ–OAR–2010–0162.

[272] Miller, T.L.; Fu, J.S.; Hromis, B.; Storey, J.M. (2007). Diesel truck idling emissions—measurements at a PM2.5 hot spot. Proceedings of the Annual Conference of the Transportation Research Board, paper no. 07–2609. Docket EPA–HQ–OAR–2010–0162.

[273] Ramachandran, G.; Paulsen, D.; Watts, W.; Kittelson, D. (2005). Mass, surface area, and number metrics in diesel occupational exposure assessment. J Environ Monit 7: 728–735. Docket EPA–HQ–OAR–2010–0162.

[274] U.S. EPA. 2000. Integrated Risk Information System File for Benzene. This material is available electronically at *http://www.epagov/iris/subst/0276.htm.* Docket EPA–HQ–OAR–2010–0162.

[275] International Agency for Research on Cancer. 1982. Monographs on the evaluation of carcinogenic risk of chemicals to humans, Volume 29. Some industrial chemicals and dyestuffs, World Health Organization, Lyon, France, p. 345–389. Docket EPA–HQ–OAR–2010–0162.

[276] Irons, R.D.; Stillman, W.S.; Colagiovanni, D.B.; Henry, V.A. 1992. Synergistic action of the benzene metabolite hydroquinone on myelopoietic stimulating activity of granulocyte/macrophage colony-stimulating factor in vitro, Proc. Natl. Acad. Sci. 89:3691–3695. Docket EPA–HQ–OAR–2010–0162.

[277] *See* IARC, Note 275, above.

[278] U.S. Department of Health and Human Services National Toxicology Program 11th Report on Carcinogens available at: *http://ntp.niehs.nih.gov/go/16183.* Docket EPA–HQ–OAR–2010–0162.

[279] Aksoy, M. (1989). Hematotoxicity and carcinogenicity of benzene. Environ. Health Perspect. 82: 193–197. Docket EPA–HQ–OAR–2010–0162.

[280] Goldstein, B.D. (1988). Benzene toxicity. Occupational medicine. State of the Art Reviews. 3: 541–554. Docket EPA–HQ–OAR–2010–0162.

[281] Rothman, N., G.L. Li, M. Dosemeci, W.E. Bechtold, G.E. Marti, Y.Z. Wang, M. Linet, L.Q. Xi, W. Lu, M.T. Smith, N. Titenko-Holland, L.P. Zhang, W. Blot, S.N. Yin, and R.B. Hayes (1996). Hematotoxicity among Chinese workers heavily exposed to benzene. Am. J. Ind. Med. 29: 236–246. Docket EPA–HQ–OAR–2010–0162.

[282] U.S. EPA (2002). Toxicological Review of Benzene (Noncancer Effects). Environmental Protection Agency, Integrated Risk Information System, Research and Development, National Center for Environmental Assessment, Washington DC. This material is available electronically at *http://www.epa.gov/iris/ubst/0276.htm.* Docket EPA–HQ–OAR–2010–0162.

[283] Qu, O.; Shore, R.; Li, G.; Jin, X.; Chen, C.L.; Cohen, B.; Melikian, A.; Eastmond, D.; Rappaport, S.; Li, H.; Rupa, D.; Suramaya, R.; Songnian, W.; Huifant, Y.; Meng, M.; Winnik, M.; Kwok, E.; Li, Y.; Mu, R.; Xu, B.; Zhang, X.; Li, K. (2003). HEI Report 115, Validation & Evaluation of Biomarkers in Workers Exposed to Benzene in China. Docket EPA–HQ–OAR–2010–0162.

[284] Qu, Q., R. Shore, G. Li, X. Jin, L.C. Chen, B. Cohen, *et al.* (2002). Hematological changes among Chinese workers with a broad range of benzene exposures. Am. J. Industr. Med. 42: 275–285. Docket EPA–HQ–OAR–2010–0162.

[285] Lan, Qing, Zhang, L., Li, G., Vermeulen, R., *et al.* (2004). Hematotoxically in Workers Exposed to Low Levels of Benzene. Science 306: 1774–1776. Docket EPA–HQ–OAR–2010–0162.

[286] Turtletaub, K.W. and Mani, C. (2003). Benzene metabolism in rodents at doses relevant to human exposure from Urban Air. Research Reports Health Effect Inst. Report No.113. Docket EPA–HQ–OAR–2010–0162.

[287] U.S. EPA (2002). Health Assessment of 1,3-Butadiene. Office of Research and Development, National Center for Environmental Assessment, Washington Office, Washington, DC. Report No. EPA600–P–98–001F. This document is available electronically at *http://www.epa.gov/iris/supdocs/buta-sup.pdf.* Docket EPA–HQ–OAR–2010–0162.

[288] U.S. EPA (2002). Full IRIS Summary for 1,3-butadiene (CASRN 106–99–0). Environmental Protection Agency, Integrated Risk Information System (IRIS), Research and Development, National Center for Environmental Assessment, Washington, DC *http://www.epa.gov/iris/subst/0139.htm.* Docket EPA–HQ–OAR–2010–0162.

[289] International Agency for Research on Cancer (1999). Monographs on the evaluation of carcinogenic risk of chemicals to humans, Volume 71, Re-evaluation of some organic chemicals, hydrazine and hydrogen peroxide and Volume 97 (in preparation), World Health Organization, Lyon, France. Docket EPA–HQ–OAR–2010–0162.

[290] U.S. Department of Health and Human Services (2005). National Toxicology Program 11th Report on Carcinogens available at: *ntp.niehs.nih.gov/index.cfm?objectid=32BA9724-F1F6-975E-7FCE50709CB4C932.* Docket EPA–HQ–OAR–2010–0162.

[291] Bevan, C.; Stadler, J.C.; Elliot, G.S.; *et al.* (1996). Subchronic toxicity of 4-vinylcyclohexene in rats and mice by inhalation. Fundam. Appl. Toxicol. 32:1–10. Docket EPA–HQ–OAR–2010–0162.

[292] U.S. EPA (1987). Assessment of Health Risks to Garment Workers and Certain Home Residents from Exposure to Formaldehyde, Office of Pesticides and Toxic Substances, April 1987. Docket EPA–HQ–OAR–2010–0162.

[293] Hauptmann, M.; Lubin, J. H.; Stewart, P.A.; Hayes, R.B.; Blair, A. 2003. Mortality from lymphohematopoetic malignancies among workers in formaldehyde industries. Journal of the National Cancer Institute 95: 1615–1623. Docket EPA–HQ–OAR–2010–0162.

[294] Hauptmann, M.; Lubin, J.H.; Stewart, P.A.; Hayes, R.B.; Blair, A. 2004. Mortality from solid cancers among workers in formaldehyde industries. American Journal of Epidemiology 159: 1117–1130. Docket EPA–HQ–OAR–2010–0162.

In an analysis of the lymphohematopoietic cancer mortality from an extended follow-up of these workers, the National Cancer Institute confirmed an association between lymphohematopoietic cancer risk and peak exposures.[295] A recent National Institute of Occupational Safety and Health study of garment workers also found increased risk of death due to leukemia among workers exposed to formaldehyde.[296] Extended follow-up of a cohort of British chemical workers did not find evidence of an increase in nasopharyngeal or lymphohematopoietic cancers, but a continuing statistically significant excess in lung cancers was reported.[297] Recently, the IARC re-classified formaldehyde as a human carcinogen (Group 1).[298]

Formaldehyde exposure also causes a range of noncancer health effects, including irritation of the eyes (burning and watering of the eyes), nose and throat. Effects from repeated exposure in humans include respiratory tract irritation, chronic bronchitis and nasal epithelial lesions such as metaplasia and loss of cilia. Animal studies suggest that formaldehyde may also cause airway inflammation—including eosinophil infiltration into the airways. There are several studies that suggest that formaldehyde may increase the risk of asthma—particularly in the young.[299] [300]

(e) Acetaldehyde

Acetaldehyde is classified in EPA's IRIS database as a probable human carcinogen, based on nasal tumors in rats, and is considered toxic by the inhalation, oral, and intravenous routes.[301] Acetaldehyde is reasonably anticipated to be a human carcinogen by the U.S. DHHS in the 11th Report on Carcinogens and is classified as possibly carcinogenic to humans (Group 2B) by the IARC.[302] [303] EPA is currently conducting a reassessment of cancer risk from inhalation exposure to acetaldehyde.

The primary noncancer effects of exposure to acetaldehyde vapors include irritation of the eyes, skin, and respiratory tract.[304] In short-term (4 week) rat studies, degeneration of olfactory epithelium was observed at various concentration levels of acetaldehyde exposure.[305] [306] Data from these studies were used by EPA to develop an inhalation reference concentration. Some asthmatics have been shown to be a sensitive subpopulation to decrements in functional expiratory volume (FEV1 test) and bronchoconstriction upon acetaldehyde inhalation.[307] The agency is currently conducting a reassessment of the health hazards from inhalation exposure to acetaldehyde.

(f) Acrolein

Acrolein is extremely acrid and irritating to humans when inhaled, with acute exposure resulting in upper respiratory tract irritation, mucus hypersecretion and congestion. The intense irritancy of this carbonyl has been demonstrated during controlled tests in human subjects, who suffer intolerable eye and nasal mucosal sensory reactions within minutes of exposure.[308] These data and additional studies regarding acute effects of human exposure to acrolein are summarized in EPA's 2003 IRIS Human Health Assessment for acrolein.[309] Evidence available from studies in humans indicate that levels as low as 0.09 ppm (0.21 mg/m^3) for five minutes may elicit subjective complaints of eye irritation with increasing concentrations leading to more extensive eye, nose and respiratory symptoms.[310] Lesions to the lungs and upper respiratory tract of rats, rabbits, and hamsters have been observed after subchronic exposure to acrolein.[311] Acute exposure effects in animal studies report bronchial hyper-responsiveness.[312] In a recent study, the acute respiratory irritant effects of exposure to 1.1 ppm acrolein were more pronounced in mice with allergic airway disease by comparison to non-diseased mice which also showed decreases in respiratory rate.[313] Based on these animal data and demonstration of similar effects in humans (*e.g.,* reduction in respiratory rate), individuals with compromised respiratory function (*e.g.,* emphysema, asthma) are expected to be at increased risk of developing adverse responses to strong respiratory irritants such as acrolein.

EPA determined in 2003 that the human carcinogenic potential of acrolein could not be determined because the available data were inadequate. No information was available on the carcinogenic effects of

[295] Beane Freeman, L.E.; Blair, A.; Lubin, J.H.; Stewart, P.A.; Hayes, R.B.; Hoover, R.N.; Hauptmann, M. 2009. Mortality from lymphohematopoietic malignancies among workers in formaldehyde industries: The National Cancer Institute cohort. J. National Cancer Inst. 101: 751–761. Docket EPA–HQ–OAR–2010–0162.

[296] Pinkerton, L.E. 2004. Mortality among a cohort of garment workers exposed to formaldehyde: an update. Occup. Environ. Med. 61: 193–200. Docket EPA–HQ–OAR–2010–0162.

[297] Coggon, D, EC Harris, J Poole, KT Palmer. 2003. Extended follow-up of a cohort of British chemical workers exposed to formaldehyde. J National Cancer Inst. 95:1608–1615. Docket EPA–HQ–OAR–2010–0162.

[298] International Agency for Research on Cancer. 2006. Formaldehyde, 2-Butoxyethanol and 1-tert-Butoxypropan-2-ol. Volume 88. (in preparation), World Health Organization, Lyon, France. Docket EPA–HQ–OAR–2010–0162.

[299] Agency for Toxic Substances and Disease Registry (ATSDR). 1999. Toxicological profile for Formaldehyde. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service. *http://ww.atsdr.cdc.gov/toxprofiles/tp111.html.* Docket EPA–HQ–OAR–2010–0162.

[300] WHO (2002). Concise International Chemical Assessment Document 40: Formaldehyde. Published under the joint sponsorship of the United Nations Environment Programme, the International Labour Organization, and the World Health Organization, and produced within the framework of the Inter-Organization Programme for the Sound Management of Chemicals. Geneva. Docket EPA–HQ–OAR–2010–0162.

[301] U.S. EPA. 1991. Integrated Risk Information System File of Acetaldehyde. Research and Development, National Center for Environmental Assessment, Washington, DC. Available at *http://www.epa.gov/iris/subst/0290.htm.* Docket EPA–HQ–OAR–2010–0162.

[302] U.S. Department of Health and Human Services National Toxicology Program 11th Report on Carcinogens available at: *ntp.niehs.nih.gov/index.cfm?objectid=32BA9724-F1F6-975E-7FCE50709CB4C932.* Docket EPA–HQ–OAR–2010–0162.

[303] International Agency for Research on Cancer. 1999. Re-evaluation of some organic chemicals, hydrazine, and hydrogen peroxide. IARC Monographs on the Evaluation of Carcinogenic Risk of Chemical to Humans, Vol 71. Lyon, France. Docket EPA–HQ–OAR–2010–0162.

[304] *See* Integrated Risk Information System File of Acetaldehyde, Note 301, above.

[305] Appleman, L.M., R.A. Woutersen, V.J. Feron, R.N. Hooftman, and W.R.F. Notten. 1986. Effects of the variable versus fixed exposure levels on the toxicity of acetaldehyde in rats. *J. Appl. Toxicol.* 6: 331–336. Docket EPA–HQ–OAR–2010–0162

[306] Appleman, L.M., R.A. Woutersen, and V.J. Feron. 1982. Inhalation toxicity of acetaldehyde in rats. I. Acute and subacute studies. *Toxicology.* 23: 293–297. Docket EPA–HQ–OAR–2010–0162.

[307] Myou, S.; Fujimura, M.; Nishi K.; Ohka, T.; and Matsuda, T. 1993. Aerosolized acetaldehyde induces histamine-mediated bronchoconstriction in asthmatics. *Am. Rev. Respir.Dis.* 148 (4 Pt 1): 940–3. Docket EPA–HQ–OAR–2010–0162.

[308] U.S. EPA (U.S. Environmental Protection Agency). (2003). Toxicological review of acrolein in support of summary information on Integrated Risk Information System (IRIS) National Center for Environmental Assessment, Washington, DC. EPA/635/R–03/003. p. 10. Available online at: *http://www.epa.gov/ncea/ris/toxreviews/0364tr.pdf.* Docket EPA–HQ–OAR–2010–0162.

[309] *See* U.S. EPA 2003 Toxicological review of acrolein, Note 308, above.

[310] *See* U.S. EPA 2003 Toxicological review of acrolein, Note 308, at p. 11.

[311] Integrated Risk Information System File of Acrolein. Office of Research and Development, National Center for Environmental Assessment, Washington, DC. This material is available at *http://www.epa.gov/iris/subst/0364.htm.* Docket EPA–HQ–OAR–2010–0162.

[312] *See* U.S. 2003 Toxicological review of acrolein, Note 308, at p. 15.

[313] Morris J.B., Symanowicz P.T., Olsen J.E., *et al.* 2003. Immediate sensory nerve-mediated respiratory responses to irritants in healthy and allergic airway-diseased mice. J Appl Physiol 94(4):1563–1571. Docket EPA–HQ–OAR–2010–0162.

acrolein in humans and the animal data provided inadequate evidence of carcinogenicity.[314] The IARC determined in 1995 that acrolein was not classifiable as to its carcinogenicity in humans.[315]

(g) Polycyclic Organic Matter

Polycyclic organic matter is generally defined as a large class of organic compounds which have multiple benzene rings and a boiling point greater than 100° Celsius. Many of the compounds included in the class of compounds known as polycyclic organic matter are classified by EPA as probable human carcinogens based on animal data. One of these compounds, naphthalene, is discussed separately below. Polycyclic aromatic hydrocarbons are a subset of polycyclic organic matter that contains only hydrogen and carbon atoms. A number of polycyclic aromatic hydrocarbons are known or suspected carcinogens. Recent studies have found that maternal exposures to polycyclic aromatic hydrocarbons (a subclass of polycyclic organic matter) in a population of pregnant women were associated with several adverse birth outcomes, including low birth weight and reduced length at birth, as well as impaired cognitive development at age three.[316] [317] EPA has not yet evaluated these recent studies.

(h) Naphthalene

Naphthalene is found in small quantities in gasoline and diesel fuels. Naphthalene emissions have been measured in larger quantities in both gasoline and diesel exhaust compared with evaporative emissions from mobile sources, indicating it is primarily a product of combustion. EPA released an external review draft of a reassessment of the inhalation carcinogenicity of naphthalene based on a number of recent animal carcinogenicity studies.[318] The draft reassessment completed external peer review.[319] Based on external peer review comments received, additional analyses are being undertaken. This external review draft does not represent official agency opinion and was released solely for the purposes of external peer review and public comment. The National Toxicology Program listed naphthalene as "reasonably anticipated to be a human carcinogen" in 2004 on the basis of bioassays reporting clear evidence of carcinogenicity in rats and some evidence of carcinogenicity in mice.[320] California EPA has released a new risk assessment for naphthalene, and the IARC has reevaluated naphthalene and re-classified it as Group 2B: possibly carcinogenic to humans.[321] Naphthalene also causes a number of chronic non-cancer effects in animals, including abnormal cell changes and growth in respiratory and nasal tissues.[322]

(i) Other Air Toxics

In addition to the compounds described above, other compounds in gaseous hydrocarbon and PM emissions from heavy-duty vehicles will be affected by this proposal. Mobile source air toxic compounds that would potentially be impacted include ethylbenzene, propionaldehyde, toluene, and xylene. Information regarding the health effects of these compounds can be found in EPA's IRIS database.[323]

(j) Exposure and Health Effects Associated With Traffic

Populations who live, work, or attend school near major roads experience elevated exposure concentrations to a wide range of air pollutants, as well as higher risks for a number of adverse health effects. While the previous sections of this preamble have focused on the health effects associated with individual criteria pollutants or air toxics, this section discusses the mixture of different exposures near major roadways, rather than the effects of any single pollutant. As such, this section emphasizes traffic-related air pollution, in general, as the relevant indicator of exposure rather than any particular pollutant.

Concentrations of many traffic-generated air pollutants are elevated for up to 300–500 meters downwind of roads with high traffic volumes.[324] Numerous sources on roads contribute to elevated roadside concentrations, including exhaust and evaporative emissions, and resuspension of road dust and tire and brake wear. Concentrations of several criteria and hazardous air pollutants are elevated near major roads. Furthermore, different semi-volatile organic compounds and chemical components of particulate matter, including elemental carbon, organic material, and trace metals, have been reported at higher concentrations near major roads.

Populations near major roads experience greater risk of certain adverse health effects. The Health Effects Institute published a report on the health effects of traffic-related air pollution.[325] It concluded that evidence is "sufficient to infer the presence of a causal association" between traffic exposure and exacerbation of childhood asthma symptoms. The HEI report also concludes that the evidence is either "sufficient" or "suggestive but not sufficient" for a causal association between traffic exposure and new childhood asthma cases. A review of asthma studies by Salam *et al.* (2008)

[314] U.S. EPA. 2003. Integrated Risk Information System File of Acrolein. Research and Development, National Center for Environmental Assessment, Washington, DC. This material is available at *http://www.epa.gov/iris/subst/0364.htm* Docket EPA–HQ–OAR–2010–0162.

[315] International Agency for Research on Cancer. 1995. Monographs on the evaluation of carcinogenic risk of chemicals to humans, Volume 63. Dry cleaning, some chlorinated solvents and other industrial chemicals, World Health Organization, Lyon, France. Docket EPA–HQ–OAR–2010–0162.

[316] Perera, F.P.; Rauh, V.; Tsai, W–Y.; *et al.* (2002). Effect of transplacental exposure to environmental pollutants on birth outcomes in a multiethnic population. *Environ Health Perspect.* 111: 201–205. Docket EPA–HQ–OAR–2010–0162.

[317] Perera, F.P.; Rauh, V.; Whyatt, R.M.; Tsai, W.Y.; Tang, D.; Diaz, D.; Hoepner, L.; Barr, D.; Tu, Y.H.; Camann, D.; Kinney, P. (2006). Effect of prenatal exposure to airborne polycyclic aromatic hydrocarbons on neurodevelopment in the first 3 years of life among inner-city children. Environ Health Perspect 114: 1287–1292. Docket EPA–HQ–OAR–2010–0162.

[318] U. S. EPA. 2004. Toxicological Review of Naphthalene (Reassessment of the Inhalation Cancer Risk), Environmental Protection Agency, Integrated Risk Information System, Research and Development, National Center for Environmental Assessment, Washington, DC. This material is available electronically at *http://www.epa.gov/iris/subst/436.htm.* Docket EPA–HQ–OAR–2010–0162.

[319] Oak Ridge Institute for Science and Education. (2004). External Peer Review for the IRIS Reassessment of the Inhalation Carcinogenicity of Naphthalene. August 2004. *http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=84403.* Docket EPA–HQ–OAR–2010–0162.

[320] National Toxicology Program (NTP). (2004). 11th Report on Carcinogens. Public Health Service, U.S. Department of Health and Human Services, Research Triangle Park, NC. Available from: *http://ntp-server.niehs.nih.gov.* Docket EPA–HQ–OAR–2010–0162.

[321] International Agency for Research on Cancer. (2002). Monographs on the Evaluation of the Carcinogenic Risk of Chemicals for Humans. Vol. 82. Lyon, France. Docket EPA–HQ–OAR–2010–0162.

[322] U.S. EPA. 1998. Toxicological Review of Naphthalene, Environmental Protection Agency, Integrated Risk Information System, Research and Development, National Center for Environmental Assessment, Washington, DC. This material is available electronically at *http://www.epa.gov/iris/subst/0436.htm.* Docket EPA–HQ–OAR–2010–0162.

[323] U.S. EPA Integrated Risk Information System (IRIS) database is available at: *http://www.epa.gov/iris.*

[324] Zhou, Y.; Levy, J.I. (2007). Factors influencing the spatial extent of mobile source air pollution impacts: A meta-analysis. BMC Public Health 7: 89. doi:10.1186/1471–2458–7–89 Docket EPA–HQ–OAR–2010–0162.

[325] HEI Panel on the Health Effects of Air Pollution. (2010). Traffic-related air pollution: A critical review of the literature on emissions, exposure, and health effects. [Online at *http://www.healtheffects.org.*] Docket EPA–HQ–OAR–2010–0162.

reaches similar conclusions.[326] The HEI report also concludes that there is "suggestive" evidence for pulmonary function deficits associated with traffic exposure, but concluded that there is "inadequate and insufficient" evidence for causal associations with respiratory health care utilization, adult-onset asthma, chronic obstructive pulmonary disease symptoms, and allergy. A review by Holguin (2008) notes that the effects of traffic on asthma may be modified by nutrition status, medication use, and genetic factors.[327]

The HEI report also concludes that evidence is "suggestive" of a causal association between traffic exposure and all-cause and cardiovascular mortality. There is also evidence of an association between traffic-related air pollutants and cardiovascular effects such as changes in heart rhythm, heart attack, and cardiovascular disease. The HEI report characterizes this evidence as "suggestive" of a causal association, and an independent epidemiological literature review by Adar and Kaufman (2007) concludes that there is "consistent evidence" linking traffic-related pollution and adverse cardiovascular health outcomes.[328]

Some studies have reported associations between traffic exposure and other health effects, such as birth outcomes (*e.g.,* low birth weight) and childhood cancer. The HEI report concludes that there is currently "inadequate and insufficient" evidence for a causal association between these effects and traffic exposure. A review by Raaschou-Nielsen and Reynolds (2006) concluded that evidence of an association between childhood cancer and traffic-related air pollutants is weak, but noted the inability to draw firm conclusions based on limited evidence.[329]

There is a large population in the United States living in close proximity of major roads. According to the Census Bureau's American Housing Survey for 2007, approximately 20 million residences in the United States, 15.6% of all homes, are located within 300 feet (91 m) of a highway with 4+ lanes, a railroad, or an airport.[330] Therefore, at current population of approximately 309 million, assuming that population and housing are similarly distributed, there are over 48 million people in the United States living near such sources. The HEI report also notes that in two North American cities, Los Angeles and Toronto, over 40% of each city's population live within 500 meters of a highway or 100 meters of a major road. It also notes that about 33% of each city's population resides within 50 meters of major roads. Together, the evidence suggests that a large U.S. population lives in areas with elevated traffic-related air pollution.

People living near roads are often socioeconomically disadvantaged. According to the 2007 American Housing Survey, a renter-occupied property is over twice as likely as an owner-occupied property to be located near a highway with 4+ lanes, railroad or airport. In the same survey, the median household income of rental housing occupants was less than half that of owner-occupants ($28,921/$59,886). Numerous studies in individual urban areas report higher levels of traffic-related air pollutants in areas with high minority or poor populations.[331] [332] [333]

Students may also be exposed in situations where schools are located near major roads. In a study of nine metropolitan areas across the United States, Appatova et al. (2008) found that on average greater than 33% of schools were located within 400 m of an Interstate, U.S., or State highway, while 12% were located within 100 m.[334] The study also found that among the metropolitan areas studied, schools in the Eastern United States were more often sited near major roadways than schools in the Western United States.

Demographic studies of students in schools near major roadways suggest that this population is more likely than the general student population to be of non-white race or Hispanic ethnicity, and more often live in low socioeconomic status locations.[335] [336] [337] There is some inconsistency in the evidence, which may be due to different local development patterns and measures of traffic and geographic scale used in the studies.[334]

C. Environmental Effects of Non-GHG Pollutants

In this section we discuss some of the environmental effects of PM and its precursors such as visibility impairment, atmospheric deposition, and materials damage and soiling, as well as environmental effects associated with the presence of ozone in the ambient air, such as impacts on plants, including trees, agronomic crops and urban ornamentals, and environmental effects associated with air toxics.

(1) Visibility

Visibility can be defined as the degree to which the atmosphere is transparent to visible light.[338] Visibility impairment is caused by light scattering and absorption by suspended particles and gases. Visibility is important because it has direct significance to people's enjoyment of daily activities in all parts of the country. Individuals value good visibility for the well-being it provides them directly, where they live and work, and in places where they enjoy recreational opportunities. Visibility is also highly valued in significant natural areas, such as national parks and wilderness areas, and special emphasis is given to protecting visibility in these

[326] Salam, M.T.; Islam, T.; Gilliland, F.D. (2008). Recent evidence for adverse effects of residential proximity to traffic sources on asthma. Current Opin Pulm Med 14: 3–8. Docket EPA–HQ–OAR–2010–0162.

[327] Holguin, F. (2008). Traffic, outdoor air pollution, and asthma. Immunol Allergy Clinics North Am 28: 577–588. Docket EPA–HQ–OAR–2010–0162.

[328] Adar, S.D.; Kaufman, J.D. (2007). Cardiovascular disease and air pollutants: Evaluating and improving epidemiological data implicating traffic exposure. Inhal Toxicol 19: 135–149. Docket EPA–HQ–OAR–2010–0162.

[329] Raaschou-Nielsen, O.; Reynolds, P. (2006). Air pollution and childhood cancer: A review of the epidemiological literature. Int J Cancer 118: 2920–2929. Docket EPA–HQ–OAR–2010–0162.

[330] U.S. Census Bureau (2008). American Housing Survey for the United States in 2007. Series H–150 (National Data), Table 1A–7. [Accessed at *http://www.census.gov/hhes/www/housing/ahs/ahs07/ahs07.html* on January 22, 2009] Docket EPA–HQ–OAR–2010–0162.

[331] Lena, T.S.; Ochieng, V.; Carter, M.; Holguín-Veras, J.; Kinney, P.L. (2002). Elemental carbon and PM2.5 levels in an urban community heavily impacted by truck traffic. Environ Health Perspect 110: 1009–1015. Docket EPA–HQ–OAR–2010–0162.

[332] Wier, M.; Sciammas, C.; Seto, E.; Bhatia, R.; Rivard, T. (2009). Health, traffic, and environmental justice: collaborative research and community action in San Francisco, California. Am J Public Health 99: S499–S504. Docket EPA–HQ–OAR–2010–0162.

[333] Forkenbrock, D.J. and L.A. Schweitzer, *Environmental Justice and Transportation Investment Policy.* Iowa City: University of Iowa, 1997. Docket EPA–HQ–OAR–2010–0162.

[334] Appatova, A.S.; Ryan, P.H.; LeMasters, G.K.; Grinshpun, S.A. (2008). Proximal exposure of public schools and students to major roadways: A nationwide U.S. survey. J Environ Plan Mgmt Docket EPA–HQ–OAR–2010–0162.

[335] Green, R.S.; Smorodinsky, S.; Kim, J.J.; McLaughlin, R.; Ostro, B. (2004). Proximity of California public schools to busy roads. Environ Health Perspect 112: 61–66. Docket EPA–HQ–OAR–2010–0162.

[336] Houston, D.; Ong, P.; Wu, J.; Winer, A. (2006). Proximity of licensed child care facilities to near-roadway vehicle pollution. Am J Public Health 96: 1611–1617. Docket EPA–HQ–OAR–2010–0162.

[337] Wu, Y.; Batterman, S. (2006). Proximity of schools in Detroit, Michigan to automobile and truck traffic. J Exposure Sci Environ Epidemiol 16: 457–470. Docket EPA–HQ–OAR–2010–0162.

[338] National Research Council, 1993. Protecting Visibility in National Parks and Wilderness Areas. National Academy of Sciences Committee on Haze in National Parks and Wilderness Areas. National Academy Press, Washington, DC. Docket EPA–HQ–OAR–2010–0162. This book can be viewed on the National Academy Press Web site at *http://www.nap.edu/books/0309048443/html/.*

areas. For more information on visibility see the final 2009 PM ISA.[339]

EPA is pursuing a two-part strategy to address visibility. First, EPA has concluded that PM2.5 causes adverse effects on visibility in various locations, depending on PM concentrations and factors such as chemical composition and average relative humidity, and has set secondary $PM_{2.5}$ standards.[340] The secondary PM2.5 standards act in conjunction with the regional haze program. EPA's regional haze rule (64 FR 35714) was put in place in July 1999 to protect the visibility in Mandatory Class I Federal areas. There are 156 national parks, forests and wilderness areas categorized as Mandatory Class I Federal areas (62 FR 38680–38681, July 18, 1997).[341] Visibility can be said to be impaired in both PM2.5 nonattainment areas and Mandatory Class I Federal areas.

(2) Plant and Ecosystem Effects of Ozone

Elevated ozone levels contribute to environmental effects, with impacts to plants and ecosystems being of most concern. Ozone can produce both acute and chronic injury in sensitive species depending on the concentration level and the duration of the exposure. Ozone effects also tend to accumulate over the growing season of the plant, so that even low concentrations experienced for a longer duration have the potential to create chronic stress on vegetation. Ozone damage to plants includes visible injury to leaves and impaired photosynthesis, both of which can lead to reduced plant growth and reproduction, resulting in reduced crop yields, forestry production, and use of sensitive ornamentals in landscaping. In addition, the impairment of photosynthesis, the process by which the plant makes carbohydrates (its source of energy and food), can lead to a subsequent reduction in root growth and carbohydrate storage below ground, resulting in other, more subtle plant and ecosystems impacts.

These latter impacts include increased susceptibility of plants to insect attack, disease, harsh weather, interspecies competition and overall decreased plant vigor. The adverse effects of ozone on forest and other natural vegetation can potentially lead to species shifts and loss from the affected ecosystems, resulting in a loss or reduction in associated ecosystem goods and services. Lastly, visible ozone injury to leaves can result in a loss of aesthetic value in areas of special scenic significance like national parks and wilderness areas. The final 2006 Ozone Air Quality Criteria Document presents more detailed information on ozone effects on vegetation and ecosystems.

(3) Atmospheric Deposition

Wet and dry deposition of ambient particulate matter delivers a complex mixture of metals (*e.g.,* mercury, zinc, lead, nickel, aluminum, cadmium), organic compounds (*e.g.,* polycyclic organic matter, dioxins, furans) and inorganic compounds (*e.g.,* nitrate, sulfate) to terrestrial and aquatic ecosystems. The chemical form of the compounds deposited depends on a variety of factors including ambient conditions (*e.g.,* temperature, humidity, oxidant levels) and the sources of the material. Chemical and physical transformations of the compounds occur in the atmosphere as well as the media onto which they deposit. These transformations in turn influence the fate, bioavailability and potential toxicity of these compounds. Atmospheric deposition has been identified as a key component of the environmental and human health hazard posed by several pollutants including mercury, dioxin and PCBs.[342]

Adverse impacts on water quality can occur when atmospheric contaminants deposit to the water surface or when material deposited on the land enters a waterbody through runoff. Potential impacts of atmospheric deposition to waterbodies include those related to both nutrient and toxic inputs. Adverse effects to human health and welfare can occur from the addition of excess nitrogen via atmospheric deposition. The nitrogen-nutrient enrichment contributes to toxic algae blooms and zones of depleted oxygen, which can lead to fish kills, frequently in coastal waters. Deposition of heavy metals or other toxics may lead to the human ingestion of contaminated fish, impairment of drinking water, damage to the marine ecology, and limits to recreational uses. Several studies have been conducted in U.S. coastal waters and in the Great Lakes Region in which the role of ambient PM deposition and runoff is investigated.[343] [344] [345] [346] [347]

Atmospheric deposition of nitrogen and sulfur contributes to acidification, altering biogeochemistry and affecting animal and plant life in terrestrial and aquatic ecosystems across the United States. The sensitivity of terrestrial and aquatic ecosystems to acidification from nitrogen and sulfur deposition is predominantly governed by geology. Prolonged exposure to excess nitrogen and sulfur deposition in sensitive areas acidifies lakes, rivers and soils. Increased acidity in surface waters creates inhospitable conditions for biota and affects the abundance and nutritional value of preferred prey species, threatening biodiversity and ecosystem function. Over time, acidifying deposition also removes essential nutrients from forest soils, depleting the capacity of soils to neutralize future acid loadings and negatively affecting forest sustainability. Major effects include a decline in sensitive forest tree species, such as red spruce (*Picea rubens*) and sugar maple (*Acer saccharum*), and a loss of biodiversity of fishes, zooplankton, and macro invertebrates.

In addition to the role nitrogen deposition plays in acidification, nitrogen deposition also leads to nutrient enrichment and altered biogeochemical cycling. In aquatic systems increased nitrogen can alter species assemblages and cause eutrophication. In terrestrial systems nitrogen loading can lead to loss of nitrogen sensitive lichen species, decreased biodiversity of grasslands, meadows and other sensitive habitats, and increased potential for invasive species. For a broader explanation of the topics treated here, refer to the description in Section 7.1.2 of the draft RIA.

[339] *See* U.S. EPA 2009. Final PM ISA, Note 243.

[340] The existing annual primary and secondary $PM_{2.5}$ standards have been remanded and are being addressed in the currently ongoing PM NAAQS review.

[341] These areas are defined in CAA section 162 as those national parks exceeding 6,000 acres, wilderness areas and memorial parks exceeding 5,000 acres, and all international parks which were in existence on August 7, 1977.

[342] U.S. EPA (2000). Deposition of Air Pollutants to the Great Waters: Third Report to Congress. Office of Air Quality Planning and Standards. EPA–453/R–00–0005. Docket EPA–HQ–OAR–2010–0162.

[343] U.S. EPA (2004). National Coastal Condition Report II. Office of Research and Development/ Office of Water. EPA–620/R–03/002. Docket EPA–HQ–OAR–2010–0162.

[344] Gao, Y., E.D. Nelson, M.P. Field, *et al.* 2002. Characterization of atmospheric trace elements on PM2.5 particulate matter over the New York-New Jersey harbor estuary. *Atmos. Environ.* 36: 1077–1086. Docket EPA–HQ–OAR–2010–0162.

[345] Kim, G., N. Hussain, J.R. Scudlark, and T.M. Church. 2000. Factors influencing the atmospheric depositional fluxes of stable Pb, 210Pb, and 7Be into Chesapeake Bay. *J. Atmos. Chem.* 36: 65–79. Docket EPA–HQ–OAR–2010–0162.

[346] Lu, R., R.P. Turco, K. Stolzenbach, *et al.* 2003. Dry deposition of airborne trace metals on the Los Angeles Basin and adjacent coastal waters. *J. Geophys. Res.* 108(D2, 4074): AAC 11–1 to 11–24. Docket EPA–HQ–OAR–2010–0162.

[347] Marvin, C.H., M.N. Charlton, E.J. Reiner, *et al.* 2002. Surficial sediment contamination in Lakes Erie and Ontario: A comparative analysis. *J. Great Lakes Res.* 28(3): 437–450. Docket EPA–HQ–OAR–2010–0162.

Adverse impacts on soil chemistry and plant life have been observed for areas heavily influenced by atmospheric deposition of nutrients, metals and acid species, resulting in species shifts, loss of biodiversity, forest decline and damage to forest productivity. Potential impacts also include adverse effects to human health through ingestion of contaminated vegetation or livestock (as in the case for dioxin deposition), reduction in crop yield, and limited use of land due to contamination.

Atmospheric deposition of pollutants can reduce the aesthetic appeal of buildings and culturally important articles through soiling, and can contribute directly (or in conjunction with other pollutants) to structural damage by means of corrosion or erosion. Atmospheric deposition may affect materials principally by promoting and accelerating the corrosion of metals, by degrading paints, and by deteriorating building materials such as concrete and limestone. Particles contribute to these effects because of their electrolytic, hygroscopic, and acidic properties, and their ability to adsorb corrosive gases (principally sulfur dioxide).

(4) Environmental Effects of Air Toxics

Emissions from producing, transporting and combusting fuel contribute to ambient levels of pollutants that contribute to adverse effects on vegetation. Volatile organic compounds, some of which are considered air toxics, have long been suspected to play a role in vegetation damage.[348] In laboratory experiments, a wide range of tolerance to VOCs has been observed.[349] Decreases in harvested seed pod weight have been reported for the more sensitive plants, and some studies have reported effects on seed germination, flowering and fruit ripening. Effects of individual VOCs or their role in conjunction with other stressors (*e.g.,* acidification, drought, temperature extremes) have not been well studied. In a recent study of a mixture of VOCs including ethanol and toluene on herbaceous plants, significant effects on seed production, leaf water content and photosynthetic efficiency were reported for some plant species.[350]

Research suggests an adverse impact of vehicle exhaust on plants, which has in some cases been attributed to aromatic compounds and in other cases to nitrogen oxides.[351] [352] [353] The impacts of VOCs on plant reproduction may have long-term implications for biodiversity and survival of native species near major roadways. Most of the studies of the impacts of VOCs on vegetation have focused on short-term exposure and few studies have focused on long-term effects of VOCs on vegetation and the potential for metabolites of these compounds to affect herbivores or insects.

D. Air Quality Impacts of Non-GHG Pollutants

(1) Current Levels of Non-GHG Pollutants

This proposal may have impacts on ambient concentrations of criteria and air toxic pollutants. Nationally, levels of $PM_{2.5}$, ozone, NO_X, SO_X, CO and air toxics are declining.[354] However, approximately 127 million people lived in counties that exceeded any NAAQS in 2008.[355] These numbers do not include the people living in areas where there is a future risk of failing to maintain or attain the NAAQS. It is important to note that these numbers do not account for potential SO_2, NO_2 or Pb nonattainment areas which have not yet been designated. Also, EPA is currently reviewing the standards for PM and CO, and those standards could be made more protective, which would increase the number of people living in nonattainment areas.

Further, the majority of Americans continue to be exposed to ambient concentrations of air toxics at levels which have the potential to cause adverse health effects.[356] [357] The levels of air toxics to which people are exposed vary depending on where people live and work and the kinds of activities in which they engage, as discussed in detail in U.S. EPA's recent mobile source air toxics rule.[358]

(2) Impacts of Proposed Standards on Future Ambient Concentrations of $PM_{2.5}$, Ozone and Air Toxics

Full-scale photochemical air quality modeling is necessary to accurately project levels of criteria pollutants and air toxics. For the final rulemaking, a national-scale air quality modeling analysis will be performed to analyze the impacts of the standards on $PM_{2.5}$, ozone, and selected air toxics (*i.e.,* benzene, formaldehyde, acetaldehyde, acrolein and 1,3-butadiene). The length of time needed to prepare the necessary emissions inventories, in addition to the processing time associated with the modeling itself, has precluded us from performing air quality modeling for this proposal.

Sections VII.A and VII.B of the preamble present projections of the changes in criteria pollutant and air toxics emissions due to the proposed vehicle standards; the basis for those estimates is set out in Chapter 6 of the draft RIA. The atmospheric chemistry related to ambient concentrations of $PM_{2.5}$, ozone and air toxics is very complex, and making predictions based solely on emissions changes is extremely difficult. However, based on the magnitude of the emissions changes predicted to result from the proposed standards, EPA expects that there will be a relatively small change in ambient air quality, pending a more comprehensive analysis for the final rulemaking.

For the final rulemaking, EPA intends to use a 2005-based Community Multi-scale Air Quality (CMAQ) modeling platform as the tool for the air quality modeling. The CMAQ modeling system is a comprehensive three-dimensional grid-based Eulerian air quality model designed to estimate the formation and fate of oxidant precursors, primary and secondary PM concentrations and deposition, and air toxics, over regional and urban spatial scales (*e.g.,* over the contiguous United States).[359] [360] [361] [362]

[348] U.S. EPA. 1991. Effects of organic chemicals in the atmosphere on terrestrial plants. EPA/600/3–91/001. Docket EPA–HQ–OAR–2010–0162.

[349] Cape JN, ID Leith, J Binnie, J Content, M Donkin, M Skewes, DN Price AR Brown, AD Sharpe. 2003. Effects of VOCs on herbaceous plants in an open-top chamber experiment. Environ. Pollut. 124:341–343. Docket EPA–HQ–OAR–2010–0162.

[350] Cape JN, ID Leith, J Binnie, J Content, M Donkin, M Skewes, DN Price AR Brown, AD Sharpe. 2003. Effects of VOCs on herbaceous plants in an open-top chamber experiment. Environ. Pollut. 124:341–343. Docket EPA–HQ–OAR–2010–0162.

[351] Viskari E–L. 2000. Epicuticular wax of Norway spruce needles as indicator of traffic pollutant deposition. Water, Air, and Soil Pollut. 121:327–337. Docket EPA–HQ–OAR–2010–0162.

[352] Ugrekhelidze D, F Korte, G Kvesitadze. 1997. Uptake and transformation of benzene and toluene by plant leaves. Ecotox. Environ. Safety 37:24–29. Docket EPA–HQ–OAR–2010–0162.

[353] Kammerbauer H, H Selinger, R Rommelt, A Ziegler-Jons, D Knoppik, B Hock. 1987. Toxic components of motor vehicle emissions for the spruce Picea abies. Environ. Pollut. 48:235–243. Docket EPA–HQ–OAR–2010–0162.

[354] U.S. EPA (2010). Our Nation's Air: Status and Trends through 2008. Office of Air Quality Planning and Standards, Research Triangle Park, NC. Publication No. EPA 454/R–09–002. *http://www.epa.gov/airtrends/2010/*. Docket EPA–HQ–OAR–2010–0162.

[355] *See* U.S. EPA Trends, Note 354.

[356] U.S. Environmental Protection Agency (2007). Control of Hazardous Air Pollutants from Mobile Sources; Final Rule. 72 FR 8434, February 26, 2007.

[357] *See* U.S. EPA 2010, Light-Duty 2012–2016 MY Vehicle Rule, Note 6.

[358] *See* U.S. EPA 2007, Note 356.

[359] U.S. Environmental Protection Agency, Byun, D.W., and Ching, J.K.S., Eds, 1999. Science algorithms of EPA Models-3 Community Multiscale

Continued

The CMAQ model is a well-known and well-established tool and is commonly used by EPA for regulatory analyses, for instance the recent ozone NAAQS proposal, and by States in developing attainment demonstrations for their State Implementation Plans.[363] The CMAQ model version 4.7 was most recently peer-reviewed in February of 2009 for the U.S. EPA.[364]

CMAQ includes many science modules that simulate the emission, production, decay, deposition and transport of organic and inorganic gas-phase and particle-phase pollutants in the atmosphere. EPA intends to use the most recent version of CMAQ which reflects updates to version 4.7 to improve the underlying science. These include aqueous chemistry mass conservation improvements, improved vertical convective mixing and lowered CB05 mechanism unit yields for acrolein from 1,3-butadiene tracer reactions which were updated to be consistent with laboratory measurements.

VIII.What are the agencies' estimated cost, economic, and other impacts of the proposed program?

In this section, we present the costs and impacts of the proposed HD National Program. It is important to note that NHTSA's proposed fuel consumption standards and EPA's proposed GHG standards would both be in effect, and each would lead to average fuel economy increases and GHG emission reductions. The two agencies' proposed standards would comprise the HD National Program.

The net benefits of the proposed HD National Program consist of the effects of the program on:

- The vehicle program costs (costs of complying with the vehicle CO_2 standards)
- Fuel savings associated with reduced fuel usage resulting from the program
- The economic value of reductions in greenhouse gas emissions,
- The reductions in other (non-GHG) pollutants,
- Costs associated with increases in noise, congestion, and accidents resulting from increased vehicle use,
- The economic value of improvements in U.S. energy security impacts,
- Benefits associated with increased vehicle use due to the "rebound" effect.

We also present the cost-effectiveness of the standards, or the cost per ton of emissions reduced. A few effects of the program, such as the effects on other pollutants, are not included here. We plan to add the effects of other pollutants to the analysis for the final rules.

The program may have other effects that are not included here. The agencies seek comment on whether any costs or benefits are omitted from this analysis, so that they can be explicitly recognized in the final rules. In particular, as discussed in Section III and in Chapter 2 of the draft RIA, the technology cost estimates developed here take into account the costs to hold other vehicle attributes, such as size and performance, constant. In addition, the analysis assumes that the full technology costs are passed along to vehicle buyers. With these assumptions, because welfare losses are monetary estimates of how much buyers would have to be compensated to be made as well off as in the absence of the change,[365] the price increase measures the loss to the buyer.[366] Assuming that the full technology cost gets passed along to the buyer as an increase in price, the technology cost thus measures the welfare loss to the buyer. Increasing fuel economy would have to lead to other changes in the vehicles that buyers find undesirable for there to be additional losses not included in the technology costs.

The costs estimates include the costs of holding other vehicle attributes, such as performance, constant. The 2010 light-duty GHG/CAFE rule, discussed that if other vehicle attributes are not held constant, then the cost estimates do not capture the impacts of these changes.[367] The light duty rule also discussed other potential issues that could affect the calculation of the welfare impacts of these types of changes, such as behavioral issues affecting the demand for technology investments, investment horizon uncertainty, and the rate at which truck owners trade off higher vehicle purchase price against future fuel savings. The agencies seek comments, including supporting data and quantitative analyses, if possible, of any additional impacts of the proposed standards on vehicle attributes and performance, and other potential aspects that could positively or negatively affect the welfare implications of this proposed rulemaking, not addressed in this analysis.

The total monetized benefits (excluding fuel savings) under the program are projected to be $1.5 to $7.9 billion in 2030, depending on the value used for the social cost of carbon. These benefits are summarized below in Table VIII–25. The costs of the program in 2030 are estimated to be approximately $1.9 billion for new engine and truck technology less $19 billion in savings realized by trucking operations through fewer fuel expenditures (calculated using pre-tax fuel prices). These costs are summarized below in Table VIII–24. The present value of the total monetized benefits (excluding fuel savings) under the program are expected to range from $23 billion to $150 billion with a 3% discount rate; with a 7% discount rate, the total monetized benefits are expected to range from $15 billion to

Air Quality (CMAQ modeling system, EPA/600/R–99/030, Office of Research and Development). Docket EPA–HQ–OAR–2010–0162.

[360] Byun, D.W., and Schere, K.L., 2006. Review of the Governing Equations, Computational Algorithms, and Other Components of the Models-3 Community Multiscale Air Quality (CMAQ) Modeling System, J. Applied Mechanics Reviews, 59 (2), 51–77. Docket EPA–HQ–OAR–2010–0162.

[361] Dennis, R.L., Byun, D.W., Novak, J.H., Galluppi, K.J., Coats, C.J., and Vouk, M.A., 1996. The next generation of integrated air quality modeling: EPA's Models-3, Atmospheric Environment, 30, 1925–1938. Docket EPA–HQ–OAR–2010–0162.

[362] Carlton, A., Bhave, P., Napelnok, S., Edney, E., Sarwar, G., Pinder, R., Pouliot, G., and Houyoux, M. *Model Representation of Secondary Organic Aerosol in CMAQv4.7.* Ahead of Print in Environmental Science and Technology. Accessed at: *http://pubs.acs.org/doi/abs/10.1021/es100636q?prevSearch=CMAQ&searchHistoryKey* Docket EPA–HQ–OAR–2010–0162.

[363] U.S. EPA (2007). Regulatory Impact Analysis of the Proposed Revisions to the National Ambient Air Quality Standards for Ground-Level Ozone. EPA document number 442/R–07–008, July 2007. Docket EPA–HQ–OAR–2010–0162

[364] Allen, D. *et al.* (2009). Report on the Peer Review of the Atmospheric Modeling and Analysis Division, National Exposure Research Laboratory, Office of Research and Development, U.S. EPA. *http://www.epa.gov/asmdnerl/peer/reviewdocs.html.* Docket EPA–HQ–OAR–2010–0162.

[365] This approach describes the economic concept of compensating variation, a payment of money after a change that would make a consumer as well off after the change as before it. A related concept, equivalent variation, estimates the income change that would be an alternative to the change taking place. The difference between them is whether the consumer's point of reference is her welfare before the change (compensating variation) or after the change (equivalent variation). In practice, these two measures are typically very close together.

[366] Indeed, it is likely to be an overestimate of the loss to the consumer, because the consumer has choices other than buying the same vehicle with a higher price; she could choose a different vehicle, or decide not to buy a new vehicle. The consumer would choose one of those options only if the alternative involves less loss than paying the higher price. Thus, the increase in price that the consumer faces would be the upper bound of loss of consumer welfare, unless there are other changes to the vehicle due to the fuel economy improvements that make the vehicle less desirable to consumers.

[367] Environmental Protection Agency and Department of Transportation, "Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards; Final Rule," **Federal Register** 75(88) (May 7, 2010). *See* especially sections III.H.1 (pp. 25510–25513) and IV.G.6 (pp. 25651–25657).

$140 billion. These values, summarized in Table VIII–25, depend on the value used for the social cost of carbon. The present value of costs of the program for new engine and truck technology, in Table VIII–24, are expected to be $42 billion using a 3% discount rate, and $23 billion with a 7% discount rate, less fuel savings (calculated using pre-tax fuel prices) of $350 billion with a 3% discount rate, and $150 billion with a 7% discount rate. Total present net benefits (in Table VIII–26) are thus expected to range from $330 billion to $460 billion with a 3% discount rate, and $150 billion to $270 billion with a 7% discount rate.

The estimates developed here are measured against a baseline fuel economy associated with MY 2010 vehicles. The extent to which fuel economy improvements may have occurred in the absence of the rules affect the net benefits associated with the rule. If trucks would have ended up installing technologies to achieve the fuel savings and reduced GHG emissions in the absence of this proposal, then both the costs and benefits of these fuel savings could be attributed to market forces, not the rules. At this time, the agencies do not have estimates of the extent of fuel-saving technologies that might have been adopted in the absence of this proposal. We seek comment on whether the agencies should use an alternative baseline based on data provided by commenters to estimate the degree to which the technologies discussed in this proposal would have been adopted in the absence of this proposal.

EPA has undertaken an analysis of the economy-wide impacts of the proposed heavy-duty truck fuel efficiency and GHG standards as an exploratory exercise that EPA believes could provide additional insights into the potential impacts of the program.[368] These results were not a factor regarding the appropriateness of the proposed standards. It is important to note that the results of this modeling exercise are dependent on the assumptions associated with how manufacturers would make fuel efficiency improvements and how trucking operations would respond to increases in higher vehicle costs and improved vehicle fuel efficiency as a result of the proposed program.

Further information on these and other aspects of the economic impacts of our rules are summarized in the following sections and are presented in more detail in the draft RIA for this proposed rulemaking.

A. Conceptual Framework for Evaluating Impacts

This regulation is motivated primarily by the goals of reducing emissions of greenhouse gases and promoting U.S. energy security by reducing consumption and imports of petroleum-based fuels. These motivations involve classic externalities, meaning that private decisions do not incorporate all of the costs associated with these problems; these costs are not borne completely by the households or businesses whose actions are responsible for them. In the absence of some mechanism to "internalize" these costs—that is, to transfer their burden to individuals or firms whose decisions impose them—individuals and firms will consume more petroleum-based fuels than is socially optimal. Externalities are a classic motivation for government intervention in markets. These externalities, as well as effects due to changes in emissions of other pollutants and other impacts, are discussed in Sections VIII.H–VIII.J.

In some cases, these classic externalities are by themselves enough to justify the costs of imposing fuel efficiency standards. For some discount rates and some projected social costs of carbon, however, the reductions in these external costs are less than the costs of new fuel saving technologies needed to meet the standards. (*See* Tables 9–18 and 9–19 in the draft RIA.) Nevertheless, this regulation reduces trucking companies' fuel costs; according to our estimates, these savings in fuel costs are *by themselves* sufficient to pay for the technologies over periods of time considerably shorter than vehicles' expected lifetimes under the assumptions used for this analysis (*e.g.*, AEO 2010 projected fuel prices). If these estimates are correct, then the *entire* value of the reductions in external costs represents additional net benefits of the rule, beyond those resulting from the fact that the value of fuel savings exceeds the costs of technologies necessary to achieve them.

It is often asserted that there are cost-effective fuel-saving technologies that truck companies are not taking advantage of. This is commonly known as the "energy gap" or "energy paradox." Standard economic theory suggests that in normally functioning competitive markets, interactions between vehicle buyers and producers would lead producers to incorporate all cost-effective technology into the vehicles that they offer, without government intervention. Unlike in the light-duty vehicle market, the vast majority of vehicles in the medium- and heavy-duty truck market are purchased and operated by businesses with narrow profit margins, and for which fuel costs represent a substantial operating expense.

Even in the presence of uncertainty and imperfect information—conditions that hold to some degree in every market—we generally expect firms to attempt to minimize their costs in an effort to survive in a competitive marketplace, and therefore to make decisions that are in the best interest of the company and its owners and/or shareholders. In this case, the benefits of the rules would be due exclusively to reducing the economic costs of externalities resulting from fuel production and consumption. However, as discussed below in Section VIII.E, the agencies have estimated that the application of fuel-saving technologies in response to the proposed standards would, on average, yield private returns to truck owners of 140% to 420% (*see* Table VIII–21 below). The agencies have also estimated that the application of these technologies would be significantly lower in the absence of the proposed standards (*i.e.*, under the "no action" regulatory alternative), meaning that truck buyers and operators ignore opportunities to make investments in higher fuel economy that appear to offer significant cost savings.

There are several possible explanations in the economics literature for why trucking companies do not adopt technologies that would be expected to increase their profits: there could be a classic market failure in the trucking industry—market power, externalities, or asymmetric or incomplete (*i.e.*, missing market) information; there could be institutional or behavioral rigidities in the industry (union rules, standard operating procedures, statutory requirements, loss aversion, *etc.*), whereby participants collectively do not minimize costs; or the engineering estimates of fuel savings and costs for these technologies might overstate their benefits or understate their costs in real-world applications.

To try to understand why trucking companies have not adopted these seemingly cost-effective fuel-saving technologies, the agencies have surveyed published literature about the energy paradox, and held discussions with numerous truck market participants. Below, we have listed five categories of possible explanations derived from these sources. Collectively, these five hypotheses may explain the apparent inconsistency between the

[368] *See* Memorandum to Docket, "Economy-Wide Impacts of Proposed Heavy-Duty Truck Greenhouse Gas Emissions and Fuel Efficiency Standards", October 8, 2010. Docket EPA–HQ–OAR–2010–0162.

engineering analysis, which finds a number of cost-effective methods of improving fuel economy, and the observation that many of these technologies are not widely adopted.

These hypotheses include imperfect information in the original and resale markets, split incentives, uncertainty about future fuel prices, and adjustment and transactions costs. As the discussion will indicate, some of these explanations suggest failures in the private market for fuel-saving technology in addition to the externalities caused by producing and consuming fuel that are the primary motivation for the rules. Other explanations suggest market-based behaviors that may imply additional costs of regulating truck fuel efficiency that are not accounted for in this analysis. Anecdotal evidence from various segments of the trucking industry suggests that many of these hypotheses may play a role in explaining the puzzle of why truck purchasers appear to under-invest in fuel economy, although different explanations may apply to different segments, or even different companies. The published literature does not appear to include empirical analysis or data related to this question.

The agencies invite comment on these explanations, and on any data or information that could be used to investigate the role of any or all of these five hypotheses in explaining this energy paradox as it applies specifically to trucks. The agencies also request comment and information regarding any other hypotheses that could explain the appearance that cost-effective fuel-saving technologies have not been widely incorporated into trucks.

(1) Information Issues in the Original Sale Markets

One potential hypothesis for why the trucking industry does not adopt what appear to be inexpensive fuel saving technologies is that there is inadequate or unreliable information available about the effectiveness of many fuel-saving technologies for new vehicles. As the NAS report notes, "Reliable, peer-reviewed data on fuel saving performance is available only for a few technologies in a few applications. As a result, the committee had to rely on information from a wide range of sources, * * * including many results that have not been duplicated by other researchers or verified over a range of duty cycles." If reliable information on the effectiveness of many new technologies is absent, truck buyers will understandably be reluctant to spend additional money to purchase vehicles equipped with unproven technologies.

This lack of information can manifest itself in multiple ways. For instance, the problem may arise purely because collecting reliable information on technologies is costly (*also see* Section VIII.A.5 on transaction costs). Moreover, information has aspects of a public good, in that no single firm has the incentive to do the costly experimentation to determine whether or not particular technologies are cost-effective, while all firms benefit from the knowledge that would be gained from that experimentation. Similarly, if multiple firms must conduct the same tests to get the same information, costs could be reduced by some form of coordination of information gathering.

There are several possible reasons why trucking firms may experience difficulty gathering or interpreting information about fuel-saving technologies. It may be difficult for truck drivers and fleet operators to separate the individual effects of various technologies and operating strategies from one another, particularly when they tend to be used in conjunction. It may also be difficult for truck operators to assess the applicability of even objective and reliable test results to their own specific vehicle configurations and operating practices; at the same time, the effects of specific technologies or operating practices may vary with geography, season of the year, or other factors. In highly competitive markets, any firm that conducts tests of fuel efficiency is unlikely to share results with other firms. If so, then cost-effective technological improvements may not be adopted because they cannot be reliably distinguished from inefficient technologies.

To some extent, information about the effectiveness of some selected technologies does exist, and it suggests that some technologies appear to be very cost-effective in some situations. The SmartWay Transport Partnership is a complementary partnership between EPA and the freight goods industry (shippers, truck and rail carriers, and logistics companies) whose aim is to provide better information on fuel-efficient, low-carbon technologies and operational practices to help accelerate their deployment. SmartWay initially focused on evaluating and testing technologies for use in over-the-road class 8 tractor-trailers, commonly operated by the large, national trucking fleets. For this reason, more information is available about the configuration and operation of these types of trucks. Many of the technologies that SmartWay selected for evaluation can also save fuel and reduce greenhouse gas emissions in other types of trucks and trucking operations. However, due to the wide diversity among other types of trucks and truck operations, and lack of precise information about the effectiveness of technologies in each one of these types of truck and trucking operations, it is difficult for the program to provide good information that is specific to each company. This makes it much more challenging to improve market confidence in fuel-saving technologies for these other truck types in the same way that SmartWay has done with its existing partners. SmartWay will continue to serve as a test bed for emerging technologies and as a conduit for technical information by developing and sharing information on other types of medium- and heavy-duty vehicles, helping to build market confidence in innovative financial, technical and operational solutions for medium- and heavy-duty vehicles across the freight goods industry, and promoting retrofit fuel-saving technologies within the existing legacy fleet. Information provision, such as the efforts of the SmartWay program, is a direct, non-regulatory approach to addressing the problem of the availability and reliability of results, as long as truck purchasers are able and willing to act on the information.

While its effect on information is indirect, we expect the requirement for the use of new technologies included in this proposal will circumvent these information issues, resulting in their adoption, thus providing more readily available information about their benefits. The agencies appreciate, however, that the diversity of truck uses, driving situations, and driver behavior willl lead to variation in the fuel savings that individual trucks or fleets experience from using specific technologies.

(2) Information Issues in the Resale Market

In addition to issues in the new vehicle market, a second hypothesis for why trucking companies may not adopt what appear to be cost-effective technologies to save fuel is that the resale market may not reward the addition of fuel-saving technology to vehicles adequately to ensure their original purchase by new truck buyers. This inadequate payback for users beyond the original owner may contribute to the short payback period that new purchasers appear to expect.[369] The agencies seek data and information on the extent to which costs of fuel-

[369] *See* NAS 2010, Note 111, at p. 188.

saving equipment can be recovered in the resale truck market.

Some of this unwillingness to pay for fuel-saving technology may be due to the extension of the information problems in the new vehicle market into resale markets. Buyers in the resale market have no more reason to trust information on fuel-saving technologies than buyers in the original market. Because actual fuel economy of trucks on the road depends on many factors, including geography and driving styles or habits, even objective sources such as logs of truck performance for used vehicles may not provide reliable information about the fuel economy that potential purchasers of used trucks will experience.

A related possibility is that vehicles will be used for different purposes by their second owners than those for which they were originally designed. For instance, a vehicle originally purchased for long hauls might be used by its second owner instead for regional or intrastate trips, in which case some of the fuel-saving measures that proved effective in its original use may not be equally effective in these new uses. If information were more widely available and reliable, then purchasers in the resale market would seek vehicles with technologies that best suited their purposes, and buyers would be matched with sellers so that used vehicles would be used primarily for purposes in which their fuel-saving technologies were most valuable.

It is also possible, though, that the fuel savings experienced by the secondary purchasers may not match those experienced by their original owners if the optimal secondary new use of the vehicle does not earn as many benefits from the technologies. In that case, the premium for fuel-saving technology in the secondary market should accurately reflect its value to potential buyers participating in that market, even if it is lower than its value in the original market, and the market has not failed. Because the information necessary to optimize use in the secondary market may not be readily available or reliable, however, buyers in the resale market may have less ability than purchasers of new vehicles to identify and gain the advantages of new fuel-saving technologies, and may thus be even less likely to pay a premium for them.

For these reasons, purchasers' willingness to pay for fuel-economy technologies may be even lower in the resale market than in the original equipment market. Even when fuel-saving technologies will provide benefits in the resale markets, purchasers of used vehicles may not be willing to compensate their original owners fully for their remaining value. As a result, the purchasers of original equipment may expect the resale market to provide inadequate appropriate compensation for the new technologies, even when those technologies would reduce costs for the new buyers. This information issue may partially explain what appears to be the very short payback periods required for new technologies in the new vehicle market.

(3) Split Incentives in the Medium- and Heavy-Duty Truck Industry

A third hypothesis explaining the energy paradox as applied to trucking involves split incentives. When markets work effectively, signals provided by transactions in one market are quickly transmitted to related markets and influence the decisions of buyers and sellers in those related markets. For instance, in a well-functioning market system, changes in the expected future price of fuel should be transmitted rapidly to those who purchase trucks, who will then reevaluate the amount of fuel-saving technology to purchase for new vehicles. If for some reason a truck purchaser will not be directly responsible for future fuel costs, or the individual who will be responsible for fuel costs does not decide which truck characteristics to purchase, then those price signals may not be transmitted effectively, and incentives can be described as "split."

One place where such a split may occur is between the owners and operators of trucks. Because they are generally responsible for purchasing fuel, truck operators have strong incentives to economize on its use, and are thus likely to support the use of fuel-saving technology. However, the owners of trucks or trailers are often different from operators, and may be more concerned about their longevity or maintenance costs than about their fuel efficiency when purchasing vehicles. As a result, capital investments by truck owners may be channeled into equipment that improves vehicles' durability or reduces their maintenance costs, rather than into fuel-saving technology. If operators can choose freely among the trucks they drive, competition among truck owners to employ operators would encourage owners to invest in fuel-saving technology. However, if truck owners have more ability to choose among operators, then market signals for improved fuel savings that would normally be transmitted to truck owners may be muted.

Anecdotal information about large truck fleets suggests that, even within a company, the office or department responsible for truck purchases is often different from that responsible for purchasing fuel. Therefore, the employees who purchase trucks may have strong incentives to lower their initial capital cost, but not equally strong incentives to lower operating costs.

Single-wide tires, which save fuel and allow more payload (thus increasing revenue), offer another example of split incentives. They require a different driving style; those concerned about retaining drivers may resist their purchase, because drivers may not like the slightly different "feel" of wheel torque needed. Maintenance and repair staff may resist them because the tires may not be as available as they would like on the road, or they may need to change road service providers. Finally, those who resell the trucks may believe that the resale market will not value the tires. While financial pressures should provide incentives for greater coordination, especially when fuel costs are a large share of operating costs, it may be difficult institutionally to change budgeting procedures and to coordinate across offices. Thus, even within a company incentives for fuel savings may not be fully transmitted to those responsible for purchasing decisions.

In addition, the NAS report notes that split incentives can arise between tractor and trailer operators.[370] Trailers affect the fuel efficiency of shipping, but trailer owners do not face strong incentives to coordinate with truck owners. Although some trucking fleets own or lease their own trailers, a significant part of the trucking business is "drop and hook" service, in which trucking fleets pick up and drop off trailers and containers. These trailers and containers can belong to shippers, other trucking companies, leasing companies, or ocean-going vessel lines, in which cases their owners may not face strong incentives to economize on fuel consumption by tractor operators. Though tractor operators should, in principle, have some ability to arrange tractor-trailer combinations that provide increased fuel efficiency, the value of the resulting fuel savings may be small relative to the complexity and cost involved. EPA and NHTSA are not proposing to regulate trailers in this proposal.

By itself, information provision may be inadequate to address the potential underinvestment in fuel economy

[370] *See* NAS 2010, Note 111, at p. 182.

resulting from such split incentives. In this setting, regulation may contribute to fuel savings that otherwise may be difficult to achieve.

The agencies seek evidence and data on the extent to which split incentives affect purchasing choices in truck markets. For example, are trailer buyers that do not own their own tractors less likely to purchase aerodynamic trailers than those that purchase and drive both tractors and trailers?

(4) Uncertainty About Future Cost Savings

Another hypothesis for the lack of adoption of seemingly fuel saving technologies may be uncertainty about future fuel prices or truck maintenance costs. When purchasers have less than perfect foresight about future operating expenses, they may implicitly discount future savings in those costs due to uncertainty about potential returns from investments that reduce future costs. In contrast, the immediate costs of the fuel-saving or maintenance-reducing technologies are certain and immediate, and thus not subject to discounting. In this situation, both the expected return on capital investments in higher fuel economy and potential variance about its expected rate may play a role in a firm's calculation of its payback period on such investments.

In the context of energy efficiency investments for the home, Metcalf and Rosenthal (1995) and Metcalf and Hassett (1995) observe that households weigh known, up-front costs that are essentially irreversible against an unknown stream of future fuel savings.[371] Uncertainty about the value of future energy savings may make risk-averse households reluctant to invest in energy-saving technologies that appear to offer attractive economic returns. These authors find that it is possible to replicate the observed adoption rates for household energy efficiency improvements by incorporating the effect of uncertainty about the value of future energy savings into an empirical model. Notably, in this situation, requiring households to adopt technologies more quickly may make them worse off by imposing additional risk on them.

Greene *et al.* (2009) also find support for this explanation in the context of light-duty fuel economy decisions: a loss-averse consumer's expected net present value of increasing the fuel economy of a passenger car can be very close to zero, even if a risk-neutral expected value calculation shows that its buyer can expect significant net benefits from purchasing a more fuel-efficient car.[372] These authors note that uncertainty regarding the future price of gasoline is a less important source of this result than is uncertainty about the lifetime, expected use, and reliability of the vehicle. Supporting this hypothesis is a finding by Dasgupta *et al.* (2007) that consumers are more likely to lease than buy a vehicle with higher maintenance costs because it provides them with the option to return it before those costs become too high.[373] However, the agencies know of no studies that have estimated the impact of uncertainty on perceived future savings for medium- and heavy-duty vehicles.

Purchasers' uncertainty about future fuel prices implies that mandating improvements in fuel efficiency can reduce the expected utility associated with truck purchases. This is because adopting such regulation requires purchasers to assume a greater level of risk than they would in its absence, even if the future fuel savings predicted by a risk-neutral calculation actually materialize. Thus the mere existence of uncertainty about future savings in fuel costs does not by itself assure that regulations requiring improved fuel efficiency will necessarily provide economic benefits for truck purchasers and operators. On the other hand, because risk aversion reduces expected returns for businesses, competitive pressures can reduce risk aversion: risk-neutral companies can make higher average profits over time. Thus, significant risk aversion is unlikely to survive competitive pressures.

(5) Adjustment and Transactions Costs

Another hypothesis is that transactions costs of changing to new technologies (how easily drivers will adapt to the changes, *e.g.*) may slow or prevent their adoption. Because of the diversity in the trucking industry, truck owners and fleets may like to see how a new technology works in the field, when applied to their specific operations, before they adopt it. If a conservative approach to new technologies leads truck buyers to adopt new technologies slowly, then successful new technologies are likely to be adopted over time without market intervention, but with potentially significant delays in achieving fuel saving, environment, and energy security benefits.

In addition, there may be costs associated with training drivers to realize the potential fuel savings enabled by new technologies, or with accelerating fleet operators' scheduled fleet turnover and replacement to hasten their acquisition of vehicles equipped with new fuel-saving technologies. Here, again, there may be no market failure; requiring the widespread use of these technologies may impose adjustment and transactions costs not included in this analysis. As in the discussion of the role of risk, these adjustment and transactions costs are typically immediate and undiscounted, while their benefits are future and uncertain; risk or loss aversion may further discourage companies from adopting new technologies.

To the extent that there may be transactions costs associated with the new technologies, then regulation gives all new truck purchasers a level playing field, because it will require all of them to adjust on approximately the same time schedule. If experience with the new technologies serves to reduce uncertainty and risk, the industry as a whole may become more accepting of new technologies. This could increase demand for future new technologies and induce additional benefits in the legacy fleet through complementary efforts such as SmartWay.

(6) Summary

On the one hand, commercial vehicle operators are under competitive pressure to reduce operating costs, and thus their purchasers would be expected to pursue and rapidly adopt cost-effective fuel-saving technologies. On the other hand, the short payback period required by buyers of new trucks is a symptom that suggests some combination of uncertainty about future cost savings, transactions costs, and imperfectly functioning markets. In addition, widespread use of tractor-trailer combinations introduces the possibility that owners of trailers may have weaker incentives than truck owners or operators to adopt fuel-saving technology for their trailers. The market

[371] Metcalf, G., and D. Rosenthal (1995). "The 'New' View of Investment Decisions and Public Policy Analysis: An Application to Green Lights and Cold Refrigerators," Journal of Policy Analysis and Management 14: 517–531. Hassett and Metcalf (1995). "Energy Tax Credits and Residential Conservation Investment: Evidence from Panel Data" Journal of Public Economics 57 (1995): 201–217. Metcalf, G., and K. Hassett (1999). "Measuring the Energy Savings from Home Improvement Investments: Evidence from Monthly Billing Data." The Review of Economics and Statistics 81(3): 516–528.

[372] Greene, D., J. German, and M. Delucchi (2009). "Fuel Economy: The Case for Market Failure" in Reducing Climate Impacts in the Transportation Sector, Sperling, D., and J. Cannon, eds. Springer Science.

[373] Dasgupta, S., S. Siddarth, and J. Silva-Risso (2007). "To Lease or to Buy? A Structural Model of a Consumer's Vehicle and Contract Choice Decisions." Journal of Marketing Research 44: 490–502.

for medium- and heavy-duty trucks may face these problems, both in the new vehicle market and in the resale market.

Provision of information about fuel-saving technologies through voluntary programs such as SmartWay will assist in the adoption of new cost-saving technologies, but diffusion of new technologies can still be obstructed. Those who are willing to experiment with new technologies expect to find cost savings, but those may be difficult to prove. As noted above, because individual results of new technologies vary, new truck purchasers may find it difficult to identify or verify the effects of fuel-saving technologies. Those who are risk-averse are likely to avoid new technologies out of concerns over the possibility of inadequate returns on the investment, or with other adverse impacts. Competitive pressures in the freight transport industry can provide a strong incentive to reduce fuel consumption and improve environmental performance. However, not every driver or trucking fleet operating today has the requisite ability or interest to access the technical information, some of which is already provided by SmartWay, nor the resources necessary to evaluate this information within the context of his or her own freight operation.

As noted at the beginning of this section, the agencies seek comments on all these hypotheses as well as any data that could inform our understanding of what appears to be slow adoption of cost-effective fuel-saving technologies in these industries.

B. Costs Associated With the Proposed Program

In this section, the agencies present the estimated costs associated with the proposed program. The presentation here summarizes the costs associated with new technology expected to be added to meet the new GHG and fuel consumption standards. The analysis summarized here provides the estimate of incremental costs on a per truck basis and on an annual total basis.

The presentation here summarizes the best estimate by EPA and NHTSA staff as to the technology mix expected to be employed for compliance. For details behind the cost estimates associated with individual technologies, the reader is directed to Section III of this preamble and to Chapter 2 of the draft RIA.

With respect to the cost estimates presented here, the agencies note that, because these estimates relate to technologies which are in most cases already available, these cost estimates are technically robust.

(1) Costs per Truck

For the Class 2b and 3 pickup trucks and vans, the agencies have used a methodology consistent with that used for our recent light-duty joint rulemaking since most of the technologies expected for Class 2b and 3 pickup trucks and vans is consistent with that expected for the larger light-duty trucks. The cost estimates presented in the recent light-duty joint rulemaking were then scaled upward to account for the larger weight, towing capacity, and work demands of the trucks in these heavier classes. For details on that scaling process and the resultant costs for individual technologies, the reader is directed to Section III of this preamble and to Chapter 2 of the draft RIA. Note also that all cost estimates have been updated to 2008 dollars for this analysis while the recent light-duty joint rulemaking was presented in 2007 dollars.

For the loose heavy-duty gasoline engines, we have generally used engine-related costs from the Class 2b and 3 pickup truck and van estimates since the loose heavy-duty gasoline engines are essentially the same engines as those sold into the Class 2b and 3 pickup truck and van market.

For heavy-duty diesel engines, the agencies have estimated costs using a different methodology than that employed in the recent light-duty joint rulemaking. In the recent light-duty joint rulemaking, the fixed costs were included in the hardware costs via an indirect cost multiplier. As such, the hardware costs presented in that analysis, and in the cost estimates for Class 2b and 3 trucks, included both the actual hardware and the associated fixed costs. For this analysis, some of the fixed costs are estimated separately for HD diesel engines and are presented separately from the hardware costs. For details, the reader is directed to Chapter 2 of the draft RIA. Importantly, both methodologies after the figures are totaled account for all the costs associated with the proposal. As noted above, all costs are presented in 2008 dollars.

The estimates of vehicle compliance costs cover the years leading up to—2012 and 2013—and including implementation of the program—2014 through 2018. Also presented are costs for the years following implementation to shed light on the long term (2022 and later) cost impacts of the program. The year 2022 was chosen here consistent with the recent light-duty joint rulemaking. That year was considered long term in that analysis because the short-term and long-term markup factors described shortly below are applied in five year increments with the 2012 through 2016 implementation span and the 2017 through 2021 span both representing the short-term. Since many of the costs used in this analysis are based on costs in the recent light-duty joint rulemaking analysis, consistency with that analysis seems appropriate. That said, comments are requested as to whether a different year would be a more appropriate long term year.

Some of the individual technology cost estimates are presented in brief in Section III, and account for both the direct and indirect costs incurred in the manufacturing and dealer industries (for a complete presentation of technology costs, please refer to Chapter 2 of the draft RIA). To account for the indirect costs on Class 2b and 3 pickup trucks and vans, the agencies have applied an ICM factor to all of the direct costs to arrive at the estimated technology cost. The ICM factor used was 1.17 in the short-term (2014 through 2021) to account for differences in the levels of R&D, tooling, and other indirect costs that will be incurred. Once the program has been fully implemented, some of the indirect costs will no longer be attributable to these standards and, as such, a lower ICM factor is applied to direct costs in 2022 and later. The agencies have also applied ICM factors to Class 4 through 8 trucks and to heavy-duty diesel engine technologies. Markup factors in these categories range from 1.11 to 1.26 in the short term (2014 through 2021) depending on the complexity of the given technology. Note that, for the HD diesel engines, the agencies have applied these mark ups to ensure that our estimates are conservative since we have estimated fixed costs separately for technologies applied to these categories—effectively making the use of markups a double counting of indirect costs. The agencies request comment on whether this approach is overly conservative. The agencies also request comment on the ICMs being used in this analysis—the levels associated with R&D, warranty, *etc.*—and whether those are appropriate or should be revised. If commenters suggest revisions, the agencies request supporting arguments and/or documentation. For the details on the ICMs, please refer to the report that has been placed in the docket for this proposal.[374]

The agencies have also considered the impacts of manufacturer learning on the

[374] RTI International. Heavy-duty Truck Retail Price Equivalent and Indirect Cost Multipliers. July 2010.

technology cost estimates by reflecting the phenomenon of volume-based learning curve cost reductions in our modeling using two algorithms—"volume-based" for newer technologies and "time-based" for mature technologies. The observed phenomenon in the economic literature which supports manufacturer learning cost reductions are based on reductions in costs as production volumes increase, and the economic literature suggests these cost reductions occur indefinitely, though the absolute magnitude of the cost reductions decrease as production volumes increase (with the highest absolute cost reduction occurring with the first doubling of production). The agencies use the terminology "volume-based" and "time-based" to distinguish among newer technologies and more mature technologies, respectively, and how learning cost reductions are applied in cost analyses. The volume-based learning algorithm applies for the early, steep portion of the learning curve and is estimated to result in 20 percent lower costs after two full years of implementation (*i.e.,* a 2016 MY cost would be 20 percent lower than the 2014 and 2015 model year costs for a new technology being implemented in 2014). The time-based learning algorithm applies for the flatter portion of the learning curve and is estimated to result in 3 percent lower costs in each of the five years following first introduction of a given technology. Once two volume-based learning steps have occurred (for technologies having volume-based learning applied), time based learning would begin. For technologies to which time based learning is applied, learning would begin in year 2 at 3 percent per year for 5 years. Beyond 5 years of time-based learning at 3 percent per year, 5 years of time-based learning at 2 percent per year, then 5 at 1 percent per year become effective.

Learning impacts have been considered on most but not all of the technologies expected to be used because some of the expected technologies are already used rather widely in the industry and, presumably, learning impacts have already occurred. The agencies have applied the volume-based learning algorithm for only a handful of technologies considered to be new or emerging technologies such as energy recovery systems and thermal storage units which might one day be used on big trucks. For most technologies, the agencies have considered them to be more established and, hence, the agencies have applied the lower time-based learning algorithm. For more discussion of the learning approach and the technologies to which each type of learning has been applied the reader is directed to Chapter 2 of the draft RIA.

In past rulemakings that have made use of these learning curve effects, comments have been received from industry related to learning effects. Commenters have stated that firms think of learning in terms of time, not production or sales volume, because that is how contracts are written between original equipment manufacturers and their suppliers. The agencies seek comment on whether or not learning is being considered properly in our analyses—is it appropriate to consider time-based learning on technologies that are already in the marketplace, or should the assumption be that such learning is already considered in the cost estimates we use? Similarly, while the agencies firmly believe that learning continues to occur given the level of ingenuity in the industries we regulate, we want to know more about whether it is appropriate for the agencies to consider the learning in our cost estimates or to consider all costs to be long-term, fully learned costs. The agencies seek not only comment on this issue but supporting information regarding learning effects and how learning is accounted for in cost contracts between supplying and purchasing firms.

The technology cost estimates discussed in Section III and detailed in Chapter 2 of the draft RIA are used to build up technology package cost estimates. For each engine and truck class, a single package for each was developed capable of complying with the proposed standards and the costs for each package was generated. The technology packages and package costs are discussed in more detail in Chapter 2 of the draft RIA. The compliance cost estimates take into account all credits and trading programs and include costs associated with air conditioning controls. Table VIII–1 presents the average incremental costs per truck for this proposal. For HD pickup trucks and vans (Class 2b and 3), costs increase as the standards become more stringent in 2014 through 2018. Following 2018, costs then decrease going forward as learning effects result in decreased costs for individual technologies. By 2022, the long term ICMs take effect and costs decrease yet again. For vocational vehicles, cost trends are more difficult to discern as diesel engines begin adding technology in 2014, gasoline engines begin adding technology in 2016, and the trucks themselves begin adding technology in 2014. With learning effects the costs, in general, decrease each year except for the heavy-duty gasoline engine changes in 2016. Long term ICMs take effect in 2022 to provide more cost reductions. For combination tractors, costs generally decrease each year due to learning effects with the exception of 2017 when the engines placed in sleeper cab tractors add turbo compounding. Following that, learning impacts result in cost reductions and the long term ICMs take effect in 2022 for further cost reductions. By 2030 and later, cost per truck estimates remain constant for all classes. Regarding the long term ICMs taking effect in 2022, the agencies consider this the point at which some indirect costs decrease or are no longer considered attributable to the program (*e.g.,* warranty costs go down). Costs per truck remain essentially constant thereafter.

Table VIII-1: Estimated Cost per Truck (2008 dollars)

	HD Pickups & Vans	Vocational	Combination
2014	$225	$374	$5,896
2015	$292	$367	$5,733
2016	$567	$400	$5,480
2017	$848	$392	$6,150
2018	$1,411	$359	$5,901
2020	$1,406	$343	$5,661
2030	$1,350	$280	$4,686
2040	$1,350	$275	$4,686
2050	$1,350	$275	$4,686

These costs would, presumably, have some impact on new truck prices, although the agencies make no attempt at determining what the impact of increased costs would be on new truck prices. Nonetheless, on a percentage basis, the costs shown in Table VIII–1 for 2018 MY trucks (when all proposed requirements are fully implemented) would be roughly four percent for a typical HD pickup truck or van, less than one percent for a typical vocational vehicle, and roughly six percent for a typical combination truck/tractor using new truck prices of $40,000, $100,000 and $100,000, respectively. The costs would represent lower or higher percentages of new truck prices for new trucks with higher or lower prices, respectively. Given the wide range of new truck prices in these categories—a Class 4 Vocational work truck might be $40,000 when new while a Class 8 refuse truck (*i.e.,* a large vocational vehicle) might be as much as $200,000 when new—it is very difficult to reflect incremental costs as percentages of new truck prices for all trucks. What is presented here is the average cost (Table VIII–1) compared with typical new truck prices.

As noted above, the fixed costs were estimated separately from the hardware costs for HD diesel engines that are placed in vocational vehicles and combination tractors. Those fixed costs are not included in Table VIII–1. The agencies have estimated the R&D costs at $6.75 million per manufacturer per year for five years and the new test cell costs (to accommodate measurement of N_2O emissions) at $100,000 per manufacturer. These costs apply individually for LHD, MHD and HHD engines. Given the 14 manufacturers impacted by the proposed standards, 11 of which are estimated to sell both MHD and HHD engines and 3 of which are estimated to sell LHD engines, we have estimated a five year annual R&D cost of $168.8 million dollars ($2 \times 11 \times \$6.75$ million plus $3 \times \$7.75$ million for each year 2012–2016) and a one-time test cell cost of $2.5 million dollars ($2 \times 11 \times$ $100,000 plus $3 \times \$100,000$ in 2013). Estimating annual sales of HD diesel engines at roughly 600,000 units results in roughly $280 per engine per year for five years beginning in 2012 and ending in 2016. Again, these costs are not reflected in Table VIII–1, but are included in Table VIII–2 as "Other Engineering Costs."

The certification and compliance program costs, for all engine and truck types, are estimated at $4.4 million per year and are expected to continue indefinitely. These costs are detailed in the "Draft Supporting Statement for Information Collection Request" which is contained in the docket for this rule.[375] Estimating annual sales of heavy-duty trucks at roughly 1.5 million units would result in $3 per engine/truck per year. These costs are not reflected in Table VIII–1, but are included in Table VIII–2 as "Compliance Program" costs.

(2) Annual Costs of the Proposal

The costs presented here represent the incremental costs for newly added technology to comply with the proposal. Together with the projected increases in truck sales, the increases in per-truck average costs shown in Table VIII–1 above result in the total annual costs presented in Table VIII–2 below. Note that the costs presented in Table VIII–2 do not include the savings that would occur as a result of the improvements to fuel consumption. Those impacts are presented in Section VIII.E. Note also that the costs presented here represent costs estimated to occur presuming that the proposed standards will continue in perpetuity. Any future changes to the proposed standards would be considered at the time they are proposed and/or made final. In other words, the proposed standards do not apply only to 2014–2018 model year trucks—they do, in fact, apply to all 2014 and later model year trucks. We present more detail regarding the 2014–2018 model year trucks in Section VIII.K where we summarize all monetized costs and benefits.

[375] "Draft Supporting Statement for Information Collection Request," Control of Greenhouse Gas Emissions from New Motor Vehicles: Proposed Heavy-Duty Engine and Vehicle Standards, EPA ICR Tracking Number 2394.01.

Table VIII-2: Annual Costs Associated with the Proposal ($Millions of 2008 dollars)

Year	HD Pickup and Van	Vocational	Combination	Other Engineering Costs	Compliance Program Costs	Annual Costs
2012	$0	$0	$0	$169	$0	$169
2013	$0	$0	$0	$171	$4.4	$176
2014	$177	$208	$720	$169	$4.4	$1,278
2015	$213	$211	$713	$169	$4.4	$1,310
2016	$404	$237	$693	$169	$4.4	$1,507
2017	$601	$240	$792	$0	$4.4	$1,638
2018	$1,011	$226	$776	$0	$4.4	$2,019
2020	$971	$229	$777	$0	$4.4	$1,981
2030	$962	$241	$742	$0	$4.4	$1,950
2040	$1,038	$332	$850	$0	$4.4	$2,224
2050	$1,119	$436	$982	$0	$4.4	$2,541
NPV, 3%	$18,770	$5,728	$16,707	$787	$98	$42,089
NPV, 7%	$9,657	$2,977	$9,114	$718	$56	$22,522

C. Indirect Cost Multipliers

(1) Markup Factors to Estimate Indirect Costs

For most of the segments in this analysis, the indirect costs are estimated by applying indirect cost multipliers (ICM) to direct cost estimates. ICMs were calculated by EPA as a basis for estimating the impact on indirect costs of individual vehicle technology changes that would result from regulatory actions. Separate ICMs were derived for low, medium, and high complexity technologies, thus enabling estimates of indirect costs that reflect the variation in research, overhead, and other indirect costs that can occur among different technologies. ICMs were also applied in the MY 2012–2016 CAFE rulemaking.

The previous CAFE rulemaking applied a retail price equivalent (RPE) factor to estimate indirect costs and mark up direct costs to the retail level. Retail Price Equivalents are estimated by dividing the total revenue of a manufacturer by the direct manufacturing costs. As such, it includes all forms of indirect costs for a manufacturer and assumes that the ratio applies equivalently for all technologies. ICMs are based on RPE estimates that are then modified to reflect only those elements of indirect costs that would be expected to change in response to a technology change. For example, warranty costs would be reflected in both RPE and ICM estimates, while marketing costs might only be reflected in an RPE estimate but not an ICM estimate for a particular technology, if the new technology is not one expected to be marketed to consumers. Because ICMs calculated by EPA are for individual technologies, many of which are small in scale, they often reflect a subset of RPE costs; as a result, the RPE is typically higher than an ICM. This is not always the case, as ICM estimates for complex technologies may reflect higher than average indirect costs, with the resulting ICM larger than the averaged RPE for the industry.

Precise association of ICM elements with individual technologies based on the varied accounting categories in company annual reports is not possible. Hence, there is a degree of uncertainty in the ICM estimates. If all indirect costs moved in proportion to changes in direct costs the ICM and RPE would be the same. Because most individual technologies are smaller scale than many of the activities of auto companies (such as designing and developing entirely new vehicles), it would be expected that the RPE estimate would reflect an upper bound on the average ICM estimate. The agencies are continuing to study ICMs and the most appropriate way to apply them, and it is possible revised ICM values may be used in our final rulemaking. With this in mind, the agencies are presenting a sensitivity analysis reflecting costs measured using the RPE in place of the ICM and indirect costs estimated independently in our primary analysis to examine the potential impact of these two approaches on estimated costs.

(2) Background

While this analysis relies on ICMs to estimate indirect costs, an alternative method of estimating indirect costs is the retail price equivalent factor. The RPE has been used by NHTSA, EPA and other agencies to account for cost factors not included in available direct cost estimates, which are derived from cost teardown studies or sometimes provided by manufacturers. The RPE is the basis for these markups in all DOT safety regulations and in most previous fuel economy rules. The RPE includes all variable and fixed elements of overhead costs, as well as selling costs such as vehicle delivery expenses, manufacturer profit, and full dealer markup, and assumes that the ratio of indirect costs to direct costs is constant for all vehicle changes. Historically, NHTSA has estimated that the RPE has averaged about 1.5 for the light-duty motor vehicle industry. The implication of an RPE of 1.5 is that each added $1.00 of variable cost in materials, labor, and other direct manufacturing costs results in an increase in consumer prices of $1.50 for any change in vehicles.

NHTSA has estimated the RPE from light-duty vehicle manufacturers' financial statements over nearly 3 decades, and although its estimated value has varied somewhat year-to-year, it has generally hovered around a level of 1.5 throughout most of this period. The NAS report as well as a study by RTI International found that other estimates of the RPE varied from 1.26 to

over 2.[376] In a recent report, NAS acknowledged that an ICM approach was preferable but recommended continued use of the RPE over ICMs until such time as empirical data derived from rigorous estimation methods is available. The NAS report recommended using an RPE of 1.5 for outsourced (supplier manufactured) and 2.0 for in-house (OEM manufactured) technologies and an RPE of 1.33 for advanced hybrid and electric vehicle technologies.

ICMs typically are significantly lower than RPEs, because they measure changes in only those elements of overhead and selling-related costs that are directly influenced by specific technology changes to vehicles. For example, the number of managers might not be directly proportional to the value of direct costs contained in a vehicle, so that if a regulation increases the direct costs of manufacturing vehicles, there might be little or no change in the number of managers. ICMs would thus assume little or no change in that portion of indirect costs associated with the number of managers—these costs would be allocated only to the existing base vehicle. By contrast, the RPE reflects the historical overall relationship between the direct costs to manufacture vehicles and the prices charged for vehicles, which must compensate manufacturers for both their direct and indirect costs for producing and selling vehicles. The assumption behind the RPE is that changes in the long-term price of the final product that accompany increases in direct costs of vehicle manufacturing will continue to reflect this historical relationship.

Another difference between the RPE and ICM is that ICMs have been derived separately for different categories of technologies. A relatively simple technology change, such as switching to a different tire with lower rolling resistance characteristics, would not influence indirect costs in the same proportion as a more complex change, such as development of a full hybrid design. ICMs were developed for 3 broad categories of technology complexities, and are applied separately to fuel economy technologies judged to fit into each of these categories. This requires determining which of these complexity categories each technology should be assigned.

There is some level of uncertainty surrounding both the ICM and RPE markup factors. The ICM estimates used in this proposal group all technologies into three broad categories and treat them as if individual technologies within each of the three categories (low, medium, and high complexity) would have the same ratio of indirect costs to direct costs. This simplification means it is likely that the direct cost for some technologies within a category will be higher and some lower than the estimate for the category in general. More importantly, the ICM estimates have not been validated through a direct accounting of actual indirect costs for individual technologies. Rather, the ICM estimates were developed using adjustment factors developed in two separate occasions: The first, a consensus process, was reported in the RTI report; The second, a modified Delphi method, was conducted separately and reported in an EPA memo.[377] Both these panels were composed of EPA staff members with previous background in the automobile industry; the memberships of the two panels overlapped but were not the same.[378] The panels evaluated each element of the industry's RPE estimates and estimated the degree to which those elements would be expected to change in proportion to changes in direct manufacturing costs. The method and estimates in the RTI report were peer reviewed by three industry experts and subsequently by reviewers for the International Journal of Production Economics.[379] RPEs themselves are inherently difficult to estimate because the accounting statements of manufacturers do not neatly categorize all cost elements as either direct or indirect costs. Hence, each researcher developing an RPE estimate must apply a certain amount of judgment to the allocation of the costs. Moreover, RPEs for heavy- and medium-duty trucks and for engine manufacturers are not as well studied as they are for the light-duty automobile industry. Since empirical estimates of ICMs are ultimately derived from the same data used to measure RPEs, this affects both measures. However, the value of RPE has not been measured for specific technologies, or for groups of specific technologies. Thus applying a single average RPE to any given technology by definition overstates costs for very simple technologies, or understates them for advanced technologies.

To highlight the potential differences between the use of ICMs and RPEs to estimate indirect costs, the agencies conducted an analysis based on the use of average RPEs for each industry in the place of the ICM and direct fixed cost estimates used in our proposal. Since most technologies involved in this proposal are low complexity level technologies, the estimate based on the use of an average RPE likely overstates the costs. The weighted average RPEs for the truck and engine industries are 1.36 and 1.28 respectively. These values were substituted for the ICMs and directly estimate indirect costs used in the primary cost analysis referenced elsewhere in this document. Using the average RPEs, the five model year cost of $7.7B in the primary analysis increases to $9.3B, an increase of 21 percent. The agencies request comment accompanied by supporting data on the use of ICMs and RPE factors to estimate fixed costs.

D. Cost per Ton of Emissions Reductions

The agencies have calculated the cost per ton of GHG reductions associated with this proposal on a CO_{2eq} basis using the above costs and the emissions reductions described in Sections VI and VII. These values are presented in Table VIII–3 through Table VIII–5 for HD pickups and vans, vocational vehicles and combination trucks/tractors, respectively. The cost per metric ton of GHG emissions reductions has been calculated in the years 2020, 2030, 2040, and 2050 using the annual vehicle compliance costs and emission reductions for each of those years. The value in 2050 represents the long-term cost per ton of the emissions reduced. The agencies have also calculated the cost per metric ton of GHG emission reductions including the savings associated with reduced fuel consumption (presented below in Section VIII. E.). This latter calculation does not include the other benefits associated with this proposal such as those associated with energy security benefits as discussed later in Section VIII.I. By including the fuel savings in the cost estimates, the cost per ton is generally less than $0 since the estimated value of fuel savings outweighs the program costs. The results for CO_{2eq} costs per ton under the

[376] Rogozhin, Alex, Michael Gallaher, and Walter McManus. "Automobile Industry Retail Price Equivalent and Indirect Cost Multipliers." Report prepared for EPA by RTI International. EPA Report EPA–420–R–09–003, February 2009.

[377] Helfand, Gloria, and Sherwood, Todd. "Documentation of the Development of Indirect Cost Multipliers for Three Automotive Technologies." Memorandum, Assessment and Standards Division, Office of Transportation and Air Quality, U.S. Environmental Protection Agency, August 2009.

[378] NHTSA staff participated in the development of the process for the second, modified Delphi panel, and reviewed the results as they were developed, but did not serve on the panel.

[379] The results of the RTI report were published in Alex Rogozhin, Michael Gallaher, Gloria Helfand, and Walter McManus, "Using Indirect Cost Multipliers to Estimate the Total Cost of Adding New Technology in the Automobile Industry." *International Journal of Production Economics* 124 (2010): 360–368.

proposal across all regulated categories are shown in Table VIII–6.

Table VIII-3: Annual Cost per Metric Ton of CO_2eq Reduced – HD Pickup Trucks & Vans (2008 dollars)

Year	Program Cost	Fuel Savings (post-tax)	CO_2eq Reduced	Cost per Ton (without Fuel Savings)	Cost per Ton (with Fuel Savings)
2020	$1,000	$1,000	4	$270	$0
2030	$1,000	$3,000	10	$100	-$200
2040	$1,000	$4,600	13	$70	-$270
2050	$1,100	$5,800	16	$70	-$290

Table VIII-4: Annual Cost per Metric Ton of CO_2eq Reduced – Vocational Vehicles (2008 dollars)[380]

Year	Program Cost	Fuel Savings (post-tax)	CO_2eq Reduced	Cost per Ton (without Fuel Savings)	Cost per Ton (with Fuel Savings)
2020	$200	$1,500	6	$30	-$220
2030	$200	$3,700	13	$20	-$280
2040	$300	$6,400	19	$20	-$320
2050	$400	$8,900	26	$20	-$330

Table VIII-5: Annual Cost per Metric Ton of CO_2eq Reduced – Combination Tractors (2008 dollars)[381]

Year	Program Cost	Fuel Savings (post-tax)	CO_2eq Reduced	Cost per Ton (without Fuel Savings)	Cost per Ton (with Fuel Savings)
2020	$800	$6,700	26	$30	-$230
2030	$700	$14,500	48	$10	-$280
2040	$800	$19,800	59	$10	-$320
2050	$1,000	$23,700	67	$10	-$340

Table VIII-6: Annual Cost per Metric Ton of CO_2eq Reduced – Proposal ($2008 dollars)

Year	Program Cost	Fuel Savings (post-tax)	CO_2eq Reduced	Cost per Ton (without Fuel Savings)	Cost per Ton (with Fuel Savings)
2020	$2,000	$9,300	35	$60	-$210
2030	$1,900	$21,200	71	$30	-$270
2040	$2,200	$30,800	91	$20	-$310
2050	$2,500	$38,400	109	$20	-$330

E. Impacts of Reduction in Fuel Consumption

(1) What are the projected changes in fuel consumption?

The new CO_2 standards will result in significant improvements in the fuel efficiency of affected trucks. Drivers of those trucks will see corresponding savings associated with reduced fuel expenditures. The agencies have estimated the impacts on fuel consumption for the tailpipe CO_2 standards. To do this, fuel consumption is calculated using both current CO_2 emission levels and the new CO_2 standards. The difference between these estimates represents the net savings from the CO_2 standards. Note that the total number of miles that vehicles are driven each year is different under the control case scenario than in the reference case due to the "rebound effect," which is discussed in Section VIII.E.(5). EPA also notes that drivers who drive more than our average estimates for vehicle miles traveled (VMT) will experience more fuel savings; drivers who drive less than our average VMT estimates will experience less fuel savings.

The expected impacts on fuel consumption are shown in Table VIII–7. The gallons shown in the table reflect impacts from the new CO_2 standards and include increased consumption resulting from the rebound effect.

Table VIII-7: Fuel Consumption Impacts of the Proposal (Million gallons)

Year	Gasoline	Diesel
2014	1.8	316
2015	5.2	624
2016	20	931
2017	42	1,393
2018	76	1,861
2020	140	2,723
2030	373	5,412
2040	496	7,004
2050	603	8,453

[380] The program costs, fuel savings, and CO_{2eq} reductions of the engines installed in vocational vehicles are embedded in the vehicle standards and analysis.

(2) Potential Impacts on Global Fuel Use and Emissions

EPA's quantified reductions in fuel consumption focus on the gains from reducing fuel used by heavy-duty vehicles within the United States. However, as discussed in Section VIII.I, EPA also recognizes that this regulation will lower the world price of oil (the "monopsony" effect). Lowering oil prices could lead to an uptick in oil consumption globally, leading to a corresponding increase in GHG emissions in other countries. This global increase in emissions could slightly offset some of the emission reductions achieved domestically as a result of the regulation.

EPA does not provide quantitative estimates of the impact of the regulation on global petroleum consumption and GHG emissions but invites comment on whether to consider this impact.

(3) What are the monetized fuel savings?

Using the fuel consumption estimates presented in Table VIII–7, the agencies can calculate the monetized fuel savings associated with the proposed standards. To do this, reduced fuel consumption is multiplied in each year by the corresponding estimated average fuel price in that year, using the reference case taken from the AEO 2010. These estimates do not account for the significant uncertainty in future fuel prices; the monetized fuel savings will be understated if actual fuel prices are higher (or overstated if fuel prices are lower) than estimated. AEO is a standard reference used by NHTSA and EPA and many other government agencies to estimate the projected price of fuel. This has been done using both the pre-tax and post-tax fuel prices. Since the post-tax fuel prices are the prices paid at fuel pumps, the fuel savings calculated using these prices represent the savings consumers would see. The pre-tax fuel savings are those savings that society would see. These results are shown in Table VIII–8. Note that in Section VIII.K, the overall benefits and costs of the rules are presented and, for that reason, only the pre-tax fuel savings are presented there. The agencies also request comment on the additional information that would be provided by conducting sensitivity analysis that considers the effect of uncertainty in future fuel prices on estimated fuel savings. For instance, the agencies could conduct sensitivity analyses by relying on the AEO 2010 low oil price and high oil price scenarios.

Table VIII-8: Estimated Monetized Fuel Savings ($Millions of 2008 dollars)

Year	Fuel Savings (pre-tax)	Fuel Savings (post-tax)
2014	$700	$800
2015	$1,400	$1,700
2016	$2,200	$2,700
2017	$3,600	$4,200
2018	$5,100	$5,900
2020	$8,100	$9,300
2030	$19,000	$21,200
2040	$28,100	$30,800
2050	$35,400	$38,400
NPV, 3%	$352,300	$391,200
NPV, 7%	$152,600	$170,600

As shown in Table VIII–8, the agencies are projecting that truck consumers would realize very large fuel savings as a result of the proposed standards. As discussed further in the introductory paragraphs of Section VIII, it is a conundrum from an economic perspective that these large fuel savings have not been provided by manufacturers and purchased by consumers of these products. Unlike in the light-duty vehicle market, the vast majority of vehicles in the medium- and heavy-duty truck market are purchased and operated by businesses; for them, fuel costs may represent substantial operating expenses. Even in the presence of uncertainty and imperfect information—conditions that hold to some degree in every market—we generally expect firms to be cost-minimizing to survive in a competitive marketplace and to make decisions that are therefore in the best interest of the company and its owners and/or shareholders.

A number of behavioral and market phenomena may lead to a disconnect between how businesses account for fuel savings in their decisions and the way in which we account for the full stream of fuel savings for these rules, including imperfect information in the original and resale markets, split incentives, uncertainty in future fuel prices, and adjustment or transactions costs (*see* Section VIII.A for a more detailed discussion). As discussed below in the context of rebound in Section VIII.E.5, the nature of the explanation for this gap may influence the actual magnitude of the fuel savings. The agencies request comment on this issue as discussed in more detail in Section VIII.A. The agencies also request comment on the interest in a sensitivity analysis that considers the role of fuel price uncertainty by considering lower and higher future fuel prices scenarios.

(4) Payback Period and Lifetime Savings on New Truck Purchases

Another factor of interest is the payback period on the purchase of a new truck that complies with the new standards. In other words, how long would it take for the expected fuel savings to outweigh the increased cost of a new vehicle? For example, a new 2018 MY HD pickup truck and van is estimated to cost $1,290 more, a vocational vehicle $332 more, and a

combination tractor $5,827 more (all values are on average, and relative to the reference case vehicle) due to the addition of new GHG reducing technology. This new technology will result in lower fuel consumption and, therefore, savings in fuel expenditures. But how many months or years would pass before the fuel savings exceed the upfront costs? Table VIII–9 shows the payback period analysis for HD pickup trucks and vans. The table shows fuel consumed under the reference case and fuel consumed by a 2018 model year truck under the proposal, inclusive of fuel consumed due to rebound miles. The decrease in fuel consumed under the proposal is then monetized by multiplying by the fuel price reported by AEO (reference case) for 2018 and later. This value represents the fuel savings expected under the proposal for an HD pickup or van. These savings are then discounted each year since future savings are considered to be of less value than current savings. Shown next are estimated increased costs (costs do not necessarily reflect increased prices which may be higher or lower than costs) for the new truck (refer to Table VIII–1). The next columns show the period required for the fuel savings to exceed the new truck costs. As seen in the table, in the fifth year of ownership, the discounted fuel savings (at both 3% and 7% discount rates) have begun to outweigh the increased cost of the truck. As shown in the table, the full life savings using 3% discounting would be $2,590 and at 7% discounting would be $1,620.

Costs in this section are shown from the greenhouse gas perspective where fuel savings are treated as negative costs, since the primary motivations of this rule are U.S. energy security and reductions in GHG emissions. From that perspective, the benefits of the rule are the external effects, and the net effects on truck owners and operators are the costs. EPA prefers to account for all costs (positive and negative) directly realized by the end user to accurately present the total cost and to differentiate those costs and cost savings from more generally realized societal benefits. At the end of this section (Section VIII.L), however, the agencies also present summary tables that show the cost and benefit analysis from the fuel efficiency perspective, where the purpose of a program to regulate fuel efficiency is primarily to save fuel. From this perspective, fuel savings would be counted as benefits that occur over the lifetime of the vehicle as it consumes less fuel, rather than as negative costs that would be experienced either at the time of purchase or over the lifetime of the vehicle. OMB's Circular A–4, which provides guidance to Federal agencies on the development of regulatory analysis, makes clear that either approach is acceptable.

Table VIII-9: Payback Period for a 2018 Model Year HD Pickup or Van (2008$)

Year of Ownership	Fuel Use (gallons)		Fuel Savings[a]		Increased Cost	Cumulative Savings	
	Reference Case	Proposal[b]	3% Discount	7% Discount		3% Discount	7% Discount
1	946	835	$334	$328	-$1,411	-$1,077	-$1,083
2	929	819	$328	$310		-$749	-$773
3	908	801	$321	$292		-$427	-$481
4	881	777	$310	$271		-$118	-$209
5	847	748	$297	$250		$179	$41
6	808	713	$279	$226		$458	$267
7	763	673	$259	$202		$717	$469
Full Life	12,439	10,976	$3,996	$3,033	-$1,411	$2,585	$1,622

Notes:

[a] Fuel savings calculated using the AEO 2010 reference case fuel prices. Gasoline and diesel fuel prices have been weighted by gasoline and diesel fuel reductions estimated for all 2018 MY heavy-duty trucks during their lifetimes.

[b] Gallons under the proposal case include gallons consumed during rebound driving.

The story is somewhat different for vocational vehicles and combination tractors. These cases are shown in Table VIII–10 and Table VIII–11, respectively. Since these trucks travel more miles in a given year, their payback periods are much shorter and actually are expected to occur within the first year of ownership under both the 3% and 7% discounting cases. As can be seen in Table VIII–10 and Table VIII–11, the lifetime fuel savings are estimated to be considerable with savings of $4,000 (3%) and $3,100 (7%) for the vocational vehicles and over $74,000 (3%) and $58,000 (7%) for the combination tractors.

Table VIII-10: Payback Period for a 2018 Model Year Vocational Vehicle (2008$)

Year of Ownership	Fuel Use (gallons)		Fuel Savings[a]		Increased Cost	Cumulative Savings	
	Reference Case	Proposal[b]	3% Discount	7% Discount		3% Discount	7% Discount
1	2,103	1,938	$497	$488	-$359	$138	$129
2	1,927	1,775	$455	$430		$593	$559
3	1,764	1,625	$417	$379		$1,010	$938
4	1,609	1,483	$378	$331		$1,387	$1,268
5	1,456	1,342	$340	$287		$1,727	$1,555
6	1,310	1,207	$301	$244		$2,029	$1,799
7	1,183	1,090	$267	$209		$2,296	$2,008
Full Life	20,144	18,572	$4,360	$3,425	-$359	$4,002	$3,066

Notes:
[a] Fuel savings calculated using the AEO 2010 reference case fuel prices. Gasoline and diesel fuel prices have been weighted by gasoline and diesel fuel reductions estimated for all 2018 MY heavy-duty trucks during their lifetimes.
[b] Gallons under the proposal case include gallons consumed during rebound driving.

Table VIII-11: Payback Period for a 2018 Model Year Combination Tractor (2008$)

Year of Ownership	Fuel Use (gallons)		Fuel Savings[a]		Increased Cost	Cumulative Savings	
	Reference Case	Proposal[b]	3% Discount	7% Discount		3% Discount	7% Discount
1	30,257	27,011	$9,746	$9,567	-$5,901	$3,845	$3,665
2	27,801	24,814	$8,968	$8,473		$12,812	$12,139
3	25,415	22,681	$8,222	$7,479		$21,035	$19,618
4	23,049	20,566	$7,425	$6,501		$28,460	$26,119
5	20,652	18,425	$6,635	$5,592		$35,096	$31,711
6	18,353	16,371	$5,819	$4,721		$40,914	$36,432
7	16,325	14,559	$5,091	$3,976		$46,005	$40,409
Full Life	261,897	233,569	$79,699	$64,023	-$5,901	$73,798	$58,122

Notes:
[a] Fuel savings calculated using the AEO 2010 reference case fuel prices. Gasoline and diesel fuel prices have been weighted by gasoline and diesel fuel reductions estimated for all 2018 MY heavy-duty trucks during their lifetimes.
[b] Gallons under the proposal case include gallons consumed during rebound driving.

All of these payback analyses include fuel consumed during rebound VMT in the proposal or control case but not in the reference case, consistent with other parts of the analysis. Further, this analysis does not include other societal impacts such as reduced time spent refueling or noise, congestion and accidents since the focus is meant to be on those factors buyers think about most while considering a new truck purchase. Note also that operators that drive more miles per year than the average would realize greater fuel savings than estimated here, and those that drive fewer miles per year would realize lesser savings. The same holds true for operators that keep their vehicles longer (*i.e.*, more years) than average in that they would realize greater lifetime fuel savings than operators that keep their vehicles for fewer years than average. Likewise, should fuel prices be higher than the AEO 2010 reference case, operators will realize greater fuel savings than estimated here while they would realize lesser fuel savings were fuel prices to be lower than the AEO 2010 reference case.

(5) Rebound Effect

The VMT rebound effect refers to the fraction of fuel savings expected to result from an increase in fuel efficiency that is offset by additional vehicle use. If truck shipping costs decrease as a result of lower fuel costs, an increase in truck VMT may occur. Unlike the light-duty rebound effect, the medium-duty

and heavy-duty rebound effect has not been extensively studied. Because the factors influencing the medium- and heavy-duty rebound effect are generally different from those affecting the light-duty rebound effect, much of the research on the light-duty rebound effect is not likely to apply to the medium- and heavy-duty sectors. One of the major differences between the medium- and heavy-duty rebound effect and the light-duty rebound effect is that heavy-duty trucks are used primarily for commercial and business purposes. Since these businesses are profit driven, decision makers are highly likely to be aware of the costs and benefits of different shipping decisions, both in the near term and long term. Therefore, shippers are much more likely to take into account changes in the overall operating costs per mile when making shipping decisions that affect VMT.

Another difference from the light-duty case is that, as discussed in the recent NAS Report [382], when calculating the percentage change in trucking costs to determine the rebound effect, all changes in the operating costs should be considered. The cost of labor and fuel generally constitute the top two shares of truck operating costs, depending on the price of petroleum,[383] distance traveled, type of truck, and commodity.[384] Finally, the equipment costs associated with the purchase or leasing of the truck is also a significant component of total operating costs. Even though vehicle costs are lump-sum purchases, they can be considered operating costs for trucking firms, and these costs are, in many cases, expected to be passed onto the final consumers of shipping services on a variable basis. This shipping cost increase could help temper the rebound effect relative to the case of light-duty vehicles, in which vehicle costs are not considered operating costs.

When calculating the net change in operating costs, both the increase in new vehicle costs and the decrease in fuel costs per mile should be taken into consideration. The higher the net cost savings, the higher the expected rebound effect. Conversely, if the upfront vehicle costs outweighed future cost savings and total costs increased, shipping costs would rise, which would likely result in a decrease in truck VMT. In theory, other changes such as maintenance costs and insurance rates would also be taken into account, although information on these potential cost changes is extremely limited. We invite comment on the most appropriate methodology for factoring new vehicle purchase or leasing costs into the per-mile operating costs. We also invite comment or data on how these regulations could affect maintenance, insurance, or other operating costs.

The following sections describe the factors affecting the rebound effect, different methodologies for estimating the rebound effect, and examples of different estimates of the rebound effect to date. According to the NAS study, it is "not possible to provide a confident measure of the rebound effect," yet NAS concluded that a rebound effect likely exists and that "estimates of fuel savings from regulatory standards will be somewhat misestimated if the rebound effect is not considered." While we believe the medium- and heavy-duty rebound effect needs to be studied in more detail, we have attempted to capture the potential impact of the rebound effect in our analysis. For this proposal, we have used a rebound effect for vocational vehicles of 15%, a rebound effect for HD pickup trucks and vans of 10%, and a rebound effect for combination tractors of 5%. These VMT impacts are reflected in the estimates of total GHG and other air pollution reductions presented in Chapter 5 of the draft RIA. We invite comment and the submission of additional data on the medium-duty and heavy-duty rebound effect.

(a) Factors Affecting the Magnitude of the Rebound Effect

The heavy-duty vehicle rebound effect is driven by the interaction of several different factors. In the short-run, decreasing the fuel cost per mile of driving could lead to a decrease in end product prices. Lower prices could stimulate additional demand for those products, which would then result in an increase in VMT. In the long run, shippers could reorganize their logistics and distribution networks to take advantage of lower truck shipping costs. For example, shippers may shift away from other modes of shipping such as rail, barge, or air. In addition, shippers may also choose to reduce the number of warehouses, reduce load rates, and make smaller, more frequent shipments, all of which could also lead to an increase in heavy-duty VMT. Finally, the benefits of the fuel savings could ripple through the economy, which could in turn increase overall demand for goods and services shipped by trucks, and therefore increase truck VMT.

Conversely, if a fuel economy regulation leads to net increases in the cost of trucking because fuel savings do not fully offset the increase in upfront vehicle costs, then the price of trucking services could rise, spurring a decrease in heavy-duty VMT and shift to rail shipping. These effects would also ripple through the economy.

Because these factors have not been well studied to date, the interaction and potential magnitude of these impacts is not well understood. However, the rebound effect is one of the determinants of the fuel savings likely to result from adopting stricter fuel economy or GHG emissions standards, and is thus an important parameter affecting EPA's evaluation of alternative standards for future model years. Therefore, we invite submission of data regarding the medium- and heavy-duty rebound effect.

(b) Options for Quantifying the Rebound Effect

As described in the previous section, the fuel economy rebound effect for heavy-duty trucks has not been studied as extensively as the rebound effect for light-duty vehicles, and virtually no research has been conducted on the HD pickup truck and van rebound effect. In this proposal, we discuss four options for quantifying the rebound effect. We invite comment on these options, and we also welcome comment on other possible methodologies.

(i) Aggregate Estimates

The aggregate approximation approach quantifies the overall change in truck VMT as a result of a percentage change in truck shipping prices. This approach relies on estimates of aggregate price elasticity of demand for trucking services, given a percentage change in trucking prices, which is generally referred to as an "own-price elasticity." Estimates of trucking own-price elasticities vary widely, and there is no general consensus on the most appropriate values to use. A 2004 literature survey cited in the recent NAS report [385] found aggregate elasticity estimates in the range of -0.5 to -1.5.[386] In other words, given an own-price elasticity of -1.5, a 10% decrease in trucking prices leads to a 15% increase in demand for truck shipping demand. However, this survey does not

[382] *See* NAS Report, Note 111.

[383] American Transportation Research Institute, *An Analysis of the Operational Costs of Trucking*, December 2008 (Docket ID: EPA–HQ–OAR–2010–0162–0007).

[384] Transport Canada, Operating Cost of Trucks, 2005. *See http://www.tc.gc.ca/eng/policy/report-acg-operatingcost2005-2005-e-2-1727.htm*, accessed on July 16, 2010 (Docket ID: EPA–HQ–OAR–2010–0162–0006). *See also* ATRI, 2008.

[385] *See* 2010 NAS Report, Note 111.

[386] Graham and Glaister, "Road Traffic Demand Elasticity Estimates: A Review," Transport Reviews Volume 24, 3, pp. 261–274, 2004 (Docket ID: EPA–HQ–OAR–2010–0162–0005).

differentiate between studies that quantify change in tons shipped or ton-miles. In addition, most of the studies find that these elasticity estimates vary substantially based on the length of the trip and the type of cargo. For example, one study estimated an own-price elasticity of −0.1 for the lumber sector and −2.3 for the chemical sector.[387]

The increase in overall truck VMT resulting from the rebound effect implicitly includes some component of mode shifting. Since there are differences in GHG emissions per ton of freight moved by rail compared to truck, any potential shifting of freight from one mode to the other could have GHG impacts. Although the total demand for freight transport is generally determined by economic activity, there is often the choice of shipping by either truck or by rail when freight is transported over land routes. This is because the United States has both an extensive highway network and an extensive rail network; these networks closely parallel each other and are often both viable choices for freight transport for many origin and destination pairs within the continent. If rates go down for one mode, there will be an increase in demand for that mode and some demand will be shifted from other modes. This "cross-price elasticity" is a measure of the percentage change in demand for shipping by another mode (*e.g.,* rail) given a percentage change in the price of trucking. Aggregate estimates of cross-price elasticities also vary widely, and there is no general consensus on the most appropriate value to use for analytical purposes. The NAS report cites values ranging from 0.35 to 0.59.[388] Other reports provide significantly different cross-price elasticities, ranging from 0.1 [389] to 2.0.[390]

When considering intermodal shift, the most relevant kinds of shipments are those that are competitive between rail and truck modes. These trips include long-haul shipments greater than 500 miles, which weigh between 50,000 and 80,000 pounds (the legal road limit in many States). Special kinds of cargo like coal and short-haul deliveries are of less interest because they are generally not economically transferable between truck and rail modes, and they would not be expected to shift modes except under an extreme price change. However, the total volume of ton-miles that could potentially be subject to mode shifting has also not been studied extensively.

(ii) Sector-Specific Estimates

Given the limited data available regarding the medium- and heavy-duty rebound effect, the aggregate approach greatly simplifies many of the assumptions associated with calculations of the rebound effect. In reality, however, responses to changes in fuel efficiency and new vehicle costs will vary significantly based on the commodities affected. A detailed, sector-specific approach would be expected to more accurately reflect changes in the trucking market given these standards. For example, input-output tables could be used to determine the trucking cost share of the total delivered price of a product or sector. Using the change in trucking prices described in the aggregate approach, the product-specific demand elasticities could be used to calculate the change in sales and shipments for each product. The change in shipment increases could then be weighted by the share of the trucking industry total, and then summed to get the total increase in trucking output. A simplifying assumption could then be made that the increase in output results in an increase in VMT. This type of detailed data has not yet been collected, so we do not have any calculations available for the proposal. While we hope to have this data available for the final rulemaking, gathering high quality data may take a longer time frame. We invite the submission of comments or data that could be used as part of this methodology.

(iii) Eonometric Estimates

Similar to the methodology used to estimate the light-duty rebound effect, the heavy-duty rebound effect could be modeled econometrically by estimating truck demand as a function of economic activity (*e.g.,* GDP) and different input prices (*e.g.,* vehicle prices, driver wages, and fuel costs per mile). This type of econometric model could be estimated for either truck VMT or ton-miles as a measure of demand. The resulting elasticity estimates could then be used to determine the change in trucking demand, given the change in fuel cost and truck prices per mile from these standards.

(iv) Other Modeling Approaches

Regulation of the heavy-duty industry has been studied in more detail in Europe, as the European Commission (EC) has considered allowing longer and heavier trucks for freight transport. Part of the analysis considered by the EC relies on country-specific modeling of changes in the freight sector that would result from changes in regulations.[391] This approach attempts to explicitly calculate modal shift decisions and impacts on GHG emissions. Although similar types of analysis have not been conducted extensively in the United States, research is currently underway that explores the potential for intermodal shifting in the United States. For example, Winebrake and Corbett have developed the Geospatial Intermodal Freight Transportation model, which evaluates the potential for GHG emissions reductions based on mode shifting, given existing limitations of infrastructure and other route characteristics in the United States.[392] This model connects multiple road, rail, and waterway transportation networks and embeds activity-based calculations in the model. Within this intermodal network, the model assigns various economic, time-of-delivery, energy, and environmental attributes to real-world goods movement routes. The model can then calculate different network optimization scenarios, based on changes in prices and policies.[393] However, more work is needed in this area to determine whether this type of methodology is appropriate for the purposes of capturing the rebound effect. We invite comment on this approach, as well as suggestions on alternative modeling frameworks that could be used to assess mode shifting, fuel consumption, and the GHG

[387] Winston, C. (1981). The welfare effects of ICC rate regulation revisited. The Bell Journal of Economics, 12, 232–244 (Docket ID: EPA–HQ–OAR–2010–0162–0021).

[388] *See* 2010 NAS Report, Note 111. *See also* 2009 Cambridge Systematics, Inc., Draft Final Paper commissioned by the NAS in support of the medium-duty and heavy-duty report. Assessment of Fuel Economy Technologies for Medium and Heavy-duty Vehicles: Commissioned Paper on Indirect Costs and Alternative Approaches Docket ID: EPA–HQ–OAR–2010–0162–0009).

[389] Friedlaender, A. and Spady, R. (1980) A derived demand function for freight transportation, Review of Economics and Statistics, 62, pp. 432–441 (Docket ID: EPA–HQ–OAR–2010–0162–0004).

[390] Christidis and Leduc, "Longer and Heavier Vehicles for freight transport," European Commission Joint Research Center's Institute for Prospective Technology Studies, 2009 (Docket ID: EPA–HQ–OAR–2010–0162–0010).

[391] Christidis and Leduc, "Longer and Heavier Vehicles for freight transport," European Commission Joint Research Center's Institute for Prospective Technology Studies, 2009.

[392] Winebrake, James and James J. Corbet (2010). "Improving the Energy Efficiency and Environmental Performance of Goods Movement," in Sperling, Daniel and James S. Cannon (2010) Climate and Transportation Solutions: Findings from the 2009 Asilomar Conference on Transportation and Energy Policy. See *http://www.its.ucdavis.edu/events/2009book/Chapter13.pdf* (Docket ID: EPA–HQ–OAR–2010–0162–0011)

[393] Winebrake, J. J.; Corbett, J. J.; Falzarano, A.; Hawker, J. S.; Korfmacher, K.; Ketha, S.; Zilora, S., Assessing Energy, Environmental, and Economic Tradeoffs in Intermodal Freight Transportation, *Journal of the Air & Waste Management Association,* 58(8), 2008 (Docket ID: EPA–HQ–OAR–2010–0162–0008).

emission implications of these proposed regulations.

(c) Estimates of the Rebound Effect

The aggregate methodology was used by Cambridge Systematics, Inc. (CSI) to show several examples of the magnitude of the rebound effect. [394] In their paper commissioned by the NAS in support of the recent medium- and heavy-duty report, CSI calculated an effective rebound effect for two different technology cost and fuel savings scenarios associated with an example Class 8 truck. Scenario 1 increased average fuel economy from 5.59 mpg to 6.8 mpg, with an additional cost of $22,930. Scenario 2 increased the average fuel economy to 9.1 mpg, at an incremental cost of $71,630 per vehicle. The CSI examples provided estimates using a range of own-price elasticities (−0.5 to −1.5) and cross-price elasticities (0.35 to 0.59) from the literature. Based on these two scenarios and a number of simplifying assumptions to aid the calculations, CSI found a rebound effect of 11–31% for Scenario 1 and 5–16% for Scenario 2 when the fuel savings from rail were not taken into account ("First rebound effect"). When the fuel savings from reduced rail usage were included in the calculations, the overall rebound effect was between 9–13% for Scenario 1 and 3–15% for Scenario 2 ("Second Rebound Effect"). *See* Table VIII–12.

CSI included a number of caveats associated with these calculations. Namely, the elasticity estimates derived from the literature are "heavily reliant on factors including the type of demand measures analyzed (vehicle-miles of travel, ton-miles, or tons), analysis geography, trip lengths, markets served, and commodities transported." Furthermore, the CSI example only focused on Class 8 combination tractors and did not attempt to quantify the potential rebound effect for any other truck classes. Finally, these scenarios were characterized as "sketches" and were not included in the final NAS report. In fact, the NAS report asserted that it is "not possible to provide a confident measure of the rebound effect," yet concluded that a rebound effect likely exists and that "estimates of fuel savings from regulatory standards will be somewhat misestimated if the rebound effect is not considered."

Table VIII-12: Range of Rebound Effect Estimates from Cambridge Systematics Aggregate Assessment

	Scenario 1 (6.8 mpg, $22,930)	Scenario 2 (9.1 mpg, $71,630)
"First Rebound Effect" (increase in truck VMT resulting from decrease in operating costs)	11-31%	5-16%
"Second Rebound Effect" (net fuel savings when decreases from rail are taken into account)	9-13 %	3-15%

As an alternative, using the econometric approach, NHTSA has estimated the rebound effect in the short run and long run for single unit (Class 4–7) and (Class 8) combination tractors. As shown in Table VIII–13, the estimates for the long-run rebound effect are larger than the estimates in the short run, which is consistent with the theory that shippers have more flexibility to change their behavior (*e.g.*, restructure contracts or logistics) when they are given more time. In addition, the estimates derived from the national data also showed larger rebound effects compared to the State data.[395] One possible explanation for the difference in the estimates is that the national rebound estimates are capturing some of the impacts of changes in economic activity. Historically, large increases in fuel prices are highly correlated with economic downturns, and there may not be enough variation in the national data to differentiate the impact of fuel price changes from changes in economic activity. In contrast, some States may see an increase in output when energy prices increase (*e.g.*, large oil producing States such as Texas and Alaska); therefore, the State data may be more accurately isolating the individual impact of fuel price changes.

Table VIII-13: Range of Rebound Effect Estimates from NHTSA Econometric Analysis

Truck Type	National Data		State Data	
	Short Run	Long Run	Short Run	Long Run
Single Unit	13-22%	28-45%	3-8%	12-21%
Combination	N/A	12-14%	N/A	4-5%

[394] Cambridge Systematics, Inc., 2009.

[395] NHTSA's estimates of the rebound effect are derived from econometric analysis of national and state VMT data reported in Federal Highway Administration, *Highway Statistics*, various editions, Tables VM–1 and VM–4. Specifically, the estimates of the rebound effect reported in Table VIII–10 are ranges of the estimated short-run and long-run elasticities of annual VMT by single-unit and combination trucks with respect to fuel cost per mile driven. (Fuel cost per mile driven during each year is equal to average fuel price per gallon during that year divided by average fuel economy of the truck fleet during that same year.) These estimates are derived from time-series regression of annual national aggregate VMT for the period 1970–2008 on measures of nationwide economic activity, including aggregate GDP, the value of durable and nondurable goods production, and the volume of U.S. exports and imports of goods, and variables affecting the price of trucking services (driver wage rates, truck purchase prices, and fuel costs), and from regression of VMT for each individual State over the period 1994–2008 on similar variables measured at the State level.

As discussed throughout this section, there are multiple methodologies for quantifying the rebound effect, and these different methodologies produce a large range of potential values of the rebound effect. However, for the purposes of quantifying the rebound effect for this proposal, we have used a rebound effect with respect to changes in fuel costs per mile on the lower range of the long-run estimates. Given the fact that the long-run State estimates are generally more consistent with the aggregate estimates, for this proposal we have chosen a rebound effect for vocational vehicles (single unit trucks) of 15% that is within the range of estimates from both methodologies. Similarly, we have chosen a rebound effect for combination tractors of 5%.

To date, no estimates of the HD pickup truck and van rebound effect have been cited in the literature. Since these vehicles are used for very different purposes than heavy-duty vehicles, it does not necessarily seem appropriate to apply one of the heavy-duty estimates to the HD pickup trucks and vans. These vehicles are more similar in use to large light-duty vehicles, so for the purposes of our analysis, we have chosen to apply the light-duty rebound effect of 10% to this class of vehicles.

For the purposes of this proposal, we have not taken into account any potential fuel savings or GHG emission reductions from the rail sector due to mode shifting. However, we have provided CSI's example calculations and request comment on these values.

Furthermore, we have made a number of simplifying assumptions in our calculations, which are discussed in more detail in the draft RIA. Specifically, we have not attempted to capture how current market failures might impact the rebound effect. The direction and magnitude of the rebound effect in the medium- and heavy-duty truck market are expected to vary depending on the existence and types of market failures affecting the fuel economy of the trucking fleet. If firms are already accurately accounting for the costs and benefits of these technologies and fuel savings, then these regulations would increase their net costs, because trucks would already include all the cost-effective technologies. As a result, the rebound effect would actually be negative and truck VMT would decrease as a result of these proposed regulations. However, if firms are not optimizing their behavior today due to factors such as lack of reliable information (*see* Section VIII.A. for further discussion), it is more likely that truck VMT would increase. If firms recognize their lower net costs as a result of these regulations and pass those costs along to their customers, then the rebound effect would increase truck VMT. This response assumes that trucking rates include both truck purchase costs and fuel costs, and that the truck purchase costs included in the rates spread those costs over the full expected lifetime of the trucks. If those costs are spread over a shorter period, as the expected short payback period implies, then those purchase costs will inhibit reduction of freight rates, and the rebound effect will be smaller.

As discussed in more detail in Section VIII.A, if there are market failures such as split incentives, estimating the rebound effect may depend on the nature of the failures. For example, if the original purchaser cannot fully recoup the higher upfront costs through fuel savings before selling the vehicle nor pass those costs onto the resale buyer, the firm would be expected to raise shipping rates. A firm purchasing the truck second-hand might lower shipping rates if the firm recognizes the cost savings after operating the vehicle, leading to an increase in VMT. Similarly, if there are split incentives and the vehicle buyer isn't the same entity that purchases the fuel, than there would theoretically be a positive rebound effect. In this scenario, fuel savings would lower the net costs to the fuel purchaser, which would result in a larger increase in truck VMT.

If all of these scenarios occur in the marketplace, the net effect will depend on the extent and magnitude of their relative effects, which are also likely to vary across truck classes (for instance, split incentives may be a much larger problem for Class 7 and 8 tractors than they are for heavy-duty pickup trucks). Additional details on the rebound effect are included in the draft RIA. We invite comment on all of the rebound estimates and assumptions.

F. Class Shifting and Fleet Turnover Impacts

The agencies considered two additional potential indirect costs, benefits, effects, and externalities which may lead to unintended consequences of the proposal to improve the fuel efficiency and reduce GHG emissions from HD trucks. The next sections cover the agencies' qualitative discussions on potential class shifting and fleet turnover effects.

(1) Class Shifting

Heavy-duty vehicles are typically configured and purchased to perform a function. For example, a concrete mixer truck is purchased to transport concrete, a combination tractor is purchased to move freight with the use of a trailer, and a Class 3 pickup truck could be purchased by a landscape company to pull a trailer carrying lawnmowers. The purchaser makes decisions based on many attributes of the vehicle, including the gross vehicle weight rating of the vehicle which in part determines the amount of freight or equipment that can be carried. If the agencies propose a regulation that impacts either the performance of the vehicle or the marginal cost of the vehicle relative to the other vehicle classes, then consumers could choose to purchase a different vehicle which may result in an unintended consequence of increased fuel consumption and GHG emissions in-use.

The agencies, along with the NAS panel, found that there is little or no literature which evaluates class shifting between trucks.[396] The agencies welcome comments that would help inform the evaluation of this potential impact. NHTSA and EPA qualitatively evaluated the proposed rule in light of potential class shifting. The agencies looked at four potential cases of shifting—from light-duty pickup trucks to heavy-duty pickup trucks, from sleeper cabs to day cabs, from combination tractors to vocational vehicles, and within vocational vehicles.

Light-duty pickup trucks, those with a GVWR of less than 8,500 pounds, are currently regulated under the existing CAFE program and will meet GHG emissions standards beginning in 2012. The increased stringency of the 2012–2016 light-duty GHG and CAFE rule has led some to speculate that vehicle consumers may choose to purchase heavy-duty pickup trucks that are currently unregulated if the cost of the light-duty regulation is high relative to the cost to buy the larger heavy-duty pickup trucks. Since fuel consumption and GHG emissions rise significantly with vehicle mass, a shift from light-duty trucks to heavy-duty trucks would likely lead to higher fuel consumption and GHG emissions, an untended consequence of the regulations. Given the significant price premium of a heavy-duty truck (often five to ten thousand dollars more than a light-duty pickup), we believe that such a class shift would be unlikely even absent this proposal. With this proposed regulation, any incentive for such a class shift is significantly diminished. The proposed regulations for the HD pickup trucks, and similarly for vans, are based on similar technologies and therefore reflect a similar expected increase in

[396] *See* 2010 NAS Report, Note 111, page 152.

cost when compared to the light-duty GHG regulation. Hence, the combination of the two regulations provides little incentive for a shift from light-duty trucks to HD trucks. To the extent that our proposed regulation of heavy-duty pickups and vans could conceivably encourage a class shift towards lighter pickups, this unintended consequence would in fact be expected to lead to lower fuel consumption and GHG emissions as the smaller light-duty pickups are significantly more efficient than heavy-duty pickup trucks.

The projected cost increases for our proposal differ significantly between Class 8 day cabs and Class 8 sleeper cabs reflecting our expectation that compliance with the proposed standards will lead truck consumers to specify sleeper cabs equipped with APUs while day cab consumers will not. Since Class 8 day cab and sleeper cab trucks perform essentially the same function when hauling a trailer, this raises the possibility that the higher cost for an APU equipped sleeper cab could lead to a shift from sleeper cab to day cab trucks. We do not believe that such an intended consequence will occur for the following reasons. The addition of a sleeper berth to a tractor cab is not a consumer-selectable attribute in quite the same way as other vehicle features. The sleeper cab provides a utility that long-distance trucking fleets need to conduct their operations—an on-board sleeping berth that lets a driver comply with federally-mandated rest periods, as required by the Department of Transportation Federal Motor Carrier Safety Administration's hours-of-service regulations. The cost of sleeper trucks is already higher than the cost of day cabs, yet the fleets that need this utility purchase them.[397] A day cab simply cannot provide this utility. The need for this utility would not be changed even if the marginal costs to reduce greenhouse gas emissions from sleeper cabs exceed the marginal costs to reduce greenhouse gas emissions from day cabs.[398] A trucking fleet could decide to put its drivers in hotels in lieu of using sleeper berths, and switch to day cabs. However, this is unlikely to occur in any great number, since the added cost for the hotel stays would far overwhelm differences in the marginal cost between day and sleeper cabs. Even if some fleets do opt to buy hotel rooms and switch to day cabs, they would be highly unlikely to purchase a day cab that was aerodynamically worse than the sleeper cab they replaced, since the need for features optimized for long-distance hauling would not have changed. So in practice, there would likely be little difference to the environment for any switching that might occur. Further, while our projected costs assume the purchase of an APU for compliance, in fact our regulatory structure would allow compliance using a near zero cost software utility that eliminates tractor idling after five minutes. Using this compliance approach, the cost difference between a Class 8 sleeper cab and day cab due to our proposed regulations is small. We are providing this alternative compliance approach reflecting that some sleeper cabs are used in team driving situations where one driver sleeps while the other drives. In that situation, an APU is unnecessary since the tractor is continually being driven when occupied. When it is parked, it will automatically eliminate any additional idling through the shutdown software. If trucking companies choose this option, then costs based on purchase of APUs may overestimate the costs of this rule to this sector.

Class shifting from combination tractors to vocational vehicles may occur if a customer deems the additional marginal cost of tractors due to the regulation to be greater than the utility provided by the tractor. The agencies initially considered this issue when deciding whether to include Class 7 tractors with the Class 8 tractors or regulate them as vocational vehicles. The agencies' evaluation of the combined vehicle weight rating of the Class 7 shows that if these vehicles were treated significantly differently from the Class 8 tractors, then they could be easily substituted for Class 8 tractors. Therefore, the agencies are proposing to include both classes in the tractor category. The agencies believe that a shift from tractors to vocational vehicles would be limited because of the ability of tractors to pick up and drop off trailers at locations which cannot be done by vocational vehicles.

The agencies do not envision that the proposed regulatory program will cause class shifting within the vocational class. The marginal cost difference due to the regulation of vocational vehicles is minimal. The cost of LRR tires on a per tire basis is the same for all vocational vehicles so the only difference in marginal cost of the vehicles is due to the number of axles. The agencies believe that the utility gained from the additional load carrying capability of the additional axle will outweigh the additional cost for heavier vehicles.[399]

In conclusion, NHTSA and EPA believe that the proposed regulatory structure for HD trucks does not significantly change the current competitive and market factors that determine purchaser preferences among truck types. Furthermore, even if a small amount of shifting does occur, any resulting GHG impacts are likely to be negligible because any vehicle class that sees an uptick in sales is also being regulated for fuel economy. Therefore, the agencies did not include an impact of class shifting on the vehicle populations used to assess the benefits of the proposal. The agencies welcome comments to inform the benefits assessment of the final rule.

(2) Fleet Turnover Effect

A regulation that increases the cost to purchase and/or operate trucks could impact whether a consumer decides to purchase a new truck and the timing of that purchase. The term pre-buy refers to the idea that truck purchases may occur earlier than otherwise planned to avoid the additional costs associated with a new regulatory requirement. Slower fleet turnover, or low-buys, may occur when owners opt to keep their existing truck rather than purchase a new truck due to the incremental cost of the regulation.

The NAS panel discusses the topics associated with HD truck fleet turnover. NAS noted that there is some empirical evidence of pre-buy behavior in response to the 2004 and 2007 heavy-duty engine emission standards, with larger impacts occurring in response to higher costs.[400] However, those regulations increased upfront costs to firms without any offsetting future cost savings from reduced fuel purchases. In summary, NAS stated that

> * * * during periods of stable or growing demand in the freight sector, pre-buy behavior may have significant impact on purchase patterns, especially for larger fleets with better access to capital and financing. Under these same conditions, smaller operators may simply elect to keep their current equipment on the road longer, all the more likely given continued improvements in diesel engine durability over time. On the other hand, to the extent that fuel economy improvements can offset incremental purchase costs, these impacts will be lessened. Nevertheless, when it comes to

[397] A baseline tractor price of a new day cab is $89,500 versus $113,000 for a new sleeper cab based on information gathered by ICF in the "Investigation of Costs for Strategies to Reduce Greenhouse Gas Emissions for Heavy-Duty On-Road Vehicles", July 2010. Page 3. Docket Identification Number EPA–HQ–OAR–2010–0162–0044.

[398] The average marginal cost difference between sleeper cabs and day cabs in the proposal is nearly $6,000.

[399] The proposed rule projects the difference in costs between the HHD and MHD vocational vehicle technologies is approximately $30.

[400] *See* NAS Report, Note 111, pp. 150–151.

efficiency investments, most heavy-duty fleet operators require relatively quick payback periods, on the order of two to three years.[401]

The proposed regulations are projected to return fuel savings to the truck owners that offset the cost of the regulation within a few years for vocational vehicles and Class 7 and 8 tractors, the categories where the potential for prebuy and delayed fleet turnover are concerns. In the case of vocational vehicles, the added cost is small enough that it is unlikely to have a substantial effect on purchasing behavior. In the case of Class 7 and 8 trucks, the effects of the regulation on purchasing behavior will depend on the nature of the market failures and the extent to which firms consider the projected future fuel savings in their purchasing decisions.

If trucking firms account for the rapid payback, they are unlikely to strategically accelerate or delay their purchase plans at additional cost in capital to avoid a regulation that will lower their overall operating costs. As discussed in Section VIII.A., this scenario may occur if this proposed rule reduces uncertainty about fuel-saving technologies. More reliable information about ways to reduce fuel consumption allows truck purchasers to evaluate better the benefits and costs of additional fuel savings, primarily in the original vehicle market, but possibly in the resale market as well.

Other market failures may leave open the possibility of some pre-buy or delayed purchasing behavior. Firms may not consider the full value of the future fuel savings for several reasons. For instance, truck purchasers may not want to invest in fuel economy because of uncertainty about fuel prices. Another explanation is that the resale market may not fully recognize the value of fuel savings, due to lack of trust of new technologies or changes in the uses of the vehicles. Lack of coordination (also called split incentives—see Section VIII.A) between truck purchasers (who emphasize the up-front costs of the trucks) and truck operators, who would like the fuel savings, can also lead to pre-buy or delayed purchasing behavior. If these market failures prevent firms from fully internalizing fuel savings when deciding on vehicle purchases, then pre-buy and delayed purchase could occur and could result in a slight decrease in the GHG benefits of the regulation.

Thus, whether pre-buy or delayed purchase is likely to play a significant role in the truck market depends on the specific behaviors of purchasers in that market. Without additional information about which scenario is more likely to be prevalent, the Agencies are not projecting a change in fleet turnover characteristics due to this regulation. We welcome comments on all aspects of this assumption, especially in the context of our assumed increase in truck freight shipments due to a VMT rebound.

G. Benefits of Reducing CO_2 Emissions

(1) Social Cost of Carbon

EPA has assigned a dollar value to reductions in CO_2 emissions using recent estimates of the social cost of carbon (SCC). The SCC is an estimate of the monetized damages associated with an incremental increase in carbon emissions in a given year. It is intended to include (but is not limited to) changes in net agricultural productivity, human health, property damages from increased flood risk, and the value of ecosystem services due to climate change. The SCC estimates used in this analysis were developed through an interagency process that included EPA, DOT/NHTSA, and other executive branch entities, and concluded in February 2010. We first used these SCC estimates in the benefits analysis for the final joint EPA/DOT rule to establish light-duty vehicle GHG emission standards and CAFE standards; see the rule's preamble for discussion about application of the SCC.[402] The SCC Technical Support Document (SCC TSD) provides a complete discussion of the methods used to develop these SCC estimates.[403]

The interagency group selected four SCC values for use in regulatory analyses, which we have applied in this analysis: $5, $22, $36, and $66 per metric ton of CO_2 emissions in 2010, in 2008 dollars.[404, 405] The first three values are based on the average SCC from three integrated assessment models, at discount rates of 5, 3, and 2.5 percent, respectively. SCCs at several discount rates are included because the literature shows that the SCC is quite sensitive to assumptions about the discount rate, and because no consensus exists on the appropriate rate to use in an intergenerational context. The fourth value is the 95th percentile of the SCC from all three models at a 3 percent discount rate. It is included to represent higher-than-expected impacts from temperature change further out in the tails of the SCC distribution. Low probability, high impact events are incorporated into all of the SCC values through explicit consideration of their effects in two of the three models as well as the use of a probability density function for equilibrium climate sensitivity. Treating climate sensitivity probabilistically results in more high temperature outcomes, which in turn lead to higher projections of damages.

The SCC increases over time because future emissions are expected to produce larger incremental damages as physical and economic systems become more stressed in response to greater climatic change. Note that the interagency group estimated the growth rate of the SCC directly using the three integrated assessment models rather than assuming a constant annual growth rate. This helps to ensure that the estimates are internally consistent with other modeling assumptions. Table VIII–14 presents the SCC estimates used in this analysis.

When attempting to assess the incremental economic impacts of carbon dioxide emissions, the analyst faces a number of serious challenges. A recent report from the National Academies of Science points out that any assessment will suffer from uncertainty, speculation, and lack of information about (1) future emissions of greenhouse gases, (2) the effects of past and future emissions on the climate system, (3) the impact of changes in climate on the physical and biological environment, and (4) the translation of these environmental impacts into economic damages.[406] As a result, any effort to quantify and monetize the harms

[401] *See* NAS Report, Note 111, page 151.

[402] See U.S. EPA 2010 LD GHG Rule, Note 6, docket ID EPA–HQ–OAR–2009–0472–11424.

[403] Docket ID EPA–HQ–OAR–2009–0472–114577, *Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866, Interagency Working Group on Social Cost of Carbon,* with participation by Council of Economic Advisers, Council on Environmental Quality, Department of Agriculture, Department of Commerce, Department of Energy, Department of Transportation, Environmental Protection Agency, National Economic Council, Office of Energy and Climate Change, Office of Management and Budget, Office of Science and Technology Policy, and Department of Treasury (February 2010). Also available at *http://epa.gov/otaq/climate/regulations.htm.*

[404] The interagency group decided that these estimates apply only to CO_2 emissions. Given that warming profiles and impacts other than temperature change (*e.g.,* ocean acidification) vary across GHGs, the group concluded "transforming gases into CO_2-equivalents using GWP, and then multiplying the carbon-equivalents by the SCC, would not result in accurate estimates of the social costs of non-CO_2 gases" (SCC TSD, pg. 13).

[405] The SCC estimates were converted from 2007 dollars to 2008 dollars using a GDP price deflator (1.021) obtained from the Bureau of Economic Analysis, National Income and Product Accounts Table 1.1.4, *Prices Indexes for Gross Domestic Product.*

[406] *National Research Council (2009). Hidden Costs of Energy: Unpriced Consequences of Energy Production and Use.* National Academies Press. See docket ID EPA–HQ–OAR–2009–0472–11486.

associated with climate change will raise serious questions of science, economics, and ethics and should be viewed as provisional.

The interagency group noted a number of limitations to the SCC analysis, including the incomplete way in which the integrated assessment models capture catastrophic and non-catastrophic impacts, their incomplete treatment of adaptation and technological change, uncertainty in the extrapolation of damages to high temperatures, and assumptions regarding risk aversion. The limited amount of research linking climate impacts to economic damages makes the interagency modeling exercise even more difficult. The interagency group hopes that over time researchers and modelers will work to fill these gaps and that the SCC estimates used for regulatory analysis by the Federal government will continue to evolve with improvements in modeling. Additional details on these limitations are discussed in the SCC TSD.

In light of these limitations, the interagency group has committed to updating the current estimates as the science and economic understanding of climate change and its impacts on society improves over time. Specifically, the interagency group has set a preliminary goal of revisiting the SCC values in the next few years or at such time as substantially updated models become available, and to continue to support research in this area.

Applying the global SCC estimates, shown in Table VIII–14, to the estimated domestic reductions in CO_2 emissions under this proposed rule, we estimate the dollar value of the climate related benefits for each analysis year. For internal consistency, the annual benefits are discounted back to net present value terms using the same discount rate as each SCC estimate (*i.e.,* 5%, 3%, and 2.5%) rather than 3% and 7%.[407] These estimates are provided in Table VIII–15.

Table VIII-14: Social Cost of CO_2, 2010 – 2050[a] (in 2008 dollars)

Year	Discount Rate and Statistic			
	5% Average	3% Average	2.5% Average	3% 95th Percentile
2010	$4.80	$21.85	$35.84	$66.26
2015	$5.87	$24.35	$39.21	$74.33
2020	$6.94	$26.85	$42.58	$82.39
2025	$8.45	$30.15	$46.84	$92.25
2030	$9.95	$33.44	$51.10	$102.10
2035	$11.46	$36.73	$55.36	$111.95
2040	$12.97	$40.02	$59.63	$121.81
2045	$14.50	$42.93	$63.00	$130.43
2050	$16.03	$45.84	$66.37	$139.06

Note:
[a] The SCC values are dollar-year and emissions-year specific.

Table VIII-15: Monetized CO_2 Benefits of Vehicle Program, CO_2 Emissions[a] (Million 2008$)

YEAR	CO_2 EMISSIONS REDUCTION (MMT)	BENEFITS			
		Avg SCC at 5% ($5-$16)[a]	Avg SCC at 3% ($22-$46)[a]	Avg SCC at 2.5% ($36-$66)[a]	95th percentile SCC at 3% ($66-$139)[a]
2020	34.1	$237	$916	$1,452	$2,810
2030	69.2	$689	$2,313	$3,535	$7,063
2040	88.9	$1,153	$3,559	$5,302	$10,832
2050	107	$1,709	$4,888	$7,076	$14,826
Net Present Value[b]		$8,610	$44,000	$74,600	$134,000

Notes:
[a] Except for the last row (net present value), the SCC values are dollar-year and emissions-year specific.
[b] Net present value of reduced CO_2 emissions is calculated differently from other benefits. The same discount rate used to discount the value of damages from future emissions (SCC at 5, 3, 2.5 percent) is used to calculate net present value of SCC for internal consistency. Refer to the SCC TSD for more detail.

[407] It is possible that other benefits or costs of proposed regulations unrelated to CO_2 emissions will be discounted at rates that differ from those used to develop the SCC estimates.

H. Non-GHG Health and Environmental Impacts

This section discusses the non-GHG health and environmental impacts that can be expected to occur as a result of the proposed heavy-duty vehicle GHG rule. GHG emissions are predominantly the byproduct of fossil fuel combustion processes that also produce criteria and hazardous air pollutants. The vehicles that are subject to the proposed standards are also significant sources of mobile source air pollution such as direct PM, NO_X X, VOCs and air toxics. The proposed standards would affect exhaust emissions of these pollutants from vehicles. They would also affect emissions from upstream sources related to changes in fuel consumption. Changes in ambient ozone, $PM_{2.5}$, and air toxics that would result from the proposed standards are expected to affect human health in the form of premature deaths and other serious human health effects, as well as other important public health and welfare effects.

It is important to quantify the health and environmental impacts associated with the proposed standard because a failure to adequately consider these ancillary co-pollutant impacts could lead to an incorrect assessment of their net costs and benefits. Moreover, co-pollutant impacts tend to accrue in the near term, while any effects from reduced climate change mostly accrue over a time frame of several decades or longer.

EPA typically quantifies and monetizes the health and environmental impacts related to both PM and ozone in its regulatory impact analyses (RIAs), when possible. However, EPA was unable to do so in time for this proposal. EPA attempts to make emissions and air quality modeling decisions early in the analytical process so that we can complete the photochemical air quality modeling and use that data to inform the health and environmental impacts analysis. Resource and time constraints precluded the Agency from completing this work in time for the proposal. Instead, we provide a characterization of the health and environmental impacts that will be quantified and monetized for the final rulemaking.

EPA bases its analyses on peer-reviewed studies of air quality and health and welfare effects and peer-reviewed studies of the monetary values of public health and welfare improvements, and is generally consistent with benefits analyses performed for the analysis of the final Ozone NAAQS and the final PM NAAQS analysis, as well as the proposed Portland Cement National Emissions Standards for Hazardous Air Pollutants RIA, and final NO_2 NAAQS.[408, 409, 410, 411]

Though EPA is characterizing the changes in emissions associated with toxic pollutants, we will not be able to quantify or monetize the human health effects associated with air toxic pollutants for either the proposal or the final rule analyses. Please refer to Section VII for more information about the air toxics emissions impacts associated with the proposed standards.

(1) Human Health and Environmental Impacts

To model the ozone and PM air quality benefits of the final rule, EPA will use the Community Multiscale Air Quality (CMAQ) model (*see* VII.C for a description of the CMAQ model). The modeled ambient air quality data will serve as an input to the Environmental Benefits Mapping and Analysis Program (BenMAP).[412] BenMAP is a computer program developed by EPA that integrates a number of the modeling elements used in previous RIAs (*e.g.,* interpolation functions, population projections, health impact functions, valuation functions, analysis and pooling methods) to translate modeled air concentration estimates into health effects incidence estimates and monetized benefits estimates.

Chapter 8.3 in the draft RIA that accompanies this proposal lists the co-pollutant health effect exposure-response functions EPA will use to quantify the co-pollutant incidence impacts associated with the final heavy-duty vehicles standard. These include PM- and ozone-related premature mortality, chronic bronchitis, nonfatal heart attacks, hospital admissions (respiratory and cardiovascular), emergency room visits, acute bronchitis, minor restricted activity days, and days of work and school lost.

(2) Monetized Impacts

To calculate the total monetized impacts associated with quantified health impacts, EPA applies values derived from a number of sources. For premature mortality, EPA applies a value of a statistical life derived from the mortality valuation literature. For certain health impacts, such as chronic bronchitis and a number of respiratory-related ailments, EPA applies willingness-to-pay estimates derived from the valuation literature. For the remaining health impacts, EPA applies values derived from current cost-of-illness and/or wage estimates. Chapter 8.3 in the draft RIA that accompanies this proposal presents the monetary values EPA will apply to changes in the incidence of health and welfare effects associated with the final standard.

(3) Other Unquantified Health and Environmental Impacts

In addition to the co-pollutant health and environmental impacts EPA will quantify for the analysis of the final standard, there are a number of other health and human welfare endpoints that EPA will not be able to quantify or monetize because of current limitations in the methods or available data. These impacts are associated with emissions of air toxics (including benzene, 1,3-butadiene, formaldehyde, acetaldehyde, and acrolein), ambient ozone, and ambient $PM_{2.5}$ exposures. Chapter 8.3 of the draft RIA lists these unquantified health and environmental impacts.

While there will be impacts associated with air toxic pollutant emission changes that result from the final standard, EPA will not attempt to monetize those impacts. This is primarily because currently available tools and methods to assess air toxics risk from mobile sources at the national scale are not adequate for extrapolation to incidence estimations or benefits assessment. The best suite of tools and methods currently available for assessment at the national scale are those used in the National-Scale Air Toxics Assessment. The EPA Science Advisory Board specifically commented in their review of the 1996 National-scale Air Toxics Assessments that these tools were not yet ready for use in a national-scale benefits analysis, because they did not consider the full distribution of exposure and risk, or

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[408] U.S. Environmental Protection Agency. (2008). Final Ozone NAAQS Regulatory Impact Analysis. Prepared by: Office of Air and Radiation, Office of Air Quality Planning and Standards. March.

[409] U.S. Environmental Protection Agency. October 2006. Final Regulatory Impact Analysis (RIA) for the Proposed National Ambient Air Quality Standards for Particulate Matter. Prepared by: Office of Air and Radiation.

[410] U.S. Environmental Protection Agency (U.S. EPA). 2009. Regulatory Impact Analysis: National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry. Office of Air Quality Planning and Standards, Research Triangle Park, NC. April. Available on the Internet at *http://www.epa.gov/ttn/ecas/regdata/RIAs/portlandcementria_4–20–09.pdf.* EPA–HQ–OAR–2009–0472–0241.

[411] U.S. Environmental Protection Agency (U.S. EPA). 2010. Final NO_2 NAAQS Regulatory Impact Analysis (RIA). Office of Air Quality Planning and Standards, Research Triangle Park, NC. April. Available on the Internet at *http://www.epa.gov/ttn/ecas/regdata/RIAs/FinalNO2RIAfulldocument.pdf.* Accessed March 15. EPA–HQ–OAR–2009–0472–0237.

[412] Information on BenMAP, including downloads of the software, can be found at *http://www.epa.gov/ttn/ecas/benmodels.html.*

address sub-chronic health effects.[413] While EPA has since improved the tools, there remain critical limitations for estimating incidence and assessing benefits of reducing mobile source air toxics. EPA continues to work to address these limitations; however, EPA does not anticipate having methods and tools available for national-scale application in time for the analysis of the final rules.[414]

I. Energy Security Impacts

This proposed rule to reduce fuel consumption and GHG emissions in heavy-duty vehicles results in improved fuel efficiency which, in turn, helps to reduce U.S. petroleum imports. A reduction of U.S. petroleum imports reduces both financial and strategic risks caused by potential sudden disruptions in the supply of imported petroleum to the United States. This reduction in risk is a measure of improved U.S. energy security. This section summarizes our estimates of U.S. oil import reductions and energy security benefits of the proposed heavy-duty fuel consumption and GHG vehicle standards. Additional discussion of this issue can be found in Chapter 9.5 of the draft RIA.

(1) Implications of Reduced Petroleum Use on U.S. Imports

In 2008, U.S. petroleum import expenditures represented 21 percent of total U.S. imports of all goods and services.[415] In 2008, the United States imported 66 percent of the petroleum it consumed, and the transportation sector accounted for 70 percent of total U.S. petroleum consumption. This compares to approximately 37 percent of petroleum from imports and 55 percent of consumption from petroleum in the transportation sector in 1975.[416] It is clear that petroleum imports have a significant impact on the U.S. economy.

Requiring lower-GHG vehicle technology in heavy-duty vehicles in the United States is expected to lower U.S. oil imports. EPA used the MOVES model to estimate the fuel savings due to this proposal. A detailed explanation of the MOVES model can be found in Chapter 5 of the draft RIA.

Based on a detailed analysis of differences in fuel consumption, petroleum imports, and imports of refined petroleum products and crude oil among the Reference Case, High Economic Growth, and Low Economic Growth Scenarios presented in the Energy Information Administration's Annual Energy Outlook (AEO) 2009, EPA and NHTSA estimate that approximately 50 percent of the reduction in fuel consumption resulting from adopting improved fuel GHG standards and fuel economy standards is likely to be reflected in reduced U.S. imports of refined fuel, while the remaining 50 percent would be expected to be reflected in reduced domestic fuel refining. Of this latter figure, 90 percent is anticipated to reduce U.S. imports of crude petroleum for use as a refinery feedstock, while the remaining 10 percent is expected to reduce U.S. domestic production of crude petroleum. Thus, on balance, each gallon of fuel saved as a consequence of the heavy-duty GHG standards and fuel economy standards is anticipated to reduce total U.S. imports of crude petroleum or refined fuel by 0.95 gallons.[417] EPA estimates of the reduction in U.S. oil imports from this proposal for the years 2020, 2030 and 2040, in millions of barrels per day, are presented in Table VIII–16 below.

Table VIII-16: U.S. Oil Import Reductions from the Heavy-Duty Vehicle Rule in 2020, 2030 and 2040 (in millions of barrels per day)

2020	2030	2040
0.177	0.357	0.463

(2) Energy Security Implications

In order to understand the energy security implications of reducing U.S. petroleum imports, EPA worked with Oak Ridge National Laboratory (ORNL), which has developed approaches for evaluating the economic costs and energy security implications of oil use. The energy security estimates provided below are based upon a methodology developed in a peer-reviewed study entitled "*The Energy Security Benefits of Reduced Oil Use, 2006–2015*," completed in March 2008. This study is included as part of the docket for this proposal.[418, 419]

When conducting this analysis, ORNL considered the full economic cost of importing petroleum into the United States. The economic cost of importing petroleum into the United States is defined to include two components in addition to the purchase price of petroleum itself. These are: (1) The higher costs for oil imports resulting from the effect of increasing U.S. import demand on the world oil price and on the market power of the Organization of the Petroleum Exporting Countries (*i.e.*, the "demand" or "monopsony" costs); and (2) the risk of reductions in U.S. economic output and disruption of the U.S. economy caused by sudden disruptions in the supply of imported petroleum to the United States (*i.e.*, macroeconomic disruption/adjustment costs). Maintaining a U.S. military presence to help secure stable oil supply from potentially vulnerable regions of the world was not included in this analysis because its attribution to particular missions or activities is hard to quantify.

[413] Science Advisory Board. 2001. NATA—Evaluating the National-Scale Air Toxics Assessment for 1996—an SAB Advisory. *http://www.epa.gov/ttn/atw/sab/sabrev.html.*

[414] In April 2009, EPA hosted a workshop on estimating the benefits of reducing hazardous air pollutants. This workshop built upon the work accomplished in the June 2000 Science Advisory Board/EPA Workshop on the Benefits of Reductions in Exposure to Hazardous Air Pollutants, which generated thoughtful discussion on approaches to estimating human health benefits from reductions in air toxics exposure, but no consensus was reached on methods that could be implemented in the near term for a broad selection of air toxics. Please visit *http://epa.gov/air/toxicair/2009workshop.html* for more information about the workshop and its associated materials.

[415] Source: U.S. Bureau of Economic Analysis, U.S. International Transactions Accounts Data, as shown on June 24, 2009.

[416] Source: U.S. Department of Energy, Annual Energy Review 2008, Report No. DOE/EIA–0384 (2008), Tables 5.1 and 5.13c, June 26, 2009.

[417] This figure is calculated as 0.50 + 0.50*0.9 = 0.50 + 0.45 = 0.95.

[418] Leiby, Paul N., "*Estimating the Energy Security Benefits of Reduced U.S. Oil Imports*" Oak Ridge National Laboratory, ORNL/TM–2007/028, Final Report, 2008. (Docket EPA–HQ–OAR–2010–0162).

[419] The ORNL study "*The Energy Security Benefits of Reduced Oil Use, 2006–2015*," completed in March 2008, is an update version of the approach used for estimating the energy security benefits of U.S. oil import reductions developed in an ORNL 1997 Report by Leiby, Paul N., Donald W. Jones, T. Randall Curlee, and Russell Lee, entitled "*Oil Imports: An Assessment of Benefits and Costs.*" (Docket EPA–HQ–OAR–2010–0162).

As part of the process for developing the ORNL energy security estimates, EPA sponsored an independent, expert peer review of the 2008 ORNL study. A report compiling the peer reviewers' comments is provided in the docket.[420] In addition, EPA has worked with ORNL to address comments raised in the peer review and to develop estimates of the energy security benefits associated with a reduction in U.S. oil imports for this heavy-duty vehicle rule. In response to peer reviewer comments, ORNL modified its model by changing several key parameters involving the coordinated supply behavior of petroleum-exporting countries, the responsiveness of oil demand and supply to a change in the world oil price, and the responsiveness of U.S. economic output to a change in the world oil price.

For this proposed rule, ORNL estimated energy security premiums by incorporating the most recent available AEO 2010 oil price forecasts and market trends. Energy security premiums for the years 2020, 2030 and 2040 are presented in Table VIII–17,[421] as well as a breakdown of the components of the energy security premiums for each of these years. The components of the energy security premiums and their values are discussed in detail in Chapter 9.4 of the RIA.

Table VIII-17: Energy Security Premiums in 2020, 2030 and 2040 (2008$/Barrel)

Year (range)	Monopsony	Macroeconomic Disruption/Adjustment Costs	Total Mid-Point
2020	$12.28 ($4.16 - $23.74)	$7.39 ($3.39 – $11.92)	$19.66 ($10.27 - $30.90)
2030	$12.69 ($4.43 – 23.80)	$8.54 ($4.10 – $13.60)	$21.23 ($11.30 - $32.88)
2040	$12.68 ($4.41 – $23.41)	$8.99 ($4.48 - $14.08)	$21.67 ($11.54 - $33.11)

The literature on the energy security for the last two decades has routinely combined the monopsony and the macroeconomic disruption components when calculating the total value of the energy security premium. However, in the context of using a global SCC value, the question arises: how should the energy security premium be determined when a global perspective is taken? Monopsony benefits represent avoided payments by the United States to oil producers in foreign countries that result from a decrease in the world oil price as the United States decreases its consumption of imported oil.

Although there is clearly a benefit to the United States when considered from a domestic perspective, the decrease in price due to decreased demand in the United States also represents a loss to other countries. Given the redistributive nature of this monopsony effect from a global perspective, it is excluded in the energy security benefits calculations for this proposal. In contrast, the other portion of the energy security premium, the U.S. macroeconomic disruption and adjustment costs that arise from U.S. petroleum imports, does not have offsetting impacts outside of the United States, and, thus, are included in the energy security benefits estimated for this proposal. To summarize, the agencies have included only the macroeconomic disruption portion of the energy security benefits to monetize the total energy security benefits of this proposal.

The total annual energy security benefits for the proposed heavy-duty vehicle rule are reported in Table VIII–18 for the years 2020, 2030 and 2040. These estimates include only the macroeconomic disruption/adjustment portion of the energy security premium.

Table VIII-18: Total Annual Energy Security Benefits from the Heavy-Duty Vehicle Rule in 2020, 2030 and 2040 (millions of 2008$)

Year	Benefits
2020	$479
2030	$1,117
2040	$1,526

J. Other Impacts

(1) Noise, Congestion and Accidents

Increased vehicle use associated with a positive rebound effect also contributes to increased traffic congestion, motor vehicle accidents, and highway noise. Depending on how the additional travel is distributed throughout the day and on where it takes place, additional vehicle use can contribute to traffic congestion and delays by increasing traffic volumes on facilities that are already heavily traveled during peak periods. These added delays impose higher costs on drivers and other vehicle occupants in the form of increased travel time and operating expenses, increased costs associated with traffic accidents, and increased traffic noise. Because drivers

[420] Peer Review Report Summary: Estimating the Energy Security Benefits of Reduced U.S. Oil Imports, ICF, Inc., September 2007.

[421] AEO 2009 forecasts energy market trends and values only to 2035. The energy security premium estimates post-2035 were assumed to be the 2035 estimate.

do not take these added costs into account in deciding when and where to travel, they must be accounted for separately as a cost of the added driving associated with the rebound effect.

EPA and NHTSA rely on estimates of congestion, accident, and noise costs caused by pickup trucks and vans, single unit trucks, buses, and combination tractors developed by the Federal Highway Administration to estimate the increased external costs caused by added driving due to the rebound effect.[422] The Federal Highway Administration (FHWA) estimates are intended to measure the increases in costs from added congestion, property damages and injuries in traffic accidents, and noise levels caused by various types of trucks that are borne by persons other than their drivers (or "marginal" external costs). EPA and NHTSA employed estimates from this source previously in the analysis accompanying the Light-Duty GHG final rule. The agencies continue to find them appropriate for this analysis after reviewing the procedures used by FHWA to develop them and considering other available estimates of these values.

FHWA's congestion cost estimates for trucks, which are weighted averages based on the estimated fractions of peak and off-peak freeway travel for each class of trucks, already account for the fact that trucks make up a smaller fraction of peak period traffic on congested roads because they try to avoid peak periods when possible. FHWA's congestion cost estimates focus on freeways because non-freeway effects are less serious due to lower traffic volumes and opportunities to re-route around the congestion. The agencies, however, applied the congestion cost to the overall VMT increase, though the fraction of VMT on each road type used in MOVES range from 27 to 29 percent of the vehicle miles on freeways for vocational vehicles and 53 percent for combination tractors. The results of this analysis potentially overestimate the costs and provide a conservative estimate. The agencies welcome comments on whether the cost calculations should be done differently in the final rulemaking.

The agencies are proposing to use FHWA's "Middle" estimates for marginal congestion, accident, and noise costs caused by increased travel from trucks. This approach is consistent with the current methodology used in the Light-Duty GHG rulemaking analysis. These costs are multiplied by the annual increases in vehicle miles travelled from the positive rebound effect to yield the estimated cost increases resulting from increased congestion, accidents, and noise during each future year. The values the agencies used to calculate these increased costs are included in Table VIII–19.

Table VIII-19 Noise, Accident, and Congestion Costs per Mile (2008$)

External Costs	Pickup truck and vans ($/VMT)	Vocational vehicles ($/VMT)	Combination tractors ($/VMT)
Congestion	$0.049	$0.110	$0.107
Accidents	$0.026	$0.019	$0.022
Noise	$0.001	$0.009	$0.020

In aggregate, the increased costs due to noise, accidents, and congestion from the additional truck driving are presented in Table VIII–20.

Table VIII-20 Accident, Noise, and Congestion Costs (Millions, 2008$)

Year	Class 2b&3	Vocational	Combination	Total Costs
2012	$0	$0	$0	$0
2013	$0	$0	$0	$0
2014	$8	$10	$18	$36
2015	$16	$19	$35	$70
2016	$23	$30	$52	$104
2017	$30	$39	$68	$137
2018	$37	$48	$83	$168
2020	$50	$64	$111	$225
2030	$89	$122	$193	$404
2040	$112	$182	$233	$527
2050	$133	$245	$271	$648
NPV, 3%	$1,606	$2,407	$3,439	$7,452
NPV, 7%	$746	$1,070	$1,614	$3,429

[422] These estimates were developed by FHWA for use in its 1997 *Federal Highway Cost Allocation Study; see http://www.fhwa.dot.gov/policy/hcas/final/index.htm* (last accessed July 21, 2010).

(2) Savings Due to Reduced Refueling Time

Reducing the fuel consumption of heavy-duty trucks may either increase their driving range before they require refueling, or motivate truck purchasers to buy, and manufacturers to offer, smaller fuel tanks. Keeping the fuel tank the same size allows truck operators to reduce the frequency with which drivers typically refuel their vehicles; it thus extends the upper limit of the range they can travel before requiring refueling. Alternatively, if purchasers and manufacturers respond to improved fuel economy by reducing the size of fuel tanks to maintain a constant driving range, the smaller tank will require less time in actual refueling.

Because refueling time represents a time cost of truck operation, these time savings should be incorporated into truck purchasers' decisions over how much fuel-saving technology they want in their vehicles. The savings calculated here thus raise the same questions discussed in Preamble VIII.A and draft RIA Section 9.1: Does the apparent existence of these savings reflect failures in the market for fuel economy, or does it reflect costs not addressed in this analysis? The response to these questions could vary across truck segment. See those sections for further analysis of this question.

This analysis estimates the reduction in the annual time spent filling the fuel tank; this reduced time could come either from fewer refueling events, if the fuel tank stays the same size, or less time spent during each refueling event, if the fuel tank is made proportionately smaller. The refueling savings are calculated as the savings in the amount of time that would have been necessary to pump the fuel. The calculation does not include time spent searching for a fuel station or other time spent at the station; it is assumed that the time savings occur only during refueling. The value of the time saved is estimated at the hourly rate recommended for truck operators ($22.15 in 2008 dollars) in DOT guidance for valuing time savings.[423]

[423] U.S. Department of Transportation, "Revised Departmental Guidance for Valuation of Travel Time in Economic Analysis," February 11, 2003, Table 4 (which shows a value of $18.10 in 2000 dollars); available at *http://ostpxweb.dot.gov/policy/Data/VOTrevision1_2-11-03.pdf* (last accessed September 9, 2010).

The refueling savings include the increased fuel consumption resulting from additional mileage associated with the rebound effect. However, the estimate of the rebound effect does not account for any reduction in net operating costs from lower refueling time. As discussed earlier, the rebound effect should be a measure of the change in VMT with respect to the net change in overall operating costs. Ideally, changes in refueling time would factor into this calculation, although the effect is expected to be minor because refueling time savings are small relative to the value of reduced fuel expenditures.

The details of this calculation are discussed in the draft RIA Chapter 9.3.2. The savings associated with reduced refueling time for a truck of each type throughout its lifetime are shown in Table VIII–21. The aggregate savings associated with reduced refueling time are shown in Table VIII–22 for vehicles sold in 2014 through 2050. EPA and NHTSA request comment on whether reduced refueling time will result from greater fuel efficiency and how it may vary by truck segment.

Table VIII-21: Lifetime Refueling Savings for a 2018 MY Truck of Each Type (2008$)

	Pickup Trucks and Vans	Vocational Vehicles	Combination Tractor
3% Discount Rate	$64	$220	$294
7% Discount Rate	$50	$176	$235

Table VIII-22 Annual Refueling Savings (Millions of 2008 dollars)

Year	Pickup Trucks and Vans	Vocational Vehicles	Combination Tractor	Total
2012	$0	$0	$0	$0
2013	$0	$0	$0	$0
2014	$0	$1.8	$4.9	$6.9
2015	$0.6	$3.4	$10	$14
2016	$1.6	$5.2	$14	$21
2017	$3.2	$8.6	$21	$32
2018	$6.1	$12	$27	$45
2020	$12	$17	$38	$67
2030	$31	$38	$73	$141
2040	$42	$58	$89	$188
2050	$51	$78	$103	$231
NPV, 3%	$532	$730	$1,267	$2,529
NPV, 7%	$229	$316	$584	$1,129

(3) The Effect of Safety Standards and Voluntary Safety Improvements on Vehicle Weight

Safety regulations developed by NHTSA in previous regulations may make compliance with the proposed standards more difficult or may reduce the projected benefits of the program. The primary way that safety regulations can impact fuel efficiency and GHG emissions is through increased vehicle weight, which reduces the fuel efficiency of the vehicle. Using MY 2010 as a baseline, this section discusses the effects of other government regulations on MY 2014–2016 medium- and heavy-duty vehicle fuel efficiency. At this time, no known safety standards will affect new models in MY 2017 or 2018. The agency's estimates are based on cost and weight tear-down studies of a few vehicles and cannot possibly cover all the variations in the manufacturers' fleets. NHTSA requested, and various manufacturers provided, confidential estimates of increases in weight resulting from safety improvements. Those increases are shown in subsequent tables.

We have broken down our analysis of the impact of safety standards that might affect the MY 2014–16 fleets into three parts: (1) Those NHTSA final rules with known effective dates, (2) proposed rules or soon to be proposed rules by NHTSA with or without final effective dates, and (3) currently voluntary safety improvements planned by the manufacturers.

(a) Weight Impacts of Required Safety Standards

NHTSA has undertaken several rulemakings in which several standards would become effective for medium-duty and heavy-duty (MD/HD) vehicles between MY 2014 and MY 2016. We will examine the potential impact on MD/HD vehicle weights for MY 2014–2016 using MY 2010 as a baseline. The following Federal Motor Vehicle Safety Standards (FMVSS) apply:

- FMVSS 119, Heavy Truck Tires Endurance and High Speed Tests.
- FMVSS 121, Air Brake Systems Stopping Distance.
- FMVSS 214, Motor Coach Lap/Shoulder Belts.
- MD/HD Vehicle Electronic Stability Control Systems.

(i) FMVSS 119, Heavy Truck Tires Endurance and High Speed Tests

The data in the large truck crash causation study and the agency's test results indicate that J and L load range tires are more likely to fail the proposed requirements among the targeted F, G, H, J and L load range tires.[424] As such the J and L load range tires specifically need to be addressed to meet the proposed requirements since the other load range tires are likely to pass the requirements. Rubber material improvements such as improving rubber compounds would be a countermeasure that reduces heat retention and improve the durability of the tires. Using high tensile strength steel chords in tire bead, carcass and belt would enable a weight reduction in construction with no strength penalties. The rubber material improvements and using high tensile strength steel would not add any additional weight to the current production heavy truck tires. Thus there may not be an incremental weight per

[424] "Preliminary Regulatory Impact Analysis, FMVSS No. 119, New Pneumatic Tires for Motor Vehicles with a GVWR of More Than 4,536 kg (10,000 pounds), June 2010.

vehicle for the period of MY 2014–2016 compared to the MY 2010 baseline. This proposal could become a final rule with an effective date of MY2016.

(ii) FMVSS No. 121, Airbrake Systems Stopping Distance

The most recent major final rule was published on July 27, 2009 and became effective on November 24, 2009 (MY2009) with different compliance dates. The final rule requires the vast majority of new heavy truck tractors (approximately 99 percent of the fleet) to achieve a 30 percent reduction in stopping distance compared to currently required levels. Three-axle tractors with GVWRat or below 59,600 pounds must meet the reduced stopping distance requirements by August 1, 2011 (MY2011). Two-axle tractors and tractors with GVWR above 59,600 pounds must meet the reduced stopping distance requirements by August 1, 2013 (MY2013). There are several brake systems that can meet the requirements in the final rule. Those systems include installation of larger S-cam drum brakes or disc brake systems at all positions, or hybrid disc and larger rear S-cam drum brake systems.

According to the data provided by a manufacturer (Bendix), the heaviest drum brakes weigh more than the lightest disc brakes while the heaviest disc brakes weigh more than the lightest drum brakes. For a three-axle tractor equipped with all disc brakes, the total weight could increase by 212 pounds or could decrease by 134 pounds, compared to an all drum braked tractor depending on which disc or drum brakes are used for comparison. The improved brakes may add a small amount of weight to the affected vehicle for MY2014–2016 resulting in a slight increase in fuel consumption.

(iii) FMVSS No. 208, Motor Coach Lap/Shoulder Belts

Based on preliminary results from the agency's cost/weight teardown studies of motor coach seats, it is estimated that the weight added by 3-point lap/shoulder belts ranges from 5.96 to 9.95 pounds per 2-person seat.[425] This is the weight only of the seat belt assembly itself and does not include changing the design of the seat, reinforcing the floor, walls or other areas of the motor coach. Few current production motor coaches have been installed with lap/shoulder belts on their seats, and the number could be negligible. Assuming a 54 passenger motor coach, the added weight for the 3-point lap/shoulder belt assembly is in the range of 161 to 269 pounds (27 * (5.96 to 9.95)) per vehicle. This proposal could become a final rule with an effective date of MY2016.

(iv) Electronic Stability Control Systems for Medium-Duty and Heavy-Duty (MD/HD) Vehicles

Electronic stability control systems are not currently required in MD/HD vehicles and could be proposed to be required in the vehicles by NHTSA. FMVSS No. 105, Hydraulic and electric brake systems, requires multipurpose passenger vehicles, trucks and buses with a GVWR greater than 4,536 kg (10,000 pounds) to be equipped with an antilock brake system. All MD/HD vehicles have a GVWR of more than 10,000 pounds, and these vehicles are required to be installed with an antilock brake system by the same standard.

Electronic stability control systems incorporate yaw rate control into the antilock brake system. Yaw is a rotation around the vertical axis. An electronic stability control system uses several sensors in addition to the sensors used in the antilock brake system, which is required in MD/HD vehicles. Those additional sensors could include steering wheel angle sensor, yaw rate sensor, lateral acceleration sensor and wheel speed sensor. According to the data provided by Meritor WABCO, the weight of the ESC for the model 4S4M tractor is estimated to be around 55.494 pounds, and the weight of the antilock brake system only is estimated to be 45.54 pounds. Then the added weight for an electronic stability control system for a vehicle is estimated to be 9.954 (55.494 − 45.54) pounds.

(b) Summary—Overview of Anticipated Weight Increases

Table VIII–23 summarizes estimates made by the agency regarding the weight added by the above discussed standards or likely rulemakings. The agency estimates that weight additions required by final rules and likely NHTSA regulations effective in MY 2016 compared to the MY 2010 fleet will increase motor coach vehicle weight by 171–279 pounds and will increase other heavy-duty truck weights by a minor 10 pounds.

Table VIII-23: Weight Additions Due to Final Rules or Likely NHTSA Regulations Comparing MY 2016 to the MY 2010 Baseline Fleet

Standard Number	Added Weight in pounds MD/HD Vehicle	Added Weight in kilograms MD/HD Vehicle
119	0	0
121	0 (?)	0 (?)
208 Motor coaches only	161-269	73-122
MD/HD Vehicle Electronic Stability Control Systems	10	4.5
Total Motor coaches	171- 279	77.5-126.5
Total All other MD/HD vehicles	10	4.5

[425] Cost and Weight Analysis of Two Motorcoach Seating Systems: One With and One Without Three-Point Lap/Shoulder Belt Restraints, Ludkes and Associates, July 2010.

(4) Effects of Vehicle Mass Reduction on Safety

NHTSA and EPA have been considering the effect of vehicle weight on vehicle safety for the past several years in the context of our joint rulemaking for light-duty vehicle CAFE and GHG standards, consistent with NHTSA's long-standing consideration of safety effects in setting CAFE standards. Combining all modes of impact, the latest analysis by NHTSA for the MYs 2012–2016 final rule found that reducing the weight of the heavier light trucks (LT > 3,870) had a positive overall effect on safety, reducing societal fatalities.[426]

In the context of the current rulemaking for HD fuel consumption and GHG standards, one would expect that reducing the weight of medium-duty trucks similarly would, if anything, have a positive impact on safety. However, given the large difference in weight between light-duty vehicles and medium-duty trucks, and even larger difference between light-duty vehicles and heavy-duty vehicles with loads, the agencies believe that the impact of weight reductions of medium- and heavy-duty trucks would not have a noticeable impact on safety for any of these classes of vehicles.

However, the agencies recognize that it is important to conduct further study and research into the interaction of mass, size and safety to assist future rulemakings, and we expect that the collaborative interagency work currently on-going to address this issue for the light-duty vehicle context may also be able to inform our evaluation of safety effects for the final HD vehicle rules. We seek comment regarding potential safety effects due to weight reduction in the HD vehicle context, with particular emphasis on commenters providing supporting data and research for HD vehicle weight reduction.

(5) Effects of the Proposal on Safety

Among all of the fuel efficiency improving technologies the agencies believe may be needed to achieve the proposed standards, NHTSA believes that tires are the only technology that might affect safety. For loaded trucks, there is little of no weather related (wet road) safety issue with reduced tire rolling resistance because of the high loads on the contact patch and high surface area of the contact patch. Within a fairly broad range (for rubber compounds) the tread material selection makes little difference in stopping distance for fully-loaded trucks. For unloaded trucks there can be a safety effect. On the other hand, tire manufacturers have introduced LRR steer and drive tires that perform very well, usually with more expensive materials and processes. High tensile steel wire constructions can make a carcass that is lighter without sacrificing strength. New grades of carbon black and other reinforcing fillers continue to be developed that lower weight and/or hysteresis without sacrificing other properties. With a cost increase, tires can be made lighter and tires can be made with lower rolling resistance without sacrificing safety. While the design of the body or carcass of tires does affect rolling resistance, because of market demands, it is unlikely that manufacturers of tires are going to make significant changes to the body or carcass of the tire that would affect safety. NHTSA is close to issuing an NPRM on an upgrade to FMVSS No. 119 for heavy truck tires that may result in better carcass construction.

Related to effects of the proposal on retread tires, the NPRM only regulates original equipment (new vehicle) tires. The proposed rules would not regulate replacement or retread tires. The only way the rules would affect retreading of tires is if the original equipment body or carcass is modified to improve rolling resistance. Again, because of market demands, it is unlikely that manufacturers of tires are going to make significant changes to the body or carcass of the tire that would affect safety. Although not regulated by this proposal, the tread used for retreaded tires can be made with lower rolling resistance without sacrificing safety at a cost, if the market demands it.

The agency seeks comments on the safety effects of LRR tires for trucks.

K. Summary of Costs and Benefits From the Greenhouse Gas Emissions Perspective

As noted in Section VIII.A, the primary motivations of this proposal are improved energy security and GHG emissions reductions in the United States. From that perspective, the benefits of the proposal are the external effects, and the net effects on truck owners and operators are the costs. In this section, the agencies present a summary of costs, benefits, and net benefits of the proposal. Section VIII.L presents the benefits and costs from the perspective that the motivation of the program is to improve fuel efficiency.

Table VIII–24 shows the estimated annual monetized costs of the proposed program for the indicated calendar years. The table also shows the net present values of those costs for the calendar years 2012–2050 using both 3 percent and 7 percent discount rates.[417] In this table, the aggregate value of fuel savings is calculated using pre-tax fuel prices since savings in fuel taxes do not represent a reduction in the value of economic resources utilized in producing and consuming fuel. Note that fuel savings shown here result from reductions in fleet-wide fuel use. Thus, they grow over time as an increasing fraction of the fleet meets the 2018 standards.

[426] "Final Regulatory Impact Analysis, Corporate Average Fuel Economy for MY 2012–MY 2016 Passenger Cars and Light Trucks", NHTSA, March 2010, (Docket No. NHTSA–2009–0059–0344.1).

[417] For the estimation of the stream of costs and benefits, we assume that after implementation of the proposed MY 2014–2017 standards, the 2017 standards apply to each year out to 2050.

Table VIII-24: Estimated Monetized Costs of the Proposed Program (Millions of 2008 dollars)[a]

	2020	2030	2040	2050	NPV, Years 2012-2050, 3% Discount Rate	NPV, Years 2012-2050, 7% Discount Rate
Technology Costs	$2,000	$1,900	$2,200	$2,500	$42,100	$22,500
Fuel Savings (pre-tax)	-$8,100	-$19,000	-$28,100	-$35,400	-$352,300	-$152,600
Monetized Annual Costs	-$6,100	-$17,100	-$25,900	-$32,900	-$310,200	-$130,100

Note:

[a] Technology costs and fuel savings for separate truck segments can be found in Section 8.3.

Table VIII–25 presents estimated annual monetized benefits for the indicated calendar years. The table also shows the net present values of those benefits for the calendar years 2012–2050 using both 3 percent and 7 percent discount rates. The table shows the benefits of reduced CO_2 emissions—and consequently the annual quantified benefits (*i.e.*, total benefits)—for each of four SCC values estimated by the interagency working group. As discussed in the RIA Section 8.5, there are some limitations to the SCC analysis, including the incomplete way in which the integrated assessment models capture catastrophic and non-catastrophic impacts, their incomplete treatment of adaptation and technological change, uncertainty in the extrapolation of damages to high temperatures, and assumptions regarding risk aversion.

In addition, these monetized GHG benefits exclude the value of net reductions in non-CO_2 GHG emissions (CH_4, N_2O, HFC) expected under this proposal. Although EPA has not monetized the benefits of reductions in non-CO_2 GHGs, the value of these reductions should not be interpreted as zero. Rather, the net reductions in non-CO_2 GHGs will contribute to this proposal's climate benefits, as explained in Section VI.C.

Table VIII-25: Monetized Benefits Associated with the Proposed Program (Million 2008 dollars)

	2020	2030	2040	2050	NPV, Years 2012-2050, 3% Discount Rate[a]	NPV, Years 2012-2050, 7% Discount Rate[a]
Reduced CO_2 Emissions at each assumed SCC value[b]						
5% (avg SCC)	$200	$700	$1,200	$1,700	$8,600	$8,600
3% (avg SCC)	$900	$2,300	$3,600	$4,900	$44,000	$44,000
2.5% (avg SCC)	$1,500	$3,500	$5,300	$7,100	$74,600	$74,600
3% (95th percentile)	$2,800	$7,100	$10,800	$14,800	$134,100	$134,100
Energy Security Impacts (price shock)	$500	$1,100	$1,500	$1,800	$19,800	$8,700
Accidents, Congestion, Noise	-$200	-$400	-$500	-$600	-$7,500	-$3,400
Refueling Savings	$100	$100	$200	$200	$2,500	$1,100
Non-CO_2 GHG Impacts and Non-GHG Impacts[c,d]	n/a	n/a	n/a	n/a	n/a	n/a
Total Annual Benefits at each assumed SCC value[b]						
5% (avg SCC)	$600	$1,500	$2,400	$3,100	$23,400	$15,000
3% (avg SCC)	$1,300	$3,100	$4,800	$6,300	$58,800	$50,400
2.5% (avg SCC)	$1,900	$4,300	$6,500	$8,500	$89,400	$81,000
3% (95th percentile)	$3,200	$7,900	$12,000	$16,200	$148,900	$140,500

Notes:

[a] Net present value of reduced CO_2 emissions is calculated differently than other benefits. The same discount rate used to discount the value of damages from future emissions (SCC at 5, 3, 2.5 percent) is used to calculate net present value of SCC for internal consistency. Refer to the SCC TSD for more detail.

[b] Section VIII.G notes that SCC increases over time. Corresponding to the years in this table, the SCC estimates range as follows: for Average SCC at 5%: $5-$16; for Average SCC at 3%: $22-$46; for Average SCC at 2.5%: $36-$66; and for 95th percentile SCC at 3%: $66-$139. *See* Section VIII.F.

[c] The monetized GHG benefits presented in this analysis exclude the value of changes in non-CO_2 GHG emissions expected under this proposal (S*ee* RIA Chapter 5). Although EPA has not monetized changes in non-CO_2 GHGs, the value of any increases or reductions should not be interpreted as zero.

[d] Non-GHG-related health and welfare impacts (related to $PM_{2.5}$ and ozone exposure) were not estimated for this proposal, but will be included in the analysis of the final rulemaking.

Table VIII–26 presents estimated annual net benefits for the indicated calendar years. The table also shows the net present values of those net benefits for the calendar years 2012–2050 using both 3 percent and 7 percent discount rates. The table includes the benefits of reduced CO_2 emissions (and consequently the annual net benefits) for each of four SCC values considered by EPA.

Table VIII-26: Monetized Net Benefits Associated with the Proposed Program (Million 2008 dollars)

	2020	2030	2040	2050	NPV, 3%[a]	NPV, 7%[a]
Total Annual Costs[b]						
Total Annual Costs	-$6,1000	-$17,100	-$25,900	-$32,900	-$310,200	-$130,100
Total Annual Benefits at each assumed SCC value[c]						
5% (avg SCC)	$600	$1,500	$2,400	$3,100	$23,400	$15,000
3% (avg SCC)	$1,300	$3,100	$4,800	$6,300	$58,800	$50,400
2.5% (avg SCC)	$1,900	$4,300	$6,500	$8,500	$89,400	$81,000
3% (95th percentile)	$3,200	$7,900	$12,000	$16,200	$148,900	$140,500
Monetized Net Benefits at each assumed SCC value[c]						
5% (avg SCC)	$6,7000	$18,600	$28,300	$36,000	$333,600	$145,100
3% (avg SCC)	$7,400	$20,200	$30,700	$39,200	$369,000	$180,500
2.5% (avg SCC)	$8,000	$21,400	$32,400	$41,400	$399,600	$211,100
3% (95th percentile)	$9,300	$25,000	$37,900	$49,100	$459,100	$270,600

Notes:

[a] Net present value of reduced CO_2 emissions is calculated differently than other benefits. The same discount rate used to discount the value of damages from future emissions (SCC at 5, 3, 2.5 percent) is used to calculate net present value of SCC for internal consistency. Refer to the SCC TSD for more detail.

[b] Negative costs represent savings.

[c] Section VIII.G notes that SCC increases over time. Corresponding to the years in this table, the SCC estimates range as follows: for Average SCC at 5%: $5-$16; for Average SCC at 3%: $22-$46; for Average SCC at 2.5%: $36-$66; and for 95th percentile SCC at 3%: $66-$139. Section VIII.G also presents these SCC estimates.

EPA also conducted a separate analysis of the total benefits over the model year lifetimes of the 2014 through 2018 model year trucks. In contrast to the calendar year analysis presented above in Table VIII–24 through Table VIII–26, the model year lifetime analysis below shows the impacts of the proposed program on vehicles produced during each of the model years 2014 through 2018 over the course of their expected lifetimes. The net societal benefits over the full lifetimes of vehicles produced during each of the five model years from 2014 through 2018 are shown in Table VIII–27 and Table VIII–28 at both 3 percent and 7 percent discount rates, respectively.

Table VIII-27: Monetized Costs, Benefits, and Net Benefits Associated with the Lifetimes of 2014-2018 Model Year Trucks (Millions of 2008 dollars; 3% Discount Rate)

	2014 MY	2015 MY	2016 MY	2017 MY	2018 MY	Sum
Technology	-$1,300	-$1,300	-$1,500	-$1,600	-$2,000	-$7,700
Fuel Savings (pre-tax)	$6,100	$6,400	$7,200	$10,700	$11,900	$42,300
Energy Security Impacts (price shock)	$400	$400	$400	$600	$700	$2,500
Accidents, Congestion, Noise	-$300	-$300	-$300	-$300	-$300	-$1,400
Refueling Savings	$200	$200	$200	$200	$200	$1,100
Non-CO_2 GHG Impacts and Non-GHG Impacts [c,d]	n/a	n/a	n/a	n/a	n/a	n/a
Reduced CO_2 Emissions at each assumed SCC value [a, b]						
5% (avg SCC)	$200	$200	$200	$300	$300	$1,200
3% (avg SCC)	$600	$600	$700	$1,000	$1,200	$4,100
2.5% (avg SCC)	$1,000	$1,000	$1,100	$1,600	$1,800	$6,500
3% (95th percentile)	$1,900	$2,000	$2,200	$3,200	$3,500	$12,800
Monetized Net Benefits at each assumed SCC value [a, b]						
5% (avg SCC)	$5,300	$5,600	$6,200	$9,900	$10,800	$38,000
3% (avg SCC)	$5,700	$6,000	$6,700	$10,600	$11,700	$40,900
2.5% (avg SCC)	$6,100	$6,400	$7,100	$11,200	$12,300	$43,300
3% (95th percentile)	$7,000	$7,400	$8,200	$12,800	$14,000	$49,600

Notes:

[a] Net present value of reduced CO_2 emissions is calculated differently than other benefits. The same discount rate used to discount the value of damages from future emissions (SCC at 5, 3, 2.5 percent) is used to calculate net present value of SCC for internal consistency. Refer to the SCC TSD for more detail.

[b] Section VIII.G notes that SCC increases over time. Corresponding to the years in this table, the SCC estimates range as follows: for Average SCC at 5%: $5-$16; for Average SCC at 3%: $22-$46; for Average SCC at 2.5%: $36-$66; and for 95th percentile SCC at 3%: $66-$139. Section VIII.G also presents these SCC estimates.

[c] The monetized GHG benefits presented in this analysis exclude the value of changes in non-CO_2 GHG emissions expected under this proposal (see RIA Chapter 5). Although EPA has not monetized changes in non-CO_2 GHGs, the value of any increases or reductions should not be interpreted as zero.

[d] Non-GHG-related health and welfare impacts (related to $PM_{2.5}$ and ozone exposure) were not estimated for this proposal, but will be included in the analysis of the final rulemaking.

Table VIII-28: Monetized Costs, Benefits, and Net Benefits Associated with the Lifetimes of 2014-2018 Model Year Trucks (Millions of 2008 dollars; 7% Discount Rate)

	2014 MY	2015 MY	2016 MY	2017 MY	2018 MY	Sum
Technology	-$1,300	-$1,300	-$1,500	-$1,600	-$2,000	-$7,700
Fuel Savings (pre-tax)	$4,500	$4,500	$4,900	$7,000	$7,500	$28,400
Energy Security Impacts (price shock)	$300	$300	$300	$400	$400	$1,700
Accidents, Congestion, Noise	-$200	-$200	-$200	-$200	-$200	-$900
Refueling Savings	$200	$200	$200	$200	$200	$900
Non-CO_2 GHG Impacts and Non-GHG Impacts [c,d]	n/a	n/a	n/a	n/a	n/a	n/a
Reduced CO_2 Emissions at each assumed SCC value [a, b]						
5% (avg SCC)	$200	$200	$200	$300	$300	$1,200
3% (avg SCC)	$600	$600	$700	$1,000	$1,200	$4,100
2.5% (avg SCC)	$1,000	$1,000	$1,100	$1,600	$1,800	$6,500
3% (95th percentile)	$1,900	$2,000	$2,200	$3,200	$3,500	$12,800
Monetized Net Benefits at each assumed SCC value [a, b]						
5% (avg SCC)	$3,700	$3,700	$3,900	$6,100	$6,200	$23,600
3% (avg SCC)	$4,100	$4,100	$4,400	$6,800	$7,100	$26,500
2.5% (avg SCC)	$4,500	$4,500	$4,800	$7,400	$7,700	$28,900
3% (95th percentile)	$5,400	$5,500	$5,900	$9,000	$9,400	$35,200

Notes:

[a] Net present value of reduced CO_2 emissions is calculated differently than other benefits. The same discount rate used to discount the value of damages from future emissions (SCC at 5, 3, 2.5 percent) is used to calculate net present value of SCC for internal consistency. Refer to the SCC TSD for more detail.

[b] Section VIII.G notes that SCC increases over time. Corresponding to the years in this table, the SCC estimates range as follows: for Average SCC at 5%: $5-$16; for Average SCC at 3%: $22-$46; for Average SCC at 2.5%: $36-$66; and for 95th percentile SCC at 3%: $66-$139. Section VIII.G also presents these SCC estimates.

[c] The monetized GHG benefits presented in this analysis exclude the value of changes in non-CO_2 GHG emissions expected under this proposal (see RIA Chapter 5). Although EPA has not monetized changes in non-CO_2 GHGs, the value of any increases or reductions should not be interpreted as zero.

[d] Non-GHG-related health and welfare impacts (related to $PM_{2.5}$ and ozone exposure) were not estimated for this proposal, but will be included in the analysis of the final rulemaking.

L. Summary of Costs and Benefits From the Fuel Efficiency Perspective

The purpose of a program to regulate fuel efficiency is primarily to save fuel, as compared to the purpose of a program to regulate GHG emissions, which is primarily to reduce the impact of climate change. Considering costs and benefits from a fuel efficiency perspective, technology costs occur when the vehicle is purchased, just as they do from a GHG emissions perspective, but fuel savings would be counted as benefits that occur over the lifetime of the vehicle as it consumes less fuel, rather than as negative costs that would be experienced either at the time of purchase or over the lifetime of the vehicle. Tables VIII–29 and VIII–30 show the same estimates as provided in Tables VIII–27 and VIII–28, but with the categories relabeled to illustrate the fuel efficiency perspective.

Table VIII-29 Monetized Costs, Benefits, and Net Benefits Associated with the Lifetimes of 2014-2018 Model Year Trucks (Millions of 2008 dollars; 3% Discount Rate)

	2014 MY	2015 MY	2016 MY	2017 MY	2018 MY	Sum
Technology Costs	$1,300	$1,300	$1,500	$1,600	$2,000	$7,700
Benefits						
Fuel Savings (pre-tax)	$6,100	$6,400	$7,200	$10,700	$11,900	$42,300
Energy Security Impacts (price shock)	$400	$400	$400	$600	$700	$2,500
Accidents, Congestion, Noise	-$300	-$300	-$300	-$300	-$300	-$1,400
Refueling Savings	$200	$200	$200	$200	$200	$1,100
Non-CO_2 GHG Impacts and Non-GHG Impacts [c,d]	n/a	n/a	n/a	n/a	n/a	n/a
Reduced CO_2 Emissions at each assumed SCC value [a, b]						
5% (avg SCC)	$200	$200	$200	$300	$300	$1,200
3% (avg SCC)	$600	$600	$700	$1,000	$1,200	$4,100
2.5% (avg SCC)	$1,000	$1,000	$1,100	$1,600	$1,800	$6,500
3% (95th percentile)	$1,900	$2,000	$2,200	$3,200	$3,500	$12,800
Monetized Net Benefits at each assumed SCC value [a, b]						
5% (avg SCC)	$5,300	$5,600	$6,200	$9,900	$10,800	$38,000
3% (avg SCC)	$5,700	$6,000	$6,700	$10,600	$11,700	$40,900
2.5% (avg SCC)	$6,100	$6,400	$7,100	$11,200	$12,300	$43,300
3% (95th percentile)	$7,000	$7,400	$8,200	$12,800	$14,000	$49,600

Notes:

[a] Net present value of reduced CO_2 emissions is calculated differently than other benefits. The same discount rate used to discount the value of damages from future emissions (SCC at 5, 3, 2.5 percent) is used to calculate net present value of SCC for internal consistency. Refer to the SCC TSD for more detail.

[b] Section VIII.G notes that SCC increases over time. Corresponding to the years in this table, the SCC estimates range as follows: for Average SCC at 5%: $5-$16; for Average SCC at 3%: $22-$46; for Average SCC at 2.5%: $36-$66; and for 95th percentile SCC at 3%: $66-$139. Section VIII.G also presents these SCC estimates.

[c] The monetized GHG benefits presented in this analysis exclude the value of changes in non-CO_2 GHG emissions expected under this proposal (see RIA Chapter 5). Although EPA has not monetized changes in non-CO_2 GHGs, the value of any increases or reductions should not be interpreted as zero.

[d] Non-GHG-related health and welfare impacts (related to $PM_{2.5}$ and ozone exposure) were not estimated for this proposal, but will be included in the analysis of the final rulemaking.

Table VIII-30 Monetized Costs, Benefits, and Net Benefits Associated with the Lifetimes of 2014-2018 Model Year Trucks (Millions of 2008 dollars; 7% Discount Rate)

	2014 MY	2015 MY	2016 MY	2017 MY	2018 MY	Sum
Technology Costs	$1,300	$1,300	$1,500	$1,600	$2,000	$7,700
Benefits						
Fuel Savings (pre-tax)	$4,500	$4,500	$4,900	$7,000	$7,500	$28,400
Energy Security Impacts (price shock)	$300	$300	$300	$400	$400	$1,700
Accidents, Congestion, Noise	-$200	-$200	-$200	-$200	-$200	-$900
Refueling Savings	$200	$200	$200	$200	$200	$900
Non-CO_2 GHG Impacts and Non-GHG Impacts [c,d]	n/a	n/a	n/a	n/a	n/a	n/a
Reduced CO_2 Emissions at each assumed SCC value [a, b]						
5% (avg SCC)	$200	$200	$200	$300	$300	$1,200
3% (avg SCC)	$600	$600	$700	$1,000	$1,200	$4,100
2.5% (avg SCC)	$1,000	$1,000	$1,100	$1,600	$1,800	$6,500
3% (95th percentile)	$1,900	$2,000	$2,200	$3,200	$3,500	$12,800
Monetized Net Benefits at each assumed SCC value [a, b]						
5% (avg SCC)	$3,700	$3,700	$3,900	$6,100	$6,200	$23,600
3% (avg SCC)	$4,100	$4,100	$4,400	$6,800	$7,100	$26,500
2.5% (avg SCC)	$4,500	$4,500	$4,800	$7,400	$7,700	$28,900
3% (95th percentile)	$5,400	$5,500	$5,900	$9,000	$9,400	$35,200

Notes:

[a] Net present value of reduced CO_2 emissions is calculated differently than other benefits. The same discount rate used to discount the value of damages from future emissions (SCC at 5, 3, 2.5 percent) is used to calculate net present value of SCC for internal consistency. Refer to the SCC TSD for more detail.

[b] Section VIII.G notes that SCC increases over time. Corresponding to the years in this table, the SCC estimates range as follows: for Average SCC at 5%: $5-$16; for Average SCC at 3%: $22-$46; for Average SCC at 2.5%: $36-$66; and for 95th percentile SCC at 3%: $66-$139. Section VIII.G also presents these SCC estimates.

[c] The monetized GHG benefits presented in this analysis exclude the value of changes in non-CO_2 GHG emissions expected under this proposal (see RIA Chapter 5). Although EPA has not monetized changes in non-CO_2 GHGs, the value of any increases or reductions should not be interpreted as zero.

[d] Non-GHG-related health and welfare impacts (related to $PM_{2.5}$ and ozone exposure) were not estimated for this proposal, but will be included in the analysis of the final rulemaking.

IX. Analysis of Alternatives

The heavy-duty truck segment is very complex. The sector consists of a diverse group of impacted parties, including engine manufacturers, chassis manufacturers, truck manufacturers, trailer manufacturers, truck fleet owners and the air breathing public. The proposal the agencies have laid out today is largely shaped to maximize the environmental and fuel savings benefits of the program respecting the unique and varied nature of the regulated industries. In developing this proposal, we considered a number of alternatives that could have resulted in fewer or potentially greater GHG and fuel consumption reductions than the program we are proposing. This section summarizes the alternatives we considered and presents assessments of technology costs, CO2 reductions, and fuel savings associated with each alternative. The agencies request comments on all of these alternatives, including whether a specific alternative could achieve greater net benefits than the preferred alternative, either for all regulatory categories, or for any individual regulatory category. The agencies also request comments on whether any specific additional analyses could provide information that could further inform the selection among alternatives for the final rule.

A. What are the alternatives that the agencies considered?

In developing alternatives, NHTSA must consider EISA's requirement for the MD/HD fuel efficiency program noted above. 49 U.S.C. 32902(k)(2) and (3) contain the following three requirements specific to the MD/HD vehicle fuel efficiency improvement program: (1) The program must be "designed to achieve the maximum feasible improvement"; (2) the various

required aspects of the program must be appropriate, cost-effective, and technologically feasible for MD/HD vehicles; and (3) the standards adopted under the program must provide not less than four model years of lead time and three model years of regulatory stability. In considering these various requirements, NHTSA will also account for relevant environmental and safety considerations.

Each of the alternatives proposed by NHTSA and EPA represents, in part, a different way the agencies could establish a HD program pursuant to EISA and the CAA. The agencies are proposing Alternative 6. The alternatives below represent a broad range of approaches under consideration for setting proposed HD vehicle fuel efficiency and GHG emissions standards. A simplified table describing the alternatives is included in Table IX–1, in Section IX. A. (9) below. The alternatives that the agencies are proposing, in order of increasing fuel efficiency and GHG emissions reductions, are:

(1) Alternative 1: No Action

A "no action" alternative assumes that the agencies would not issue rules regarding a MD/HD fuel efficiency improvement program, and is considered to comply with the National Environmental Policy Act (NEPA) and to provide an analytical baseline against which to compare environmental impacts of the other regulatory alternatives.[418] The agencies refer to this as the "No Action Alternative" or as a "no increase" or "baseline" alternative.

(2) Alternative 2: Engine Only

The EPA currently regulates heavy-duty engines, *i.e.*, engine manufacturers, rather than the vehicle as a whole, in order to control criteria emissions.[429] Under Alternative 2, the agencies would similarly set engine performance standards for each vehicle class, Class 2b through Class 8, and would specify an engine cell test procedure, as EPA currently does for criteria pollutants. HD engine manufacturers would be responsible for ensuring that each engine could meet the applicable vehicle class engine performance standard when tested in accordance with the specified engine cell test procedure. Engine manufacturers could improve HD engines by applying the combinations of fuel efficiency improvements and GHG emissions reduction technologies to the engine that they deem best achieve that result.

(3) Alternative 3: Class 8 Combination Tractors

Combination tractors consume the largest fraction of fuel within the heavy-duty truck segment. Tractors also offer significant potential for fuel savings due to the high annual mileage and high vehicle speed of typical trucks within this segment, as compared to annual mileage and average speeds/duty cycles of other vehicle categories. This alternative would set performance standards for both the engine of Class 8 vehicles and the overall vehicle efficiency performance for the Class 8 combination tractor segment. Under Alternative 3, the agencies would set an engine performance standard, as discussed under Alternative 2, for Class 8 tractors. In addition, Class 8 combination tractor manufacturers would be required to meet an overall vehicle performance standard by making various non-engine fuel saving technology improvements. These non-engine fuel efficiency and GHG emissions improvements could be accomplished, for example, by a combination of improvements to aerodynamics, lowering tire rolling resistance, decreasing vehicle mass (weight), reducing fuel use at idle, or by adding intelligent vehicle technologies.[430] Compliance with the overall vehicle standard could be determined using a computer model that would simulate overall vehicle fuel efficiency given a set of vehicle component inputs. Using this compliance approach, the Class 8 vehicle manufacturer would supply certain vehicle characteristics (relating to the categories of technologies noted immediately above) that would serve as model inputs. The agency would supply a standard Class 8 vehicle engine's contribution to overall vehicle efficiency, making the engine component a constant for purposes of compliance with the overall vehicle performance standard, such that compliance with the overall vehicle standard could only be achieved via efficiency improvements to non-engine vehicle components. Thus, vehicle manufacturers could make any combination of improvements of the non-engine technologies that they believe would best achieve the Class 8 overall vehicle performance standard.

(4) Alternative 4: Engines and Class 7 and 8 Tractors

This alternative combines Alternative 2 with Alternative 3, and additionally would set an overall vehicle efficiency performance standard for Class 7 tractors. This alternative would, thus, set standards for all HD engines and would set overall vehicle performance standards for Class 7 and 8 tractors, as described for Class 8 combination tractors under Alternative 3. Class 7 tractors make up a small percent of the tractor market, approximately 9 percent.[431] Though the segment is currently small, the agencies believe the inclusion of this subcategory of vehicles would help prevent a potential class shifting, as noted in the NAS panel report.[432]

(5) Alternative 5: Engines, Class 7 and 8 Tractors, and HD Pickup Trucks and Vans

This alternative builds on Alternative 4 through the addition of an overall vehicle efficiency performance standard for HD Pickup Trucks and Vans (or work trucks). Therefore, under this alternative, the agencies would set engine performance standards for each HD vehicle class, and would also set overall vehicle performance standards for Class 7 and 8 tractors, as well as for HD Pickup Trucks and Vans. Compliance for the HD pickup trucks and vans would be determined through a fleet averaging process similar to determining passenger car and light truck compliance with CAFE standards.

(6) Alternative 6: Engines, Tractors, and Class 2b Through 8 Trucks

Alternative 6 represents the agencies' preferred approach. This alternative would set engine efficiency standards, engine GHG emissions standards,

[418] NEPA requires agencies to consider a "no action" alternative in their NEPA analyses and to compare the effects of not taking action with the effects of the reasonable action alternatives to demonstrate the different environmental effects of the action alternatives. See 40 CFR 1502.2(e) and 1502.14(d). CEQ has explained that "[T]he regulations require the analysis of the no action alternative even if the agency is under a court order or legislative command to act. This analysis provides a benchmark, enabling decision makers to compare the magnitude of environmental effects of the action alternatives. It is also an example of a reasonable alternative outside the jurisdiction of the agency which must be analyzed. (See 40 CFR 1502.14(c).) * * * Inclusion of such an analysis in the EIS is necessary to inform Congress, the public, and the President as intended by NEPA. (See 40 CFR 1500.1(a).) "Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations," 46 FR 18026 (emphasis added).

[429] There are several reasons for this approach. In many cases the engine and chassis are produced by different manufacturers and it is more efficient to hold a single entity responsible. Also, testing an engine cell is more accurate and repeatable than testing a whole vehicle.

[430] *See* the NAS Report, Note 111, above, at Chapter 5, for discussions of the potential fuel efficiency improvement technologies that can be applied to each of these vehicle components.

[431] MJ Bradley. Heavy-duty Vehicle Market Analysis. May 2009.

[432] *See* NAS Report, Note 111, above, at page 152.

overall vehicle fuel efficiency standards, and overall vehicle GHG emissions standards for HD pickup trucks and vans and the remaining Class 2b through Class 8 vehicles and the engines installed in them. This alternative essentially sets fuel efficiency and GHG emissions performance standards for both the engines and the overall vehicles in the entire heavy-duty truck sector. Compliance with each vehicle category's engine performance standard would be determined as discussed in the description of Alternative 2. Compliance with the tractor and vocational vehicle categories' overall vehicle performance standard (Class 2b through 8 vehicles) would be determined as discussed in the description of Alternative 3. Compliance for the HD pickup trucks and vans as described in Alternative 5.

The agencies also evaluated two scenarios related to Alternative 6 but with stringency levels which were 20 percent more and less stringent. These alternatives are referred to as Alternatives 6a and 6b. The agencies welcome comment on other approaches to develop and present additional stringency alternatives.

(a) Alternative 6a: Engines, Tractors, and Class 2b Through 8 Trucks

Alternative 6a represents an alternative stringency level to the agencies' preferred approach. Like Alternative 6, this alternative would set GHG emissions and fuel efficiency standards for HD pickup trucks and vans and for Class 2b through 8 vocational vehicles and combination tractors and the engines installed in them. The difference between Alternative 6 and 6a is the level of stringency for each of the proposed standards. Alternative 6a represents a stringency level which is approximately15 percent less stringent than the preferred approach. The agencies calculated the stringency level in order to meet two goals. First, we desired to create an alternative that was closely related to the proposal (within 10–20 percent of the preferred alternative). Second, we wanted an alternative that reflected removal of the last technology we believed manufacturers would add in order to meet the preferred alternative. In other words, we wanted an alternative that as closely as possible reflected the last increment in stringency prior to reaching our preferred alternative. In general, this could be thought of as removing the least cost effective (final) step. The resulting Alternative 6a is based on the same technologies used in Alternative 6 except as follows:

- Combination tractor standard would be based removal of the Advanced SmartWay aerodynamic package and weight reduction technologies which reduces the average combination tractor savings by approximately 1 percent;
- HD pickup truck and van standard would be based on removal of aerodynamics which reduces the average truck savings by approximately 2 percent; and
- Vocational vehicle standard would be based on removal of low rolling resistant tires which reduces the average vehicle savings by approximately 2 percent.

(b) Alternative 6b: Engines, Tractors, and Class 2b Through 8 Trucks

Alternative 6b represents an alternative stringency level to the agencies' preferred approach. Like Alternative 6, this alternative would set GHG emissions and fuel efficiency standards for HD pickup trucks and vans and for Class 2b through 8 vocational vehicles and combination tractors and the engines installed in them. The difference between Alternative 6 and 6b is the level of stringency for each of the proposed standards. Alternative 6b represents a stringency level which is approximately 20 percent more stringent than the preferred approach. The agencies calculated the stringency level based on similar goals as for Alternative 6a. Specifically, we wanted an alternative that would reflect an incremental improvement over the preferred alternative based on the technologies we thought most likely to be applied by manufacturers if a more stringent standard were set. In general, this could be thought of as adding the next most cost effective technology in each of the categories. However, as discussed in the feasibility discussions in Section III, we are not proposing this level of stringency because we do not believe that these technologies can be developed and introduced in the timeframe of this rulemaking. Reflecting that given unlimited resources it might be possible to introduce these technologies in this timeframe, but our inability to estimate what those real costs might be (*e.g.* to build new factories in only one to two years), we have denoted the cost for this alternative with a +c. The +c is intended to make clear that the cost estimates we are showing do not include additional costs related to pulling ahead the development and expanding manufacturing base for these technologies. The resulting Alternative 6b is based on the same technologies used in Alternative 6 except as follows:

- Combination tractor standard would be based on the addition of Rankine waste heat recovery to the HD engines installed in combination tractors with sleeper cabs;
- HD pickup truck and van standard would be based on the addition of a 10 percent mass reduction; and
- Vocational vehicle standard would be based on the addition hybrid powertrains to 8 percent of the vehicles.

(7) Alternative 7: Engines, Tractors, Trucks, and Trailers

This alternative builds on Alternative 6 by adding a performance standard for fuel efficiency and GHG emissions of commercial trailers. Therefore, this alternative would include fuel efficiency performance standards and GHG emissions standards for Class 2b and 3 work truck and Class 3 through Class 8 vocational vehicle engines, and the performance standards for the overall fuel efficiency and GHG emissions of those vehicles, as described above.

(8) Alternative 8: Engines, Tractors, Trucks, and Trailers Plus Advanced Hybrid Powertrain Technology for Vocational Vehicles, Pickups, and Vans

Alternative 8 includes all elements of Alternative 7, plus sets standards based on the application of hybrid powertrains to heavy-duty pickup trucks, vans, and vocational vehicles. The application of hybrids is capped at 10,000 units annually for model years 2014–2016 (more than double the industry's sales projections for 2010) and increases to 50 percent of new vehicles in those categories starting in 2017, or approximately 650,000 hybrid powertrain units annually. The agencies do not believe that it is possible to achieve hybrid technology penetration rates at or even near these levels in the timeframe of this rulemaking. However, we believe it is useful to consider what a future standard based on the use of such advanced technologies could achieve. Similarly, we cannot, with confidence, project the cost of doing so in this timeframe. Nevertheless for the purpose of evaluating what additional benefits could be achieved if such a program were possible, we believe this Alternative 8 is useful for consideration. The assumed standard and commensurate fuel consumption and emission reductions for this alternative are based on a 25 percent reduction in CO_2 and fuel consumption with the application of hybrid powertrain technology. The actual benefit realized through the application of hybrid

technology is highly dependent on vehicle drive cycle and can vary significantly between different applications. The 25 percent reduction assumed here is based on the estimate of the NAS panel for a hybrid refuse truck.[433] Although the agencies are not able to conclude that this alternative is technically feasible and therefore potentially appropriate to be finalized as a regulatory requirement, we have made an estimate of the cost for this approach based on the estimates from the NAS report. Specifically we are assuming an incremental cost of $30,000 per vehicle for vocational vehicles based again on the NAS estimate for a refuse truck and an incremental cost of $9,000 per vehicle for HD pickup trucks and vans. As with Alternative 6b, we include a +c in our cost estimates for this alternative to reflect additional costs not estimated by the agencies.

(9) Summary of Alternatives

A summary of the combination of vehicles regulated under each proposed alternative is included in Table IX–1.

Table IX-1: Summary of Alternatives

Approach	Vehicle Category	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	Alt. 8
Engines	Cl. 2b-8	-	●	Cl. 8 Only	●	●	●	●	●
Vehicles	Pickups and Vans	-				●	●	●	●
	Cl. 2b-8 Vocational Vehicles	-					●	●	●
	Cl. 7-8 Tractors	-		Cl. 8 Only	●	●	●	●	●
Trailers								●	●

B. How do these alternatives compare in overall GHG emissions reductions, fuel efficiency and cost?

The agencies analyzed all ten alternatives through MOVES to evaluate the impact of each proposed alternative, as shown in Table IX–2. The table contains the annual CO_2 and fuel savings in 2030 and 2050 for each alternative (relative to the reference scenario of Alternative 1), presenting both the total savings across all regulatory categories, and for each regulatory category. Table IX–3 presents the annual technology costs associated with each alternative (relative to the reference scenario of Alternative 1) in 2030 and 2050 for each regulatory category. In addition, the net benefits for each alternative in 2030 and 2050 are included in Tables IX–4 and IX–5, respectively. The agencies request comment on whether any of these alternatives could achieve greater net benefits than the preferred alternative, either for all regulatory categories, or for any individual regulatory category.

In analyzing the marginal economic impact of each of the alternatives relative to one another, or relative to the preferred Alternative 6, various potentially relevant time frames and frames of reference for analysis could be employed. For example, it may be relevant to consider the impacts of an alternative not only in 2030 and 2050, but also in 2020. Likewise, it may be relevant to consider not just total annual impacts on the entire fleet in a given year, but also the NPV impacts on the specific MY vehicles that are to be directly regulated in this rulemaking (*i.e.* MY 2014–2018). The agencies also request comments on the time frames of (*e.g.* 2014–2018, 2030, or 2050), and frames of reference for, economic analyses of alternatives that commenters believe are relevant in evaluating the incremental impact of the agencies' preferred alternative 6, relative to the other alternative examined.

[433] *See* NAS Report, Note 111 above, at 77.

Table IX-2: Annual CO_2 and Oil Savings in 2030 and 2050

	Downstream CO_2 Savings (MMT)		Oil Savings (billion gallons)	
	2030	2050	2030	2050
Alt. 1	0	0	0	0
Alt. 2 – Total	29	46	2.9	4.6
Tractors	19	27	1.8	2.6
HD Pickup Trucks	4	7	0.4	0.7
Vocational Vehicles	6	13	0.6	1.2
Alt. 3 – Total	35	50	3.4	4.9
Tractors	35	50	3.4	4.9
HD Pickup Trucks	0	0	0	0
Vocational Vehicles	0	0	0	0
Alt. 4 – Total	50	76	5.0	7.5
Tractors	40	57	3.9	5.6
HD Pickup Trucks	4	7	0.4	0.7
Vocational Vehicles	6	13	0.6	1.2
Alt. 5 – Total	54	82	5.4	8.2
Tractors	40	57	3.9	5.6
HD Pickup Trucks	8	13	0.8	1.3
Vocational Vehicles	6	13	0.6	1.2
Alt. 6a – Total	52	79	5.1	7.8
Tractors	39	56	3.8	5.5
HD Pickup Trucks	7	11	0.7	1.1
Vocational Vehicles	6	13	0.6	1.2
Preferred – Total	58	91	5.8	9.0
Tractors	40	57	3.9	5.6
HD Pickup Trucks	8	13	0.8	1.3
Vocational Vehicles	10	21	1.0	2.1
Alt. 6b – Total	68	107	6.7	10.6
Tractors	46	65	4.5	6.4
HD Pickup Trucks	9	15	1.0	1.6
Vocational Vehicles	13	27	1.3	2.6
Alt. 7 – Total	62	96	6.1	9.5
Tractors	40	57	3.9	5.6
HD Pickup Trucks	8	13	0.8	1.3
Vocational Vehicles	10	21	1.0	2.1
Trailers	4	5	0.4	0.5
Alt. 8 – Total	86	142	8.4	14.2
Tractors	40	57	3.9	5.6
HD Pickup Trucks	16	25	1.6	2.7
Vocational Vehicles	26	55	2.5	5.4
Trailers	4	5	0.4	0.5

Table IX-3: Technology Cost Projections for the Alternatives

	Technology costs (2008$ millions)	
	2030	2050
Alt. 1	$0	$0
Alt. 2 – Total	$532	$749
Tractors	$119	$157
HD Pickup Trucks	$235	$273
Vocational Vehicles	$178	$319
Alt. 3 – Total	$708	$938
Tractors	$708	$938
HD Pickup Trucks	$0	$0
Vocational Vehicles	$0	$0
Alt. 4 – Total	$1,155	$1,574
Tractors	$742	$982
HD Pickup Trucks	$235	$273
Vocational Vehicles	$178	$319
Alt. 5 – Total	$1,882	$2,420
Tractors	$742	$982
HD Pickup Trucks	$962	$1,119
Vocational Vehicles	$178	$319
Alt. 6a – Total	$1,592	$2,041
Tractors	$487	$645
HD Pickup Trucks	$927	$1,078
Vocational Vehicles	$178	$319
Preferred – Total	$1,945	$2,537
Tractors	$742	$982
HD Pickup Trucks	$962	$1,119
Vocational Vehicles	$241	$436
Alt. 6b – Total [a]	$4,984+c	$7,575+c
Tractors	$1,375+c	$1,819+c
HD Pickup Trucks	$1,301+c	$1,514+c
Vocational Vehicles	$2,307+c	$4,241+c
Alt. 7 – Total	$2,885	$3,740
Tractors	$742	$982
HD Pickup Trucks	$962	$1,119
Vocational Vehicles	$241	$436
Trailers	$910	$1,203
Alt. 8 – Total	$35,477 +c	$59,000+c
Tractors	$742	$982
HD Pickup Trucks	$7,760 +c	$8,809+c
Vocational Vehicles	$26,065+c	$48,006+c
Trailers	$910	$1,203

Notes:
[a] "+c" indicates additional costs not estimated in this proposal.

Table IX-4: Monetized Net Benefits Associated with Each Alternative in 2030 (Million 2008 dollars)

	Alt.1	Alt.2	Alt.3	Alt.4	Alt.5	Alt.6a	Alt.6	Alt.6b	Alt.7	Alt.8
Technology Costs [e]	$0	-$500	-$700	-$1,200	-$1,900	-$1,600	-$1,900	-$5,000 +c	-$2,900	-$35,500 +c
Fuel Savings (pre-tax)	$0	$9,400	$11,300	$16,400	$17,600	$16,800	$19,000	$22,100	$20,100	$27,700
Energy Security Impacts (price shock)	$0	$600	$700	$1,000	$1,000	$1,000	$1,100	$1,300	$1,200	$1,600
Accidents, Congestion, Noise	$0	-$200	-$200	-$300	-$400	-$400	-$400	-$500	-$400	-$600
Refueling Savings	$0	$70	$60	$110	$130	$120	$100	$170	$150	$230
Non-CO_2 GHG Impacts and Non-GHG Impacts [c,d]	$0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Reduced CO_2 Emissions at each assumed SCC value [a, b]										
5% (avg SCC)	$0	$300	$400	$600	$600	$600	$700	$800	$700	$1,000
3% (avg SCC)	$0	$1,200	$1,400	$2,000	$2,200	$2,100	$2,300	$2,700	$2,500	$3,400
2.5% (avg SCC)	$0	$1,800	$2,100	$3,100	$3,300	$3,200	$3,500	$4,200	$3,800	$5,200
3% (95th percentile)	$0	$3,600	$4,300	$6,200	$6,600	$6,400	$7,100	$8,300	$7,600	$10,400
Monetized Net Benefits at each assumed SCC value [a, b]										
5% (avg SCC)	$0	$9,700	$11,600	$16,600	$17,000	$16,500	$18,600	n/a	$18,900	n/a
3% (avg SCC)	$0	$10,600	$12,600	$18,000	$18,600	$18,000	$20,200	n/a	$20,700	n/a
2.5% (avg SCC)	$0	$11,200	$13,300	$19,100	$19,700	$19,100	$21,400	n/a	$22,000	n/a
3% (95th percentile)	$0	$13,000	$15,500	$22,200	$23,000	$22,300	$25,000	n/a	$25,800	n/a

Notes:

[a] Net present value of reduced CO_2 emissions is calculated differently than other benefits. The same discount rate used to discount the value of damages from future emissions (SCC at 5, 3, 2.5 percent) is used to calculate net present value of SCC for internal consistency. Refer to the SCC TSD for more detail.

[b] Section VIII.G notes that SCC increases over time. Corresponding to the years in this table, the SCC estimates range as follows: for Average SCC at 5%: $5-$16; for Average SCC at 3%: $22-$46; for Average SCC at 2.5%: $36-$66; and for 95th percentile SCC at 3%: $66-$139. Section VIII.G also presents these SCC estimates.

[c] The monetized GHG benefits presented in this analysis exclude the value of changes in non-CO_2 GHG emissions expected under this proposal (see RIA Chapter 5). Although EPA has not monetized changes in non-CO_2 GHGs, the value of any increases or reductions should not be interpreted as zero.

[d] Non-GHG-related health and welfare impacts (related to $PM_{2.5}$ and ozone exposure) were not estimated for this proposal, but will be included in the analysis of the final rulemaking.

[e] "+c" indicates additional costs not estimated in this proposal.

Table IX-5: Monetized Net Benefits Associated with Each Alternative in 2050 (Million 2008 dollars)

	Alt.1	Alt.2	Alt.3	Alt.4	Alt.5	Alt.6a	Alt.6	Alt.6b	Alt.7	Alt.8
Technology Costs [e]	$0	-$700	-$900	-$1,600	-$2,400	-$2,000	-$2,500	-$7,600 +c	-$3,700	-$59,000 +c
Fuel Savings (pre-tax)	$0	$17,900	$19,000	$29,500	$32,000	$30,600	$35,400	$41,500	$37,200	$55,200
Energy Security Impacts (price shock)	$0	$900	$1,000	$1,500	$1,700	$1,600	$1,800	$2,200	$1,900	$2,900
Accidents, Congestion, Noise	$0	-$300	-$300	-$500	-$500	-$500	-$600	-$700	-$600	-$900
Refueling Savings	$0	$120	$90	$180	$200	$190	$200	$270	$240	$410
Non-CO_2 GHG Impacts and Non-GHG Impacts [c,d]	$0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Reduced CO_2 Emissions at each assumed SCC value [a, b]										
5% (avg SCC)	$0	$900	$900	$1,400	$1,600	$1,500	$1,700	$2,000	$1,800	$2,700
3% (avg SCC)	$0	$2,500	$2,700	$4,100	$4,500	$4,300	$4,900	$5,800	$5,200	$7,700
2.5% (avg SCC)	$0	$3,600	$3,900	$6,000	$6,500	$6,200	$7,100	$8,400	$7,500	$11,100
3% (95th percentile)	$0	$7,600	$8,100	$12,500	$13,600	$13,000	$14,800	$17,600	$15,800	$23,300
Monetized Net Benefits at each assumed SCC value [a, b]										
5% (avg SCC)	$0	$18,800	$19,800	$30,500	$32,600	$31,400	$36,000	n/a	$36,800	n/a
3% (avg SCC)	$0	$20,400	$21,600	$33,200	$35,500	$34,200	$39,200	n/a	$40,200	n/a
2.5% (avg SCC)	$0	$21,500	$22,800	$35,100	$37,500	$36,100	$41,500	n/a	$42,500	n/a
3% (95th percentile)	$0	$25,500	$27,000	$41,600	$44,600	$42,900	$49,300	n/a	$50,800	n/a

Notes:

[a] Net present value of reduced CO_2 emissions is calculated differently than other benefits. The same discount rate used to discount the value of damages from future emissions (SCC at 5, 3, 2.5 percent) is used to calculate net present value of SCC for internal consistency. Refer to the SCC TSD for more detail.

[b] Section VIII.G notes that SCC increases over time. Corresponding to the years in this table, the SCC estimates range as follows: for Average SCC at 5%: $5-$16; for Average SCC at 3%: $22-$46; for Average SCC at 2.5%: $36-$66; and for 95th percentile SCC at 3%: $66-$139. Section VIII.G also presents these SCC estimates.

[c] The monetized GHG benefits presented in this analysis exclude the value of changes in non-CO_2 GHG emissions expected under this proposal (see RIA Chapter 5). Although EPA has not monetized changes in non-CO_2 GHGs, the value of any increases or reductions should not be interpreted as zero.

[d] Non-GHG-related health and welfare impacts (related to $PM_{2.5}$ and ozone exposure) were not estimated for this proposal, but will be included in the analysis of the final rulemaking.

[e] "+c" indicates additional costs not estimated in this proposal.

C. How would the agencies include commercial trailers, as described in alternative 7?

A central theme throughout our proposed HD Program is the recognition of the diversity and complexity of the heavy-duty vehicle segment. Trailers are an important part of this segment and are no less diverse in the range of functions and applications they serve. They are the primary vehicle for moving freight in the United States. The type of freight varies from retail products to be sold in stores, to bulk goods such as stones, to industrial liquids such as chemicals, to equipment such as bulldozers. Semi-trailers come in a large variety of styles—box, refrigerated box, flatbed, tankers, bulk, dump, grain, and many others. The most common type of trailer is the box trailer, but even box trailers come in many different lengths ranging from 28 feet to 53 feet or greater,

and in different widths, heights, depths, materials (wood, composites, and/or aluminum), construction (curtain side or hard side), axle configuration (sliding tandem or fixed tandem), and multiple other distinct features. NHTSA and EPA believe trailers impact the fuel consumption and CO_2 emissions from combination tractors and the agencies see opportunities for reductions. Unlike trucks and engines, EPA and NHTSA have very limited experience related to regulating trailers for fuel efficiency or emissions. Likewise, the trailer manufacturing industry has only the most limited experience complying with regulations related to emissions and none with regard to EPA or NHTSA certification and compliance procedures. We have therefore decided not to propose regulations for trailers in this proposal. However in order to broadly solicit comments on controlling fuel efficiency and GHG emissions through trailer regulations we are describing in an advanced notice of proposed regulation style a program which could set the foundation of a future rulemaking for trailers. We are soliciting comments on all aspects of the information shared in this section.

(1) Why are the agencies considering the regulation of trailers?

Trailers impact the aerodynamic drag, rolling resistance, and overall weight of the combination tractor-trailer. TIAX, LLC performed an evaluation of SmartWay trailer technologies, and found that they provide the opportunity to reduce fuel consumption and greenhouse gas emissions from tractor trailers by up to 10 to 12 percent for aerodynamics and 3 to 6 percent for lower rolling resistance tires.[434] Reductions of this magnitude are larger than can be readily accomplished from improvements in engine design and are roughly of the same magnitude as reductions possible through improvements in truck designs. Not only do trailers represent a significant opportunity for reductions as discussed later in this section, but we have strong reason to believe that these reductions would not occur absent regulation as noted in the recent NAS report.

The NAS report notes:

> A perplexing problem for any option, regarding Class 8 vehicles, is what to do about the trailer. The trailer market represents a clear barrier with split incentives, where the owner of the trailer often does not incur fuel costs, and thus has no incentive to improve aerodynamics of the trailer itself or to improve the integration of the trailer with the tractor or truck.[435]

In other words, trailers affect the fuel efficiency of shipping, but they do not face strong uniform incentives to coordinate with truck owners. In principle, if truck owners had the ability to choose what trailers they accepted, they could require trailers with fuel-saving technologies; in practice, though, truck owners have limited practical ability to be selective about what trailers they accept.

In this setting, information provision may be inadequate to address the related problems of split incentives and thin markets. Regulation aimed at trailer manufacturers can contribute fuel savings and GHG reductions that otherwise may be difficult to achieve.

(2) What does the trailer industry look like?

(a) Trailer Types

The commercial trailer market includes a wide variety of trailer types. The market is dominated by box (or van) trailers, which made up approximately 63 percent of the new trailers registered between 2003 and 2007.[436] The top ten new trailer registrations are included by type are listed in Table IX–6.

Table IX-6: Trailer Registrations

Trailer Type	Percentage of Registrations (2003-2007)[437]
Box	63%
Flatbed (Platform)	8%
Container Chassis	7%
Refrigerated Van	5%
Dump	3%
Grain	2%
Flatbed Drop Deck	2%
Tank	1%
Lowbed	1%
Livestock	1%

The remaining 6.5percent of the trailer registrations consisted of livestock, transfer, hazardous chemical tanks, hoppers, gooseneck livestock, lowbed drop deck, beverage, special, dry bulk tanker, logging, wood chip, and other types of trailers. Within each of these main trailer categories there are distinctions among trailer construction, materials, dimension, mass, and functionality, all of which can impact a trailer's contribution to truck fuel consumption and greenhouse gas emissions.

(b) Trailer Fleet Size Relative to the Tractor Fleet

The industry generally recognizes that the ratio of the number of trailers in the fleet relative to the number of tractors is typically three-to-one.[438] Typically at any one time, two trailers are parked while one is being transported. For

[434] TIAX. Assessment of Fuel Economy Technologies for Medium- and Heavy-Duty Vehicles. November 2009. Pages 4–50 and 4–57.

[435] *See* NAS Report, Note 111, above, at p. 8–8.

[436] *See* MJ Bradley, Note 431.

[437] *See*MJ Bradley, Note 431.

[438] *See* TIAX at Note 434 above, at p. 4–49.

certain private fleets, this ratio can be greater, as high as six-to-one. This characteristic of the fleet impacts the cost effectiveness of trailer technologies because a trailer on average will only travel one third of the miles travel ed by a tractor.

(c) Trailer Owners

Trailer ownership is distinct from that of the tractors. Trailers are often owned by shippers or by leasing companies, not by the trucking fleets. A special type of "trailer" is a shipping container used for intermodal surface movement to transport freight from ocean going liner vessels to inland destinations via truck, rail or barge. When hauled by a truck, the container is loaded on a specialty piece of equipment called a "chassis." This consists of a frame and axle/wheel assemblies on which the container is mounted, so that when the chassis and container are assembled the unit serves the same function as a road trailer (per 46 CFR 340.2). Container chassis are sometimes owned by specialty companies and are leased to ports, fleets, and shippers. Trailers that are purchased by fleets are typically kept much longer than are the tractors, so trucks and trailers have different purchasing cycles. Because of the disconnect between owners, the trailer owners may not benefit directly from fuel consumption and GHG emission reductions.

(d) Trailer Builders

The top ten builders with the largest market share of trailer sales in 2009 include Utility Trailer Manufacturing, Great Dane, Wabash National, Hyundai Translead, Timpte, Wilson Trailer, Stoughton Trailers, Heil Trailer, Fontaine Trailer, and MANAC.[439] However, nearly half of all trailer manufacturers are considered small businesses by the Small Business Administration definition.[440] Therefore, the agencies will be required to convene a Small Business Regulatory Enforcement Fairness Act (SBREFA) panel to conduct the proper outreach to all stakeholders impacted by a proposed regulation for trailers.

Although trailer manufacturing is an important sector within the commercial vehicle manufacturing industry, trailers are far less mechanically complex than are the trucks that haul them. This means that trailer manufacturing has a low barrier to entry compared to automotive or truck manufacturers. The agencies can envision that proposed regulation would require significant effort to maintain a level playing field within the market to reduce the incentive to work around the regulation.

(3) What technologies are available to reduce fuel consumption and GHG emissions from trailers?

There are opportunities to reduce the fuel consumption and GHG emissions impact of the trailer through aerodynamics, tires, and tare weight reductions to some extent in most types of trailers. In addition, refrigerated trailers have opportunities to both reduce the fuel consumption and CO_2 emissions of the transportation refrigeration unit and reduce GHG emissions through reduced refrigerant leakage. There are additional opportunities being developed for improvements in suspension systems, trailer structure, dump hoists and other features, depending upon the type of trailer and its intended function.

(a) Aerodynamics

Trailer aerodynamic technologies to date have focused on the box, van trailers—the largest segment of the trailer fleet. This focus on box, van trailers may also be partially attributed to the complexity of the shape of the non-box, van trailers which, in many cases, transport cargo that is in the windstream (*e.g.,* flatbeds that carry heavy equipment, car carriers, and loggers). For non-box, van trailers you could have a different aerodynamic shape with every load. While some technologies exist to address aerodynamic drag for non-box, van trailers, it has been either experimental or not widely commercially available.

Current trailer aerodynamic technologies for box trailers are estimated to provide approximately 10–12 percent reductions in drag when used as a package.[441] For box trailers, trailer aerodynamic technologies have addressed drag at the front of the trailer (*i.e.,* vortex traps, leading edge fairings), underneath the trailer (*i.e.,* side skirts, wheel fairings) and the trailer rear (*i.e.,* afterbodies). These technologies are commercially available and have seen moderate adoption rates. More recent trailer aerodynamic innovations channel air flow around the sides and under the trailer using underbody air deflectors ("underbelly treatment"). Table IX–7 lists technologies that the EPA SmartWay program has evaluated for use on box, van trailers. In general, the performance of these technologies is dependent upon the smooth transition of airflow from the tractor to the trailer. Overall shape can be optimized to minimize trailer aerodynamic drag, just as shape can reduce tractor aerodynamic drag.

[439] Trailer-Body Builders.com. 2009 North American Truck Trailer Output. Available at *http://trailer-bodybuilders.com/trailer-output/output/2009_trailer_output_table/.*

[440] Per SBA definition for NAICS 336212, companies with less than 500 employees are considered small businesses.

[441] *See* TIAX at Note 434, above, at 4–50.

Table IX-7: Aerodynamic Technologies for Trailers

Location on Trailer	Technology Type	Designed Effect
Front	Vortex trap	Reduce drag induced by cross-flow through gap between tractor and trailer
Front	Front fairings	Smoothly transition air to flow from tractor to the trailer
Rear	Afterbody (boat tail and rear fairings)	Reduce pressure drag induced by the trailer wake
Undercarriage	Side skirts	Manage flow of air underneath tractor to reduce eddies and wake
Undercarriage	Underbelly treatment	Manage flow of air underneath tractor to reduce eddies and wake
Accessories	General	Reducing surface area perpendicular to travel and minimizing complex shapes that may induce drag
General	Advanced, passive air management	Manage airflow through passive aerodynamic shapes or devices that keep flow attached to the vehicle (tractor and trailer)

The agencies' initial assessment of the incremental costs of aerodynamics is included in Table IX–8. The costs represent a high volume retail price of the components based on information developed for the NAS report [442] and the ICF cost contract.[443]

Table IX-8: Aerodynamic Technology Costs

Technology	Cost Estimate
Trailer Side Skirts	$1300 - 1600
Gap Fairing	$850
Trailer Aerocone	$1,000
Boat Tails	$1960
Air Tabs	$180

Some of these technologies, such as side skirts, may be applicable to other trailer types. The agencies are interested in comments regarding the aerodynamic improvement opportunities in all types of trailers.

(b) Tires

The rolling resistance coefficient baseline for today's fleet is 6.5 kg/ton for the trailer tire, based on sales weighting of the top three manufacturers based on market share. This value is based on new trailer tires, since rolling resistance decreases as the tread wears. To achieve the intended emissions benefit, SmartWay established the maximum allowable rolling resistance coefficient for the trailer tire 15% below the baseline or 5.5 kg/ton. Similar to combination tractor tires, LRR tires are available as either dual tires or as single wide-base tires for trailers.

Research indicates the contribution to overall vehicle fuel efficiency by tires is approximately equal to the proportion of the vehicle weight on them.[444] On a fully loaded typical Class 8 long-haul tractor and trailer, 42.5 percent of the total tire energy loss attributed to rolling resistance is from the trailer tires. The TIAX assessment of single wide based tires on the trailer found that they provide approximately a 3 percent fuel consumption benefit over a standard dual tire package.[445]

Based on the ICF report,[446] EPA and NHTSA estimate the incremental retail cost for LRR tires as $78 per tire. The agencies also estimate that the incremental cost to replace a pair of dual tires with a single wide based tire is $216, however, the cost can be reduced when the wheel replacement cost is considered, since half the number of tires and wheels are needed.

The inflation pressure of tires also impacts the rolling resistance.

[442] *See* TIAX, Note 434 above.

[443] ICF. Investigation of Costs for Strategies to Reduce Greenhouse Gas Emissions for Heavy-Duty On-Road Vehicles. July 2010. Page 96.

[444] Bridgestone Firestone, North American Tire, LLC. "Tires & Truck Fuel Economy," A New Perspective. Special Edition Four, 2008

[445] *See* TIAX, Note 434 above, at p. 4–56.

[446] *See* ICF, Note 443, above.

Underinflation causes an increase in rolling resistance and fuel consumption. Trailer systems, such as tire pressure monitoring or automatic tire inflation, can help drivers insure that they are traveling with properly inflated tires. Estimates vary, but TIAX estimates on average that a trailer automatic tire inflation system could provide a 0.6% benefit to fuel consumption for a cost of approximately $300 to $400.[447]

(c) Weight Reduction

Reduction in trailer tare (or empty) weight can lead to fuel efficiency reductions in two ways. For applications which are not limited by the weight limit, the overall weight of the tractor and trailer combination would be reduced and would lead to improved fuel efficiency. For the applications which limit the payload due to the weight restrictions, the lower trailer weight would allow additional payload to be transported during the truck's trip. Weight reduction opportunities in trailers exist in both the structural components and in the wheels and tires. Material substitution (replacing steel with aluminum) is feasible for components such as roof posts, bows, side posts, cross members, floor joists, and floors. Similar material substitution is feasible for wheels. Weight reduction opportunities also exist through the use of single wide based tires replacing two dual tires.

The agencies' assessment of the ICF report[448] indicates that the expected incremental retail prices of the lightweighted components are as included in Table IX–9: Trailer Lightweighting Costs.

Table IX-9: Trailer Lightweighting Costs

Component	Cost
Roof Posts/Bows	$120
Side Posts	$525
Cross Members/Floor Joists	$400
Floor	$1,500
Wheels	$1,500

(d) Opportunities in Refrigerated Trailers

Refrigeration units are used in van trailers to transport temperature sensitive products. A traditional transportation refrigeration unit is powered by a nonroad diesel engine. There are GHG reduction opportunities in refrigerated trailers through the use of electrical trailer refrigeration units and highly reflective trailer coatings.

Highly reflective materials, such as reflective paints or translucent white fiberglass roofs, can reflect the solar radiation and decrease the cooling demands on the trailer's refrigeration unit. A reflective composite roof can cost approximately $800, the addition of reflective tape to a trailer roof would cost approximately $450.

Hybrid trailer refrigeration units utilize a diesel engine which drives a generator which in turn powers the compressor and fans. The cost of this unit is approximately $4,000.

(4) What approaches could the agencies propose for evaluating fuel efficiency and GHG emissions contributions from trailers?

Building from EPA's SmartWay experience, EPA and NHTSA have considered several options to demonstrate GHG and fuel consumption reductions from trailer technologies. The agencies welcome comments on the testing approaches describe below or alternative recommendations.

(a) Metric

There are several metrics that the agencies envision could be appropriate used to evaluate the fuel consumption and CO_2 emissions due to trailers. The agencies are proposing the use of a ton-mile metric with a prescribed payload for the vocational vehicle and tractor regulatory categories and subcategories. A similar approach could be applied to trailer evaluation, which would account for aerodynamic improvements, tire improvements, and trailer lightweighting. However, a ton-mile metric does not necessarily capture the capacity aspect of trailers. Box trailers provide benefits to freight efficiency through an increase in either cubic volume or pallet-equivalent. Certain box van trailers including drop frame moving van trailers and high cube trailers are specially designed to maximize cubic capacity. The agencies welcome comments regarding the appropriate metric for trailer efficiency demonstration.

(b) Potential Approaches to Evaluate GHG Emissions and Fuel Consumption Reducing Technologies

(i) Design-Based Specification Approach

The SmartWay certification for tractors and dry box van trailers began as a design-based specification, developed on the basis of test results for APUs, and engines that have been demonstrated to improve fuel efficiency and reduce emissions.

(ii) Modeling Approach

As the agencies are proposing for the evaluation of tractors and vocational vehicles, a similar simulation model approach could also be applied to trailers. A simulation-based model would require the trailer manufacturer input parameters similar to the ones proposed in the tractor program—coefficient of drag, tire rolling resistance, and weight. The agencies envision that a standardized tractor would be required to fairly assess the tractor-trailer system. Both agencies have years of successful experience with vehicle simulation modeling. EPA, DOE, DOT, Commerce and others used vehicle simulation modeling to jumpstart technology scenarios for the Partnership for a New Generation of Vehicles Program, a large public-private research program aimed at developing advanced fuel-efficient passenger vehicle designs. Those same agencies used vehicle simulation modeling for a similar purpose in the 21st Century Truck Partnership, a sister program to develop advanced fuel-efficient commercial truck designs. EPA used vehicle simulation modeling to characterize various technology scenarios for its initial design of the

[447] See TIAX, Note 434 above, at p. 4–58.

[448] *See* ICF, Note 443, above.

SmartWay program and to conduct analyses on its test data, test cycles, and related data. This experience has demonstrated to the technical staff at EPA and DOT that vehicle simulation modeling can be a reliable and feasible tool to assess vehicle performance. EPA and NHSTA welcome comments from trailer manufacturers on their ability to run simulation models and evaluate the aerodynamics of the trailers which they produce.

(iii) Whole Vehicle Testing—Chassis, Track or On-Road Test

Complete vehicle testing is commonly conducted on chassis dynamometers, tracks, or on the road. Light-duty vehicles are tested on chassis dynamometers to demonstrate compliance with EPA and NHTSA regulations associated with emissions and fuel efficiency, respectively. Heavy-duty truck manufacturers often use paired truck test, such as prescribed in SAE J1321,[449] to evaluate the difference between two trucks. The current SmartWay verification program allows for a modified SAE J1321 test to be used to evaluate the fuel consumption performance of trailers due to improvements in aerodynamic design. Heavy-duty truck fleets today commonly use long term on-road testing to evaluate trucks, trailers, and technologies.

A chassis dynamometer test is a test conducted indoors on a hydrokinetic chassis dynamometer. The chassis dynamometer option in this test procedure incorporates many of the methods and requirements established in the Federal light-duty vehicle and 'light' heavy-duty vehicle emissions certification chassis test procedure. Chassis dynamometers may be found at vehicle test laboratories; typically, facilities used for emissions and vehicle fuel efficiency testing. Because the test is conducted on a chassis dynamometer, rolling resistance, aerodynamic drag and inertial road load power requirements must be determined ahead of time, with coastdown tests and calculations to determine the proper horsepower absorption setting for the chassis dynamometer.

A track test is a complete vehicle test conducted on an outside test track. Test tracks may be found at vehicle proving grounds or other facilities specifically designed for vehicle or tire performance testing. Because the test involves the vehicle being operated on a road surface in a manner similar to that of on-road driving, rolling resistance, aerodynamic drag, and inertial road load power requirements are incorporated in the test measurement, and do not have to be determined beforehand with a coastdown test and calculations. Although the result of a track test reflects real-world vehicle performance better than a chassis dynamometer test, by directly evaluating the impacts of road effects such as aerodynamic drag of tractors and trailers and rolling resistance effects of tires, variability of ambient conditions may result in greater variability of test results.[450] Therefore, any protocol should include specification of ambient conditions as well as specifications for measurement of fuel consumption.

The TMC/SAE Fuel Consumption test is a standardized on-road test procedure for comparing the in-service fuel consumption of two conditions of a test vehicle or one test vehicle to another.[451] The procedure uses an unchanging control vehicle run in tandem with the test vehicle. The result of the test is the percent difference in fuel consumption between two test vehicles.

The agencies are interested in comments regarding the advantages and disadvantages of each approach, along with any baseline trailer performance.

(5) What actions are already being taken to improve the efficiency of trailers?

(a) SmartWay Certified Trailers

Beginning in 2007, EPA began designating certain new dry freight box van trailers for on the road use of 53 feet or greater length Certified SmartWay Trailers. Older or pre-owned trailers could also be certified if properly retrofitted. In order for a trailer to be designated as Certified SmartWay, the trailer must be equipped with aerodynamic devices such as trailer skirts and gap reducers along with verified LRR trailer tires (either dual or single-wide). Trailer manufacturers can also test trailers using a modified J1321 test method to assess the fuel-saving impact of the aerodynamic features. Trailers that meet or exceed the minimum threshold for reduction in fuel consumption and that are equipped with SmartWay-verified LRR tires are eligible for SmartWay designation. Information about SmartWay certified trailers, the test methods, and verified trailer equipment is at the U.S. EPA SmartWay Web site, *http://www.epa.gov/smartway*.

(b) California AB32

The California requirement to reduce GHG emissions from trailers became effective in 2010.[452] It requires that all new 2011 model year dry van trailers are SmartWay certified or demonstrate a 5 percent aerodynamic and a 1.5 percent tire improvement. Compliance is demonstrated through the use of SmartWay certified components or a SAE paired-truck test to demonstrate improvements. California is also requiring retrofit of existing van trailers phasing in starting in 2011. Information on the California program can be found at the California Air Resources Board Web site, *http://www.arb.ca.gov/cc/hdghg/hdghg.htm.*

(6) Why are the agencies delaying regulation and what are the next steps for trailer regulation?

It is the intent of both agencies to take advantage of available and very near-term technologies to achieve early reductions in greenhouse gas emissions and fuel consumption. As noted above, President Obama requested both agencies to coordinate to create a first-ever National Policy to increase fuel efficiency and decrease greenhouse gas pollution from medium- and heavy-duty trucks for model years 2014–2018. To meet the goals within the time frame outlined by the President in his directive, EPA and DOT are moving expeditiously to develop these proposed regulations as outlined in this proposal.

The expertise of each agency's technical and regulatory staff, along with critical input from the SmartWay program, industry and other key stakeholders, make it feasible to propose regulations covering commercial heavy-duty trucks within this time frame. However, both EPA and NHTSA recognize, along with the NAS, the diversity and complexity of the trailer industry. There are dozens of trailer types, dozens of trailer manufacturing entities, and several diverse trailer end user groups. In addition to the challenge of addressing these multiple complexities, unlike many other vehicle sectors, this is an industry that has never before been subject to either emissions or fuel economy regulation.

Additionally, since a number of trailer manufacturing entities are small businesses, EPA and NHTSA need to allow sufficient time to convene a

[449] Society of Automotive Engineers. Joint TMC/SAE Fuel Consumption Test Procedure—Type II. SAE J1321. October 1986.

[450] However, it has been demonstrated that even tests conducted in laboratories have differences in repeatability within a given laboratory and differences in reproducibility among laboratories. See "Interlaboratory Crosscheck of Heavy-duty Vehicle Chassis Dynamometers" Final Report Coordinating Researth Council Project No. E–55–1, May 2002.

[451] See SAE, Note 449, above.

[452] California Air Resources Board. Available at *http://www.arb.ca.gov/regact/2008/ghghdv08/ghghdv08.htm*, accessed September 17, 2010.

SBREFA panel to conduct the proper outreach to the potentially impacted stakeholders.

Therefore, EPA and NHTSA propose to follow their proposals for heavy-duty truck regulations with a proposal for regulating trailers, at a future date to be determined after both agencies conduct a more comprehensive assessment of the topics discussed in this section. EPA and NHTSA welcome comment on delaying proposing trailer regulations and on related topics that might affect the timing of such a proposal.

X. Recommendations From the 2010 NAS Report

A. Overview

One of the most important resources for the agencies in developing the HD National Program was the report produced by the National Academy of Sciences in response to Congress' mandate in EISA. Section 108 of EISA states that DOT (by delegation, NHTSA) must execute an agreement with the NAS "to develop a report evaluating MD/HD truck fuel economy standards, including:

(1) An assessment of technologies and costs to evaluate fuel economy for MD/HD trucks;

(2) An analysis of existing and potential technologies that may be used practically to improve MD/HD truck fuel economy;

(3) An analysis of how such technologies may be practically integrated into the MD/HD truck manufacturing process;

(4) An assessment of how such technologies may be used to meet fuel economy standards to be prescribed under 49 U.S.C. 32902(k); and

(5) Associated costs and other impacts on the operation of MD/HD trucks, including congestion.

EISA further states that the NAS must submit the report to DOT, the Senate Committee on Commerce, Science, and Transportation, and the House Committee on Energy and Commerce not later than one year after the date on which the Secretary executed the agreement with the NAS. NAS requested and was granted an additional six months to complete its report, so based on the date of execution of the ultimate agreement, the deadline for the NAS report was determined to be March 2010.

The NRC Committee to Assess Fuel Economy Technologies for Medium- and Heavy-Duty Vehicles was formed to fulfill the contract between NHTSA and the NAS.[453] Interpreting the tasks listed in Section 108 of EISA, NAS directed the committee to:

- Consider approaches to measuring fuel economy for medium- and heavy-duty vehicles that would be required for setting standards;
- Assess current and potential technologies and estimate improvements in fuel economy for medium-duty and heavy-duty trucks that might be achieved;
- Address how the technologies identified in the task above may be used practically to improve medium-duty and heavy-duty truck fuel economy;
- Address how such technologies may be practically integrated into the medium-duty and heavy-duty truck manufacturing process;
- Assess how such technologies may be used to meet fuel economy standards;
- Discuss the pros and cons of approaches to improving the fuel efficiency of moving goods as opposed to setting vehicle fuel economy standards; and
- Identify the potential costs and other impacts on the operation of medium-duty and heavy-duty trucks.[454]

The final publication of the NAS Report "Technologies and Approaches to Reducing the Fuel Consumption of Medium- and Heavy-Duty Vehicles" (the "NAS Report") was made available to the public in September 2010.[455] Although the NAS Report was developed and written in terms of reducing fuel consumption, its findings and recommendations apply equally to a program that reduces GHG emissions, given the close relationship between the two.

B. What were the major findings and recommendations of the 2010 NAS Report, and how is the proposed HD National Program consistent with them?

The 2010 NAS Report spanned eight chapters and several hundred pages, with dozens of major findings and recommendations. While this preamble refers frequently throughout to the various NAS findings and recommendations as it explains the HD National Program, this particular section is designed to provide the reader with a quick reference guide to the findings and recommendations and the extent to which the agencies' proposed program is consistent with them. The significant majority of NAS' findings and recommendations have been implemented directly by the agencies. Generally speaking, to the extent that the proposed HD National Program diverges from the NAS recommendations, it is often due to differences in the agencies' approach as compared to NAS' expectations for a HD regulatory program, which the agencies think are necessary and beneficial in order to obtain the greatest GHG and fuel consumption reductions as rapidly as possible, and to facilitate the transition for the industry to a more holistic regulatory system over a longer timeframe.

Instead of discussing the NAS Report findings and recommendations in the order presented in the Report itself, as is done in the NHTSA Study accompanying this NPRM, this section divides the NAS findings and recommendations into three categories: findings and recommendations with which (1) the HD National Program is consistent; (2) the HD National Program is significantly inconsistent; and (3) the HD National Program is less-significantly inconsistent.

(1) NAS Findings and Recommendations With Which the Proposed HD National Program Is Consistent

(a) What metrics should be employed for regulating fuel consumption/GHG emissions?

With the light-duty fuel economy and GHG regulations as a backdrop, the NAS committee considered the difference between fuel *economy* (a measure of how far a vehicle will go on a gallon of fuel) and fuel *consumption* (the inverse measure, of how much fuel is consumed in driving a given distance) as potential metrics for MD/HD regulations.[456] Noting the non-linear nature of fuel economy—*e.g.,* that more fuel can be saved by increasing fuel economy from 14 to 16 mpg than from 30 to 32 mpg—and its potential to confuse consumers, the committee concluded that fuel economy would not be a good metric for judging the fuel efficiency of a vehicle, and stated that it would use fuel *consumption* throughout the report instead.[457]

However, because MD/HD vehicles are designed to carry loads in an efficient and timely manner, as opposed to light-duty vehicles which are generally used simply for carrying passengers, the committee suggested

[453] Committee to Assess Fuel Economy Technologies for Medium- and Heavy-Duty Vehicles; National Research Council; Transportation Research Board (2010). "Technologies and Approaches to Reducing the Fuel Consumption of Medium- and Heavy-Duty Vehicles," ("NAS Report"), at page 9. Washington, DC, The National Academies Press. Contract DTNH22–08–H–00222. Available electronically from the National Academy Press Web site at *http://www.nap.edu/catalog.php?record_id=12845* (last accessed September 10, 2010).

[454] *See* Note 453 above, at 10.

[455] *Id.*

[456] *See* Note 453 above, at 20 through 25.

[457] *Id.* at 24.

that normalizing the fuel consumption to the payload that the vehicle hauls would be the best way to represent an appropriate attribute-based fuel consumption metric.[458] The committee identified this metric as Load-Specific Fuel Consumption (LSFC), defined as fuel consumption on a given cycle (in gallons/100 miles), divided by payload (in tons).[459] The committee thus recommended that any HD fuel consumption regulation use LSFC as the metric and be based on using an average (or typical) payload based on national data representative of the classes and duty cycle of the vehicle.[460] The committee noted that standards might require different values of LSFC due to the various functions of the vehicle classes, *e.g.,* pickup trucks versus utility trucks versus line-haul trucks.[461] The committee stated that any data reporting or labeling should state an LSFC at specified tons of payload.[462]

The agencies agree that the appropriate metric for regulating HD vehicle GHG emissions and fuel consumption is one tied to the vehicle's task and reflects the work done by the vehicle. Thus, the agencies have employed different metrics in developing the proposed standards in this NPRM, as follows:

The metric for HD engines is grams of CO_2 per brake horsepower-hour and gal/100 bhp-hr, which normalizes CO_2 emissions and fuel consumption based on work done.

The metric for Class 7 and 8 combination tractors is grams of CO_2 per ton-mile and gal/1,000 ton-mile, which normalizes CO_2 emissions and fuel consumption based on the work done in transporting payload.

The metric for vocational vehicles is also grams of CO_2 per ton-mile and gal/1,000 ton-mile, which normalizes CO_2 emissions and fuel consumption based on work done.

The metric for HD pickup trucks and vans is grams of CO_2 per mile and gal/100 mi. While these metrics are not normalized by payload, standards are based on the work done by the vehicles in that the standards are vehicle attribute based and a function of payload capacity and towing capacity (and whether two-wheel drive or four-wheel drive).

In establishing measurement driving cycles and vehicle load settings, the agencies carefully review reviewed available data and selected cycles and vehicle load settings that are judged to be most representative of national average use.

Thus, as NAS recommended, the agencies are proposing separate standards with different metrics—all based on consideration of the tasks vehicles perform and the work they do, which is consistent with the LSFC concept—for different categories of vehicles.

The agencies have no plan to require fuel consumption labeling, or to publish values for individual vehicles. Because of the broad range of actual vehicle use, including the range of payloads carried, driving cycles and road terrain, and recognizing that, for individual vehicles, engines, transmission ratios, final drive ratios and tire sizes are selected based on intended use, the agencies judge that a label or published fuel consumption value, based on testing under average conditions, would likely not provide an accurate assessment of individual vehicle fuel consumption performance, and may be misleading.

(b) Which Classes of Vehicles Should be Regulated?

The committee stated that while it may seem expedient to initially focus on those classes of vehicles with the largest fuel consumption (*i.e.,* Class 8, Class 6, and Class 2b, which together account for approximately 90 percent of fuel consumption of HD vehicles), the committee believes that selectively regulating only certain vehicle classes would lead to very serious unintended consequences and would compromise the intent of the regulation.[463] The committee suggested, however, that within vehicle classes, there may be certain subclasses of vehicles (*e.g.,* fire trucks) that could be exempt from the regulation without creating market distortions.[464]

The agencies agree that it is crucial to avoid unintended consequences such as class shifting, which might occur as a result of regulating only certain classes of trucks. Thus, as NAS recommended, the agencies are regulating all Classes 2b through 8 in this first round of regulations, with different standards tailored to different groups of vehicles to maximize fuel savings and emissions reductions as appropriate for the work that they perform. In addition, the agencies agree with the NAS recommendation that certain subclasses be exempted from regulation and have provided flexibilities that include Averaging, Banking and Trading, and exemptions for some off-road vehicles.

Related to this recommendation, NAS also noted that large vehicle manufacturers with significant engineering capability design and manufacture almost all Class 2b, 3, and 8b vehicles, while small companies with limited engineering resources make a significant percentage of vehicles in Classes 4 through 8a, although in many cases they buy the complete chassis from larger vehicle manufacturers.[465] The committee emphasized that regulators will need to take into account the limitations of these smaller companies.[466]

The agencies agree that the impacts on small manufacturers in Classes 4 through 8a should be considered in developing HD regulations, and have done so through the structure of our standards for those vehicle categories. *See* Section II in this preamble for a fuller discussion. The agencies are proposing to not set standards at this time for engine, chassis, and vehicle manufacturers which meet the small business definitions.

(c) What Test Procedures Should be Employed for Evaluating Compliance With Standards?

The committee emphasized that a certification test method must be highly accurate, repeatable, and identical to the in-use compliance tests, as is the case with current regulation of light-duty vehicles tested on a chassis dynamometer, and for heavy-duty engine emission standards tested on engine dynamometers.[467] The committee stated that using the process and results from existing engine dynamometer testing for criteria emissions to certify fuel economy standards for MD/HD vehicles would build on proven, accurate, and repeatable methods, and put less additional administrative burden on the industry.[468] However, the committee cautioned that to account for the fuel consumption benefits of hybrid powertrains and transmission technology, the present engine-only tests for emissions certification will need to be augmented with other powertrain components added to the engine test cell, either as real hardware or as simulated components.[469] Additionally, the vehicle attributes (aero, tires, mass) would need to be accounted for, perhaps by using vehicle-specific prescribed loads (via models) in the test cycle, which the committee

[458] *See* Note 453 above, at 25, and at 189, Recommendation 8–3.

[459] *Id.*

[460] *See* Note 453 above, at 39, Recommendation 2–1.

[461] *Id.* The committee also stated that regulators should use a common procedure to develop baseline LSFC data for various applications, to determine if separate standards are required for different vehicles that have a common function.

[462] *Id.*

[463] *Id.* at 189, Finding 8–1.

[464] *See* Note 453 above.

[465] *Id.,* Finding 8–2.

[466] *Id.*

[467] *Id.* at 190, Finding 8–8.

[468] *Id.,* Finding 8–9.

[469] *See* Note 453 above.

stated would require close cooperation among component manufacturers and vehicle manufacturers.[470]

The committee noted that since there is currently no established Federal test method for HD vehicle fuel consumption, either empirical testing (whether at the component level or up to the whole vehicle level) or simulation modeling or both could be used for the characterization and certification of regulated equipment.[471] The committee cautioned that each approach involves uncertainties that can affect certification and compliance, and stressed the need for a pilot regulation program to examine the potential for these effects.[472]

The committee also noted that significant segments of the MD/HD vehicle purchasing process are highly consumer-driven, with many engine, transmission, and drive axle choice combinations resulting in a wide array of completed vehicles for a given vehicle model.[473] The committee stressed that from a regulatory standpoint, the use of expensive and time-consuming chassis testing on each distinct vehicle variation is impractical.[474] However, the committee suggested that by knowing the performance of major subcomponents on fuel consumption, it may be practical to demonstrate compliance certification with vehicle standards by aggregating the subcomponents into a specified virtual vehicle for computers to evaluate fuel consumption of the completed vehicle.[475]

The committee stated that further research will be required to underpin the protocol used to measure key input parameters, such as tire rolling resistance and aerodynamic drag forces, and to ensure the robustness of simulations for evaluating vehicle fuel consumption.[476] However, the committee stated, once determined, these major components may be assembled through simulation to represent a whole-vehicle system, and models benchmarked to reliable data may be used to extend the prediction to a variety of vehicle types, by changing bodies (aerodynamic measures), tires, and operating weights associated with the powertrains.[477]

Thus, the committee recommended that the agency consider the use of simulation modeling with component test data and additional tested inputs from powertrain tests as a way of lowering cost and administrative burdens yet achieving needed accuracy of results.[478] The committee stated that this is similar to the approach taken in Japan, but different in that the program would represent all of the parameters of the vehicle (powertrain, aerodynamics, and tires) and relate fuel consumption to the vehicle task.[479] The committee further recommended that the combined vehicle simulation/component testing approach be supplemented with tests of complete vehicles for audit purposes.[480]

The agencies agree that choosing accurate and repeatable test procedures that build on existing procedures to the maximum extent will minimize administrative burden and be crucial for the success of the program. Thus, as NAS recommended, the agencies are proposing chassis dynamometer testing for HD pickup trucks and vans, building off existing criteria pollutant emissions test programs and manufacturers' experience with light-duty fuel economy test procedures; engine dynamometer testing for HD engines, building off existing criteria pollutant emissions test programs; and vehicle simulation testing for vocational vehicles and Class 7–8 combination tractors, which is new for this program but which, the agencies believe, minimizes burden while maximizing accuracy and repeatability. The agencies have carefully considered measurement protocols for key simulation input parameters and have structured the program to reduce sensitivity to accuracy and repeatability issues. *See* Section V in this preamble for a fuller discussion. The agencies recognize the importance of continuing work to standardize and refine measurement methods and intend to work with industry and technical organizations to improve those measurement methods. The simulation program includes inputs for all vehicle parameters that affect fuel consumption, but the interface allows manufacturers to enter a limited number of the inputs for this first program. The majority of inputs have been preselected by the agencies to represent typical vehicle attributes in each regulatory category. The agencies believe this approach and the choice of preselected parameters will reduce the potential for unintended consequences. The simulation program also uses vehicle loads and driving cycles that were selected based on careful consideration of vehicle task, as recommended. And finally, testing of complete vehicles for audit purposes has occurred and will continue to occur during the comment period, in order to further hone the accuracy of the simulation approach. The agencies are thus consistent with NAS' recommendations with respect to test procedures.

The agencies have structured the program to regulate large manufacturers, and as such there are fewer regulated entities than the NAS study envisioned. The agencies agree with the NAS expectation that a program would require close cooperation among component manufacturers and vehicle manufacturers. The agencies believe the regulated manufacturers, and their suppliers, have sufficient resources to handle this burden, and in most cases are already operating with close cooperation.

(d) How should appropriate technologies be determined?

The committee emphasized that technology effectiveness (that is, its fuel consumption/emissions reduction potential) is extremely dependent on application (for example, a hybrid powertrain applied to a pickup truck versus line-haul tractor) and drive cycle (for example, start-stop versus steady-state, variations in load, *etc.*).[481] The committee also stressed that while some technologies are economically viable now, others may require significantly higher fuel costs or valuations of environmental/security externalities to make them cost-beneficial.[482]

The agencies recognize and agree that not all technologies are applicable in the same way to all HD trucks and all drive cycles, and that not all technologies are cost-beneficial in the timeframe of this rulemaking. The agencies divided the overall HD fleet into unique categories in order to group generally similar vehicle types that have generally similar uses. For vocational vehicles, where uses and drive cycles are highly varied, the agencies have structured the program in a way that should provide benefits broadly through the separate regulation of engines and the vehicle (effectively only the tires, for this first rulemaking). Measurement of fuel consumption performance in each category is based on estimated average drive cycles and vehicle loading for that category. Section III discusses these issues in considerable detail.

[470] *Id.*

[471] *Id.,* Finding 8–10.

[472] *Id.*

[473] *Id.,* Finding 8–11.

[474] *See* Note 453 above.

[475] *Id.*

[476] *Id.,* Finding 8–12.

[477] *Id.*

[478] *Id.,* Recommendation 8–4.

[479] *See* Note 453 above.

[480] *Id.*

[481] *Id.* at 5, Finding 4/5/6–1.

[482] *Id.,* Finding 4/5/6–2.

(2) NAS Findings and Recommendations With Which the Proposed HD National Program Is Not Significantly Consistent, and Why the Agencies Have Chosen a Different Path

(a) Should the Agencies Conduct a Pilot Program?

In briefings to the agencies following the completion of the NAS Report, the committee repeatedly stressed its final recommendation over all others: That NHTSA should conduct a pilot program before beginning to regulate HD fuel consumption officially, and that the pilot program should have these elements:

- NHTSA should "Gain experience with certification testing, data gathering, compiling and reporting. There needs to be a concerted effort to determine the accuracy and repeatability of all the test methods and simulation strategies that will be used with any proposed regulatory standards and a willingness to fix issues that are found."
- NHTSA should "Gather data on fuel consumption from several representative fleets of vehicles. This should continue to provide a real-world check on the effectiveness of the regulatory design on the fuel consumption of trucking fleets in various parts of the marketplace and various regions of the country."

The committee's fundamental concern was that given that HD fuel consumption had never previously been regulated, and given the scope of the regulatory system that the committee had envisioned, serious unintended consequences could occur if NHTSA did not build in extra time to conduct a pilot program, with negative effects on the regulated industry and on fuel savings.

With regard to NAS' first concern, that NHTSA must gain experience with certification testing, data gathering, compiling and reporting before initiating a HD fuel consumption regulatory system, the agencies believe that the proposed HD National Program may avoid the risks that NAS identified because it is based in large part on existing test protocols and reporting systems. The agencies' proposed certification and compliance programs for HD pickup trucks and vans, for example, employ the same testing procedures and reporting systems as for light-duty CAFE and GHG regulations, so both the agencies and the manufacturers who are regulated already have much experience with testing, data collection, and reporting.[483] For HD engine standard certification and compliance, similarly, the agencies' proposed systems rely on engine testing identical to that already used by EPA and manufacturers for criteria pollutant emissions regulations, and also vehicle modeling.

While it is true that the vehicle testing for Class 7–8 tractors and for vocational vehicles is new, the agencies believe that the proposed modeling approach will likely avoid NAS' concerns due to its degree of simplification, relative to what NAS considered. The agencies are not requiring the same level of whole vehicle simulation for certification and compliance as envisioned by NAS—instead, while manufacturers will take real-world measurements for each component or system attribute, those measurements will all be placed into "bins," and the bin value (which will be representative and pre-defined) will be the value actually employed in the modeling system. The agencies believe that this approach has considerable merit in the timeframe of this rulemaking to initiate the HD National Program for several reasons. First, since not all test methodologies have been firmly established, pre-defined bin values help to mitigate measurement uncertainty that might otherwise allow manufacturers to game the testing protocol. While there may be some loss of accuracy due to use of bin values rather than direct measurement values, and while the agencies will have to track vehicle model inputs carefully to ensure that manufacturers are not gaming the bins themselves, the agencies believe that the proposed levels of stringency should compensate for these risks. And second, waiting for a pilot program to gain additional experience with testing, data gathering, and reporting would delay our ability to get highly cost-effective fuel efficiency and emissions improvements, based on utilization of existing technologies, as soon as possible. If a pilot program were initiated as early as MY 2014, and it took one year to collect information to inform rulemaking and an additional year for finalizing a rule which, by statute, would provide 4 years lead time, the first regulated model year would be 2020. The costs of waiting to regulate officially, in terms of fuel savings and emissions reductions, would likely outweigh the potential benefits of gaining more experience, especially given the structure of the first phase of the proposed HD National Program.

With regard to NAS' second concern, that NHTSA must gather data on fuel consumption from representative fleets as a real-world check on the effectiveness of the regulatory design, the agencies believe that the proposed HD National Program will be much better able to avoid unintended consequences than the regulatory system that NAS envisioned because we do *not* propose to regulate the entire vehicle as a single system. The agencies believe that the proposed HD National Program approach has considerable merit for the timeframe of this rulemaking because it does not regulate transmission and final drive ratios and tire sizes, and thus allows manufacturers and customers to continue to specify these attributes in order to optimize them for specific vehicle use. This reduces the need for our regulatory program to define the real-world drive cycle (in terms of speed, load, grade, and altitude) exactly correctly for every individual vehicle, as envisioned by NAS. Additionally, by expressly requiring improvements in engine efficiency, the proposed HD National Program will require all vehicles to become more efficient regardless of their intended use. Although the agencies will not document exact real-world measured improvements in fuel efficiency/emissions reductions, the program will achieve percentage improvements that may be approximately estimated. Furthermore, while program benefits may be lower than the full potential envisioned by NAS if fleets choose to optimize powertrain specifications for purposes other than fuel efficiency, the agencies believe that achieving improvements sooner outweighs the less-certain later benefits of undertaking an initial pilot program as suggested by NAS.

(b) Should the agencies regulate trailers in the first phase of the HD National program?

The NAS committee recommended that NHTSA include trailers in its regulatory program to achieve maximum possible fuel efficiency improvements, and also to provide an incentive to manufacturers to optimize the tractor/trailer interface.[484] The committee noted that commercial trailers are produced by a separate group of about 12 major manufacturers that are not associated with truck manufacturers.[485] The committee stated that trailers represent an important opportunity for fuel consumption reduction, and can benefit from improvements in aerodynamics and tires.[486]

[483] *See* Section II of this preamble.

[484] *See* Note 453 above, at 189, Recommendation 8–2.

[485] *Id.,* Finding 8–3.

[486] *Id.*

For purposes of the proposed HD National Program, the agencies intend to consider regulation of trailers in a subsequent rulemaking and not in this initial phase. As the committee suggested, regulating trailers is very challenging due to the nature of the trailer industry, with many small manufacturers and very long vehicle lifespans. However, since trailer production volume is low, the agencies project that their impact on fuel consumption and emissions reduction will be much smaller than for regulating engines and tractors, as the agencies intend to do in the first phase of the HD National Program. The agencies are thus deferring trailer regulations until a subsequent phase.[487]

(c) Should the agencies include in their baseline analysis the effect of the California air resources board SmartWay mandate?

The committee found that the legislation passed by California requiring tractor-trailer combinations to be SmartWay certified will have a significant impact on the number of vehicles in the United States that are specified with fuel-efficient technologies beginning in 2010.[488] The agencies are using a 2010 baseline with an estimate of national sales mix that includes the sales of SmartWay tractors. The California trailer mandate is not reflected in either the baseline or the proposal estimates because this proposal does not regulate trailers. Therefore the agencies believe the estimated program for this proposal account for the effects of the California SmartWay mandate

(d) Should the agencies' aerodynamic drag test method include varying yaw angles?

The committee recommended that a HD fuel consumption regulation should require that aerodynamic features be evaluated on a wind-averaged basis that takes into account the effects of yaw, and that tractor and trailer manufacturers should be required to certify their drag coefficient results using a common industry standard.[489] The committee stated that yaw-induced drag can be accurately measured only in a wind tunnel.[490]

The agencies are not implementing this recommendation in the first phase of the proposed HD National Program. The current lack of common wind tunnel facilities precludes using a single aerodynamic test method at the outset of the program, which will begin with EPA's GHG regulations in 2014. Instead, the program will allow manufacturers to continue to use whatever aerodynamic test method they currently use. This will ease administrative burden, but the agencies recognize that it will create variability in measured aerodynamic values. To address this, the agencies are employing a bin system for aerodynamic drag values, and varying values will be grouped in the same bin.[491] The agencies anticipate investigating varying yaw angles in a subsequent rulemaking for a future phase of the HD National Program.

(e) Should the agencies complete an economic/payback analysis prior to beginning to regulate, in order to avoid unintended consequences?

The committee recommended that NHTSA's study (which it expected would precede the NPRM) include a careful economic/payback analysis based on fuel usage by application and different fuel price scenarios, including operating and maintenance costs.[492] The committee stated that standards that differentially affect the capital and operating costs of different vehicle classes can cause purchase of vehicles that are not optimized for particular operating conditions, and cautioned that the complexity of truck use and the variability of duty cycles increase the probability of these unintended consequences.[493]

The agencies have included in this NPRM and in the draft RIA a draft economic/payback analysis based on industry average operating cycles and expectations for ongoing maintenance costs. The agencies seek comment on the assumptions and analysis presented in Section VIII of the preamble and Chapter 9 of the draft RIA. In particular, the agencies request comment on the ability of these average assumptions to reflect payback periods for the industry as a whole and what if any changes the agencies should make in the analyses for the final rulemaking consistent with the recommendations of the NAS.

(f) How should the agencies account for indirect effects and unintended consequences as a result of the proposed HD National Program?

The committee stressed the need of regulators to consider a number of effects in the development of any proposals to regulate HD fuel consumption,[494] specifically fleet turnover impacts and pre-buy effects; [495] the rebound effect; [496] vehicle class shifting effects; [497] environmental co-benefits and costs; [498] congestion; [499] safety;a [500] and incremental weight impacts.[501] While the committee did not examine any of these effects in depth, it stated that it believed that a rebound effect likely exists, and that estimates of fuel savings from regulatory standards will be somewhat misestimated if the rebound effect is not considered.[502]

In response, while the agencies have initiated analyses of these unintended consequences, they have not all been completed in time to be incorporated into this NPRM. The NAS committee itself noted the lack of available information on these effects, especially as compared to the wealth of information available for light-duty fuel economy and GHG regulatory analysis. Much of this work must simply be done from scratch. The agencies have included estimates of the rebound effect in this NPRM and draft RIA,[503] but we hope to have analyses of other effects available for the final rule.

(3) NAS Findings and Recommendations With Which the Proposed HD National Program Is Not Entirely Consistent, and Why the Agencies Have Chosen a Different Path

(a) Should the agencies regulate final-stage manufacturers?

The committee recommended that NHTSA regulate the final stage manufacturers since they have the greatest control over the design of the vehicle and its major subsystems that affect fuel consumption.[504] However, this recommendation was predicated on a regulatory system that regulated the whole vehicle as a single unit.

The agencies are proposing to regulate final-stage manufacturers for HD pickup trucks and vans, but not for vocational

[487] *See* Section II of this preamble.

[488] *See* Note 453 above, at 50, Finding 3–4.

[489] *Id.* at 128, Recommendation 5–1.

[490] *Id.* at 39, Finding 2–4.

[491] *See* Section II of this preamble.

[492] *See* Note 453 above at 157, Recommendation 6–1.

[493] *Id.* at 156, Finding 6–12.

[494] *Id.,* Finding 6–9.

[495] *Id.,* Finding 6–10.

[496] *Id.,* Finding 6–11.

[497] *Id.* Finding 6–12. Of particular concern is the potential for fleets to purchase vehicles classified for purposes of our regulations as "vocational" vehicles, in order to avoid the significant capital costs associated with the addition of aero improvements, weight reductions, and an APU, and then convert them to a tractor. The agencies believe we have addressed this potential loophole, as discussed in Section V.

[498] *See* Note 453 above, Finding 6–13.

[499] *Id.,* Finding 6–14.

[500] *Id.* at 156–157, Findings 6–16 and 6–17.

[501] *Id.* at 156, Finding 6–16.

[502] *Id.,* Finding 6–11.

[503] *See* Section VIII of this preamble and Chapter 9 of the draft RIA.

[504] *See* Note 453 above at 189, Recommendation 8–1.

vehicles or for Class 7–8 combination tractors. While choosing not to regulate the whole vehicle as a single unit for this first phase of the HD National Program means that the agencies' initial rule will not achieve the maximum potential benefits sought by NAS through its approach, the agencies believe that the benefits of implementing regulations more quickly outweigh the drawbacks. Additionally, the proposed HD National Program approach eliminates dealing with thousands of final-stage manufacturers in the first phase of regulations, many of whom are small businesses and could be unduly affected by these regulations in this time frame.

(b) What should the agencies do about component testing data?

The committee recommended that, in order to ensure consistent data from component manufacturers for certification and compliance modeling, NHTSA establish a standardized test protocol and safeguards for the confidentiality of that component data.[505] To that end, the committee recommended that NHTSA implement as soon as possible a major engineering contract to analyze several actual vehicles in several applications and develop an approach to component testing data in conjunction with vehicle simulation modeling to arrive at LSFC data for these vehicles.[506]

The agencies believe that these concerns are less of an issue with the proposed HD National Program. As discussed above, test protocols for HD pickup trucks and vans test protocols are already standardized, and both the agencies and the manufacturers know what to expect in the data. Additionally, for Classes 3 to 8, we know what to expect in the engine testing and data, and since the vehicle testing uses a simplified bin approach, even though there may be some loss of accuracy and potential for gaming, the agencies believe that this is the fastest way to get regulations implemented while addressing the problem of a lack of standardized test protocol/safeguards for data. The agencies anticipate addressing this issue on an ongoing basis in subsequent rulemakings for later phases of the HD National Program.

(c) How should the agencies validate a combined vehicle simulation/component testing compliance approach?

The committee recommended that actual vehicles should also be tested by appropriate full-scale test procedures to confirm actual LSFC values and reductions measured with fuel consumption reduction technologies, as compared to the more cost-effective fleet certification approach.[507]

As discussed above, the agencies believe that this is less of a concern for the proposed HD National Program since the agencies are not proposing to regulate the whole vehicle as a single system. The agencies will continue to conduct tests of complete vehicles for audit purposes as the HD National Program develops and as time and resources allow.

(d) How should the agencies consider HD Regulation in Europe and Japan?

The committee suggested that the HD fuel consumption regulations in Japan, and those under consideration and study by the European Commission, provide valuable input and experience to the U.S. plans. The committee stated that in Japan the complexity of HD vehicle configurations and duty cycles was determined to lend itself to the use of computer simulation as a cost-effective means to calculate fuel efficiency, and that the EC studies so far indicate plans to develop and use simulations in their expected regulatory system. The committee noted that Japan is not using extensive full-vehicle testing in the certification process, despite the fact that its HD vehicle manufacturing diversity is less than in the United States, with relatively few HD vehicle manufacturers and no independent engine companies.

The agencies have reviewed the Japanese and planned EC HD regulations to the extent possible given the time frame for this rulemaking and considered those approaches. However, the proposed HD National Program differs from the Japanese and planned EC HD programs. The agencies agree that international harmonization in HD fuel consumption/GHG regulations is desirable and expect harmonization may increase over time, given the global presence of many HD vehicle manufacturers.

(e) How much engineering work needs to be done before HD fuel consumption regulations can be implemented?

The committee stated that significant engineering work is needed to produce a regulatory approach that produces cost effective and accurate results, which can provide meaningful data to vehicle purchasers.[508] While the agencies emphasize that much engineering work has already been undertaken in support of this proposed HD National Program, we believe, as discussed above, that the need for engineering work perceived by NAS is reduced somewhat based on the structure of the proposed program. Since the agencies are not regulating transmission ratios, final drive ratio, and tire size; since the agencies are not regulating the complete vehicle as a single unit and instead separating the engine from the vehicle; and since the agencies are building off of existing regulatory programs for light-duty vehicles and HD criteria pollutant emissions wherever possible, we believe that we have created a solid basis for the HD National Program that will address NAS' concerns in this regard.

XI. Statutory and Executive Order Reviews

(1) Executive Order 12866: Regulatory Planning and Review

Under section 3(f)(1) of Executive Order 12866 (58 FR 51735, October 4, 1993), this action is an "economically significant regulatory action" because it is likely to have an annual effect on the economy of $100 million or more. Accordingly, the agencies submitted this action to the Office of Management and Budget (OMB) for review under Executive Order 12866 and any changes made in response to OMB recommendations have been documented in the docket for this action.

NHTSA is also subject to the Department of Transportation's Regulatory Policies and Procedures. These proposed rules are also significant within the meaning of the DOT Regulatory Policies and Procedures. Executive Order 12866 additionally requires NHTSA to submit this action to OMB for review and document any changes made in response to OMB recommendations.

In addition, the agencies prepared an analysis of the potential costs and benefits associated with this action. This analysis is contained in the Draft Regulatory Impact Analysis, which is available in the docket for this proposal and at the docket Internet address listed under **ADDRESSES** above.

(2) National Environmental Policy Act

Concurrently with this NPRM, NHTSA is releasing a Draft

[505] *Id.*

[506] *Id.* at 190, Recommendation 8–5.

[507] *Id.* at 190, Recommendation 8–4.

[508] *Id.* at 190, Finding 8–13.

Environmental Impact Statement (DEIS), pursuant to the National Environmental Policy Act, 42 U.S.C. 4321–4347, and implementing regulations issued by the Council on Environmental Quality (CEQ), 40 CFR part 1500, and NHTSA, 49 CFR part 520. NHTSA prepared the DEIS to analyze and disclose the potential environmental impacts of the proposed HD fuel consumption standards and reasonable alternatives. The DEIS analyzes direct, indirect, and cumulative impacts and analyzes impacts in proportion to their significance.

Because of the link between the transportation sector and GHG emissions, the DEIS considers the possible impacts on climate and global climate change in the analysis of the effects of these fuel consumption standards. The DEIS also describes potential environmental impacts to a variety of resources. Resources that may be affected by the proposed action and alternatives include water resources, biological resources, land use and development, safety, hazardous materials and regulated wastes, noise, socioeconomics, and environmental justice. These resource areas are assessed qualitatively in the DEIS.

For additional information on NHTSA's NEPA analysis, please *see* the DEIS.

(3) Paperwork Reduction Act

The information collection requirements in this proposal have been submitted for approval to OMB under the *Paperwork Reduction Act,* 44 U.S.C. 3501 *et seq.* The Information Collection Request (ICR) document prepared by EPA has been assigned EPA ICR number 2394.01.

The agencies propose to collect information to ensure compliance with the provisions in this proposal. This includes a variety of testing, reporting and recordkeeping requirements for vehicle manufacturers. Section 208(a) of the CAA requires that vehicle manufacturers provide information the Administrator may reasonably require to determine compliance with the regulations; submission of the information is therefore mandatory. We will consider confidential all information meeting the requirements of section 208(c) of the CAA.

It is estimated that this collection affects approximately 35 engine and vehicle manufacturers. The information that is subject to this collection is collected whenever a manufacturer applies for a certificate of conformity. Under section 206 of the CAA (42 U.S.C. 7521), a manufacturer must have a certificate of conformity before a vehicle or engine can be introduced into commerce.

The burden to the manufacturers affected by this proposal has a range based on the number of engines and vehicles a manufacturer produces. The total estimated burden associated with this proposal is 25,052 hours annually (*see* Table XI–1:). This estimated burden for engine and vehicle manufacturers is a total estimate for new reporting requirements. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

Table XI-1: Burden for Reporting and Recordkeeping Requirements

Number of Affected Vehicle Manufacturers	34
Annual Labor Hours for Each Manufacturer to Prepare and Submit Required Information	Varies
Total Annual Information Collection Burden	25,052 Hours

An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR part 9.

To comment on the agencies' needs for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques, EPA has established a public docket for this proposal, which includes this ICR, under Docket ID number EPA–HQ–OAR–2010–0162. Submit any comments related to the ICR for this proposal to EPA and OMB. *See* the **ADDRESSES** section at the beginning of this notice for where to submit comments to EPA. Send comments to OMB at the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, NW., Washington, DC 20503, Attention: Desk Office for EPA. Since OMB is required to make a decision concerning the ICR between 30 and 60 days after November 30, 2010, a comment to OMB is best assured of having its full effect if OMB receives it by December 30, 2010. The final rules will respond to any OMB or public comments on the information collection requirements contained in this proposal.

(4) Regulatory Flexibility Act

(a) Overview

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

For purposes of assessing the impacts of this proposal on small entities, small entity is defined as: (1) A small business as defined by SBA regulations at 13 CFR 121.201 (*see* Table XI–2 below); (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

Table XI–2 provides an overview of the primary SBA small business categories included in the heavy-duty engine and vehicle sector:

Table XI-2: Primary SBA Small Business Categories in the Heavy-Duty Engine and Vehicle Sector

Industry [a]	Defined as small entity by SBA if less than or equal to:	NAICS Codes [b]
Motor vehicle manufacturers, engine and truck manufacturers	1,000 employees	336111 336112 336120
Commercial importers of vehicles and vehicle components	$7.0 million annual revenue	811112 811198 541514
Alternative fuel vehicle converters Sec. 42 –Wholesale trade is not applicable to government procurement of supplies	500 employees 1,000 employees	336111 336112 422720 454312 541514 541690 811198
Truck trailer manufacturers	500 employees	336212

Notes:

[a] Heavy-duty engine and vehicle entities that qualify as small businesses would not be subject to these proposed rules. We are deferring action on small vehicle entities, and we intend to address these entities in a future rule.

[b] North American Industrial Classification System.

(b) Summary of Potentially Affected Small Entities

The agencies have not conducted an Initial Regulatory Flexibility Analysis for the proposal because we are proposing to certify that these rules would not have a significant economic impact on a substantial number of small entities. The agencies are proposing to defer standards for manufacturers meeting SBA's definition of small business as described in 13 CFR 121.201 due to the short lead time to develop this proposal, the extremely small fuel savings and emissions contribution of these entities, and the potential need to develop a program that would be structured differently for them (which would require more time). The agencies would instead consider appropriate fuel consumption and GHG emissions standards for these entities as part of a future regulatory action. This includes small entities in several distinct categories of businesses for heavy-duty engines and vehicles: chassis manufacturers, combination tractor manufacturers, and alternative fuel engine converters.

Based on preliminary assessment, the agencies have identified a total of about 17 engine manufacturers, 3 complete pickup truck and van manufacturers, 11 combination tractor manufacturers and 43 heavy-duty chassis manufacturers. Notably, several of these manufacturers produce vehicles in more than just one regulatory category (HD pickup trucks/vans, combination tractors, or vocational vehicles (*i.e.* heavy-duty chassis manufacturers)). Based on the types of vehicles they manufacture, these companies, however, would be subject to slightly different testing and reporting requirements. Taking this feature of the heavy-duty trucking sector into account, the agencies estimate that although there are fewer than 30 manufacturers covered by the proposal, there are close to 60 divisions with these companies that would be subject to the proposed regulations. Of these, about 15 entities fit the SBA criteria of a small business. There are approximately three engine converters, two tractor manufacturers, and ten heavy-duty chassis manufacturers in the heavy-duty engine and vehicle market that are small businesses. (No major heavy-duty engine manufacturers, heavy-duty chassis manufacturers, or tractor manufacturers meet the small-entity criteria as defined by SBA). The agencies estimate that these small entities comprise less than 0.35 percent of the total heavy-duty vehicle sales in the United States, and therefore the proposed deferment will have a negligible impact on the fuel consumption and GHG emissions reductions from the proposed standards.

To ensure that the agencies are aware of which companies would be deferred, the agencies are proposing that such entities submit a declaration to the agencies containing a detailed written description of how that manufacturer qualifies as a small entity under the provisions of 13 CFR 121.201. Some small entities, such as heavy-duty tractor and chassis manufacturers, are not currently covered under criteria pollutant motor vehicle emissions regulations. Small engine entities are currently covered by a number of EPA motor vehicle emission regulations, and they routinely submit information and data on an annual basis as part of their compliance responsibilities. Because such entities are not automatically exempted from other EPA regulations for heavy-duty engines and vehicles, absent such a declaration, EPA would assume that the entity was subject to the greenhouse gas control requirements in this GHG proposal. The declaration to the agencies would need to be submitted at time of either engine or vehicle emissions certification under the Heavy-duty Highway Engine program. The agencies expect that the additional paperwork burden associated with completing and submitting a small entity declaration to gain deferral from

the proposed GHG and fuel consumption standards would be negligible and easily done in the context of other routine submittals to the agencies. However, the agencies have accounted for this cost with a nominal estimate included in the Information Collection Request completed under the Paperwork Reduction Act. Additional information can be found in the Paperwork Reduction Act discussion in Section XI. (3) Paperwork Reduction Act. Based on this, the agencies are proposing to certify that the rules would not have a significant economic impact on a substantial number of small entities. The agencies continue to be interested in the potential impacts of the proposal on small entities and welcome comments on issues related to such impacts.

(c) Conclusions

We therefore certify that this proposal will not have a significant economic impact on a substantial number of small entities.

(5) Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104–4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and Tribal governments and the private sector. Under section 202 of the UMRA, the agencies generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal mandates" that may result in expenditures to State, local, and Tribal governments, in the aggregate, or to the private sector, of $100 million or more in any one year. Before promulgating a rule for which a written statement is needed, section 205 of the UMRA generally requires the agencies to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows the agencies to adopt an alternative other than the least costly, most cost-effective or least burdensome alternative if the Administrator (of either agency) publishes with the final rule an explanation why that alternative was not adopted.

Before the agencies establish any regulatory requirements that may significantly or uniquely affect small governments, including Tribal governments, they must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA and NHTSA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

This proposal contains no Federal mandates (under the regulatory provisions of Title II of the UMRA) for State, local, or Tribal governments. The rules impose no enforceable duty on any State, local or Tribal governments. The agencies have determined that this proposal contains no regulatory requirements that might significantly or uniquely affect small governments. The agencies have determined that this proposal contains a Federal mandate that may result in expenditures of $100 or more for the private sector in any one year. The agencies believe that the proposal represents the least costly, most cost-effective approach to achieve the statutory requirements of the rules. Section VIII.L, above, explains why the agencies believe that the fuel savings that would result from this proposal would lead to lower prices economy-wide, improving U.S. international competitiveness. The costs and benefits associated with the proposal are discussed in more detail above in Section VIII and in the Draft Regulatory Impact Analysis, as required by the UMRA.

Table XI–3 presents the rule-related benefits, costs and net benefits in both present value terms and in annualized terms. In both cases, the discounted values are based on an underlying time varying stream of cost and benefit values that extend into the future (2012 through 2050). The distribution of each monetized economic impact over time can be viewed in the RIA that accompanies this proposal.

Present values represent the *total* amount that a stream of monetized costs/benefits/net benefits that occur over time are worth now (in year 2008 dollar terms for this analysis), accounting for the time value of money by discounting future values using either a 3 or 7 percent discount rate, per OMB Circular A–4 guidance. An annualized value takes the present value and converts it into a *constant stream of annual values* through a given time period (2012 through 2050 in this analysis) and thus averages (in present value terms) the annual values. The present value of the constant stream of annualized values equals the present value of the underlying time varying stream of values. The ratio of benefits to costs is identical whether it is measured with present values or annualized values.

It is important to note that annualized values cannot simply be summed over time to reflect total costs/benefits/net benefits; they must be discounted and summed. Additionally, the annualized value can vary substantially from the time varying stream of cost/benefit/net benefit values that occur in any given year (*e.g.,* the stream of costs represented by $0.34B and $0.58B in Table XI–3 below average $1.5B from 2014 through 2018 and are zero from 2019–2050).

Table XI-3: Estimated Lifetime and Annualized Discounted Costs, Benefits, and Net Benefits for 2014-2018 Model Year HD Vehicles assuming the $22/ton SCC Value[a,b] (billions 2008 dollars)

Lifetime Present value[c,d] – 3% Discount Rate	
Costs	$7.7
Benefits	$49
Net Benefits	$41
Annualized value[c,e] – 3% Discount Rate	
Costs	$0.34
Benefits	$2.1
Net Benefits	$1.8
Lifetime Present value[c,d] - 7% Discount Rate	
Costs	$7.7
Benefits	$34
Net Benefits	$27
Annualized value[c,e] – 7% Discount Rate	
Costs	$0.58
Benefits	$2.6
Net Benefits	$2.0

Notes:

[a] Although the agencies estimated the benefits associated with four different values of a one ton CO_2 reduction (SCC: $5, $22, $36, $66), for the purposes of this overview presentation of estimated costs and benefits we are showing the benefits associated with the marginal value deemed to be central by the interagency working group on this topic: $22 per ton of CO_2, in 2008 dollars and 2010 emissions and fuel consumption. As noted in Section VIII.G, SCC increases over time.

[b] Note that net present value of reduced GHG emissions is calculated differently than other benefits. The same discount rate used to discount the value of damages from future emissions (SCC at 5, 3, and 2.5 percent) is used to calculate net present value of SCC for internal consistency. Refer to Section VIII.G for more detail.

[c] Discounted values presented in this table are based on an underlying series of cost and benefit values that extend into the future (2012 through 2050). The distribution of each monetized economic impact over time can be viewed in the RIA that accompanies this

[d] Present value is the total, aggregated amount that a series of monetized costs or benefits that occur over time is worth now (in year 2008 dollar terms), discounting future values to the present.

[e] The annualized value is the constant annual value through a given time period (2012 through 2050 in this analysis) whose summed present value equals the present value from which it was derived.

(6) 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, as specified in Executive Order 13132. This proposal would apply to manufacturers of motor vehicles and not to State or local governments. Thus, Executive Order 13132 does not apply to this action. Although section 6 of Executive Order 13132 does not apply to this action, the agencies did consult with representatives of State governments in developing this action.

In the spirit of Executive Order 13132, and consistent with EPA and NHTSA policy to promote communications between the agencies and State and local governments, the agencies specifically solicit comment on this proposed action from State and local officials.

NHTSA notes that EPCA contains a provision (49 U.S.C. 32919(a)) that expressly preempts any State or local government from adopting or enforcing a law or regulation related to fuel economy standards or average fuel economy standards for automobiles covered by an average fuel economy standard under 49 U.S.C. Chapter 329. However, commercial medium- and heavy-duty on-highway vehicles and work trucks are not "automobiles," as defined in 49 U.S.C. 32901(a)(3). Accordingly, NHTSA has tentatively concluded that EPCA's express preemption provision would not reach the fuel efficiency standards to be established in this rulemaking.

NHTSA also considered the issue of implied or conflict preemption. The possibility of such preemption is dependent upon there being an actual conflict between a standard established by NHTSA in this rulemaking and a State or local law or regulation. *See Spriestma* v. *Mercury Marine,* 537 U.S. 51, 64–65 (2002). At present, NHTSA has no knowledge of any State or local law or regulation that would actually conflict with one of the fuel efficiency standards to be established in this rulemaking.

NHTSA seeks public comments on this issue.

(7) Executive Order 13175 (Consultation and Coordination With Indian Tribal Governments)

These proposed rules do not have Tribal implications, as specified in Executive Order 13175 (65 FR 67249, November 9, 2000). This proposal will be implemented at the Federal level and impose compliance costs only on vehicle manufacturers. Tribal governments would be affected only to the extent they purchase and use regulated vehicles. Thus, Executive Order 13175 does not apply to this proposal. The agencies specifically solicit additional comment on this proposal from Tribal officials.

(8) Executive Order 13045: "Protection of Children From Environmental Health Risks and Safety Risks"

This action is subject to Executive Order 13045 (62 FR 19885, April 23, 1997) because it is an economically significant regulatory action as defined by Executive Order 12866, and the agencies believe that the environmental health or safety risk addressed by this action may have a disproportionate effect on children. A synthesis of the science and research regarding how climate change may affect children and other vulnerable subpopulations is contained in the Technical Support Document for Endangerment or Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act, which can be found in the public docket for this proposal.[509] A summary of the analysis is presented below.

With respect to GHG emissions, the effects of climate change observed to date and projected to occur in the future include the increased likelihood of more frequent and intense heat waves. Specifically, EPA's analysis of the scientific assessment literature has determined that severe heat waves are projected to intensify in magnitude, frequency, and duration over the portions of the United States where these events already occur, with potential increases in mortality and morbidity, especially among the young, elderly, and frail. EPA has estimated reductions in projected global mean surface temperatures as a result of reductions in GHG emissions associated with the standards proposed in this action (Section II). Children may receive benefits from reductions in GHG emissions because they are included in the segment of the population that is most vulnerable to extreme temperatures.

For non-GHG pollutants, EPA has determined that climate change is expected to increase regional ozone pollution, with associated risks in respiratory infection, aggravation of asthma, and premature death. The directional effect of climate change on ambient PM levels remains uncertain. However, disturbances such as wildfires are increasing in the United States and are likely to intensify in a warmer future with drier soils and longer growing seasons. PM emissions from forest fires can contribute to acute and chronic illnesses of the respiratory system, particularly in children, including pneumonia, upper respiratory diseases, asthma and chronic obstructive pulmonary diseases.

The public is invited to submit comments or identify peer-reviewed studies and data that assess effects of early life exposure to the pollutants addressed by this proposal.

(9) Executive Order 13211 (Energy Effects)

This proposal is not a "significant energy action" as defined in Executive Order 13211, "Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use" (66 FR 28355, May 22, 2001) because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. In fact, this proposal has a positive effect on energy supply and use. Because the proposed GHG emission standards would result in significant fuel savings, this proposal encourages more efficient use of fuels. Therefore, we have concluded that this proposal is not likely to have any adverse energy effects. Our energy effects analysis is described above in Section VIII.H.

(10) National Technology Transfer Advancement Act

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

For CO_2, N_2O, and CH_4 emissions and fuel consumption from heavy-duty engines, the agencies are proposing to collect data over the same tests that are used for the Heavy-duty Highway Engine program. This will minimize the amount of testing done by

[509] *See* Endangerment TSD, Note 10, above.

manufacturers, since manufacturers are already required to run these tests.

For CO_2, N_2O, and CH_4 emissions and fuel consumption from complete pickup trucks and vans, the agencies are proposing to collect data over the same tests that are used for the Heavy-duty Highway Engine program and California Air Resources Board. This will minimize the amount of testing done by manufacturers, since manufacturers are already required to run these tests.

For CO_2 emissions and fuel consumption from heavy-duty combination tractors and vocational vehicles, the agencies are proposing to collect data through the use of a simulation model instead of a full-vehicle chassis dynamometer testing. This will minimize the amount of testing done by manufacturers. EPA's compliance assessment tool is based upon well-established engineering and physics principals that are the basis of general academic understanding in this area, and the foundation of any dynamic vehicle simulation model, including the models cited by ICCT in its study.[510] Therefore, the EPA's compliance assessment tool satisfies the description of a consensus. For the evaluation of tire rolling resistance input to the model, EPA is proposing to use the ISO 28580 test, a voluntary consensus methodology. EPA is proposing to allow several alternatives for the evaluation of aerodynamics which allows the industry to continue to use their own evaluation tools because EPA does not know of a single consensus standard available for heavy-duty truck aerodynamic evaluation.

For air conditioning standards, EPA is proposing to use a consensus methodology developed by the Society of Automotive Engineers (SAE).

(11) Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

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

[510] ICCT. ICCT Evaluation of Vehicle Simulation Tools. 2009.

With respect to GHG emissions, EPA has determined that these proposed rules will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it increases the level of environmental protection for all affected populations without having any disproportionately high and adverse human health or environmental effects on any population, including any minority or low-income population. The reductions in CO_2 and other GHGs associated with the standards will affect climate change projections, and EPA has estimated reductions in projected global mean surface temperatures (Section VI). Within communities experiencing climate change, certain parts of the population may be especially vulnerable; these include the poor, the elderly, those already in poor health, the disabled, those living alone, and/or indigenous populations dependent on one or a few resources.[511] In addition, the U.S. Climate Change Science Program [512] stated as one of its conclusions: "The United States is certainly capable of adapting to the collective impacts of climate change. However, there will still be certain individuals and locations where the adaptive capacity is less and these individuals and their communities will be disproportionally impacted by climate change." Therefore, these specific sub-populations may receive benefits from reductions in GHGs.

For non-GHG co-pollutants such as ozone, $PM_{2.5}$, and toxics, EPA has concluded that it is not practicable to determine whether there would be disproportionately high and adverse human health or environmental effects on minority and/or low income populations from this proposal.

The public is invited to submit comments or identify peer-reviewed studies and data that assess effects of early life exposure to the pollutants addressed by this proposal.

XII. Statutory Provisions and Legal Authority

A. EPA

Statutory authority for the vehicle controls in this proposal are found in CAA section 202(a) (which authorizes standards for emissions of pollutants from new motor vehicles which emissions cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare), sections 202(d), 203–209, 216, and 301 of the CAA, 42 U.S.C. 7521(a), 7521(d), 7522, 7523, 7524, 7525, 7541, 7542, 7543, 7550, and 7601.

B. NHTSA

Statutory authority for the fuel consumption standards in this proposal is found in EISA section 103 (which authorizes a fuel efficiency improvement program, designed to achieve the maximum feasible improvement to be created for commercial medium- and heavy-duty on-highway vehicles and work trucks, to include appropriate test methods, measurement metrics, standards, and compliance and enforcement protocols that are appropriate, cost-effective and technologically feasible) of the Energy Independence and Security Act of 2007, 49 U.S.C. 32902(k).

List of Subjects

40 CFR Part 85

Confidential business information, Imports, Labeling, Motor vehicle pollution, Reporting and recordkeeping requirements, Research, Warranties.

40 CFR Part 86

Administrative practice and procedure, Confidential business information, Labeling, Motor vehicle pollution, Reporting and recordkeeping requirements.

40 CFR Parts 1036 and 1037

Administrative practice and procedure, Air pollution control, Confidential business information, Environmental protection, Incorporation by reference, Labeling, Motor vehicle pollution, Reporting and recordkeeping requirements, Warranties.

40 CFR Parts 1065 and 1066

Administrative practice and procedure, Air pollution control, Incorporation by reference, Reporting and recordkeeping requirements, Research.

40 CFR Part 1068

Environmental protection, Administrative practice and procedure, Confidential business information, Imports, Incorporation by reference, Motor vehicle pollution, Penalties, Reporting and recordkeeping requirements, Warranties.

49 CFR Parts 523, 534, and 535

Fuel economy.

[511] *See* Endangerment TSD, Note 10, above.

[512] CCSP (2008) *Analyses of the effects of global change on human health and welfare and human systems.* A Report by the U.S. Climate Change Science Program and the Subcommittee on Global Change Research. [Gamble, J.L. (ed.), K.L. Ebi, F.G. Sussman, T.J. Wilbanks, (Authors)]. U.S. Environmental Protection Agency, Washington, DC, USA.

Environmental Protection Agency

40 CFR Chapter I

For the reasons set forth in the preamble, the Environmental Protection Agency proposes to amend 40 CFR chapter I of the Code of Federal Regulations as follows:

PART 85—CONTROL OF AIR POLLUTION FROM MOBILE SOURCES

1. The authority citation for part 85 continues to read as follows:

Authority: 42 U.S.C. 7401–7671q.

Subpart P—[Amended]

Section 85.1511 is revised to read as follows:

§ 85.1511 Exemptions and exclusions.

(a) Individuals, as well as certificate holders, shall be eligible for importing vehicles into the United States under the provisions of this section, unless otherwise specified.

(b) Notwithstanding any other requirements of this subpart, a motor vehicle or motor vehicle engine entitled to a temporary exemption under this paragraph (b) may be conditionally admitted into the United States if prior written approval for such conditional admission is obtained from the Administrator. Conditional admission shall be under bond. A written request for approval from the Administrator shall contain the identification required in § 85.1504(a)(1) (except for § 85.1504(a)(1)(v)) and information that indicates that the importer is entitled to the exemption. Noncompliance with provisions of this section may result in the forfeiture of the total amount of the bond or exportation of the vehicle or engine. The following temporary exemptions are permitted by this paragraph (b):

(1) *Exemption for repairs or alterations.* Vehicles and engines may qualify for a temporary exemption under the provisions of 40 CFR 1068.325(a). Such vehicles or engines may not be registered or licensed in the United States for use on public roads and highways.

(2) *Testing exemption.* Vehicles and engines may qualify for a temporary exemption under the provisions of 40 CFR 1068.325(b). Test vehicles or engines may be operated on and registered for use on public roads or highways provided that the operation is an integral part of the test.

(3) *Precertification exemption.* Prototype vehicles for use in applying to EPA for certification may be imported by independent commercial importers subject to applicable provisions of 40 CFR 85.1706 and the following requirements:

(i) No more than one prototype vehicle for each engine family for which an independent commercial importer is seeking certification shall be imported by each independent commercial importer.

(ii) Unless a certificate of conformity is issued for the prototype vehicle, the total amount of the bond shall be forfeited or the vehicle must be exported within 180 days from the date of entry.

(4) *Display exemptions.* Vehicles and engines may qualify for a temporary exemption under the provisions of 40 CFR 1068.325(c). Display vehicles or engines may not be registered or licensed for use or operated on public roads or highways in the United States, unless an applicable certificate of conformity has been received.

(c) Notwithstanding any other requirements of this subpart, a motor vehicle or motor vehicle engine may be finally admitted into the United States under this paragraph (c) if prior written approval for such final admission is obtained from the Administrator. Conditional admission of these vehicles is not permitted for the purpose of obtaining written approval from the Administrator. A request for approval shall contain the identification information required in § 85.1504(a)(1) (except for § 85.1504(a)(1)(v)) and information that indicates that the importer is entitled to the exemption or exclusion. The following exemptions or exclusions are permitted by this paragraph (c):

(1) *National security exemption.* Vehicles may be imported under the national security exemption found at 40 CFR 1068.315(a). Only persons who are manufacturers may import a vehicle under a national security exemption.

(2) *Hardship exemption.* The Administrator may exempt on a case-by-case basis certain motor vehicles from Federal emission requirements to accommodate unforeseen cases of extreme hardship or extraordinary circumstances. Some examples are as follows:

(i) Handicapped individuals who need a special vehicle unavailable in a certified configuration;

(ii) Individuals who purchase a vehicle in a foreign country where resale is prohibited upon the departure of such an individual;

(iii) Individuals emigrating from a foreign country to the U.S. in circumstances of severe hardship.

(d) Foreign diplomatic and military personnel may import nonconforming vehicles without bond. At the time of admission, the importer shall submit to the Administrator the written report required in § 85.1504(a)(1) (except for information required by § 85.1504(a)(1)(v)). Such vehicles may not be sold in the United States.

(e) Racing vehicles may be imported by any person provided the vehicles meet one or more of the exclusion criteria specified in § 85.1703. Racing vehicles may not be registered or licensed for use on or operated on public roads and highways in the United States.

(f) The following exclusions and exemptions apply based on date of original manufacture:

(1) Notwithstanding any other requirements of this subpart, the following motor vehicles or motor vehicle engines are excluded from the requirements of the Act in accordance with section 216(3) of the Act and may be imported by any person:

(i) Gasoline-fueled light-duty vehicles and light-duty trucks originally manufactured prior to January 1, 1968.

(ii) Diesel-fueled light-duty vehicles originally manufactured prior to January 1, 1975.

(iii) Diesel-fueled light-duty trucks originally manufactured prior to January 1, 1976.

(iv) Motorcycles originally manufactured prior to January 1, 1978.

(v) Gasoline-fueled and diesel-fueled heavy-duty engines originally manufactured prior to January 1, 1970.

(2) Notwithstanding any other requirements of this subpart, a motor vehicle or motor vehicle engine not subject to an exclusion under paragraph (f)(1) of this section but greater than twenty OP years old is entitled to an exemption from the requirements of the Act, provided that it is imported into the United States by a certificate holder. At the time of admission, the certificate holder shall submit to the Administrator the written report required in § 85.1504(a)(1) (except for information required by § 85.1504(a)(1)(v)).

(g) Applications for exemptions and exclusions provided for in paragraphs (b) and (c) of this section shall be mailed to the Designated Compliance Officer (*see* 40 CFR 1068.30).

(h) Vehicles conditionally or finally admitted under this section must still comply with all applicable requirements, if any, of the Energy Tax Act of 1978, the Energy Policy and Conservation Act and any other Federal or State requirements.

PART 86—CONTROL OF EMISSIONS FROM NEW AND IN-USE HIGHWAY VEHICLES AND ENGINES

3. The authority citation for part 86 continues to read as follows:

Authority: 42 U.S.C. 7401–7671q.

Subpart A—[Amended]

4. Section 86.007–23 is amended by adding paragraph (o) to read as follows:

§ 86.007–23 Required data.

* * * * *

(o) The provisions of this paragraph (o) apply starting with the 2014 model year. For heavy-duty engines tested over the transient engine test cycle, manufacturers must show individual measurements for cold-start testing and hot-start testing. For heavy-duty engines testing over the SET cycle, manufacturers must show individual results for each steady-state test mode for each pollutant except PM.

5. A new § 86.016–1 is added to subpart A to read as follows:

§ 86.016–1 General applicability.

(a) *Applicability.* The provisions of this subpart generally apply to 2005 and later model year new Otto-cycle heavy-duty engines used in incomplete vehicles and vehicles above 14,000 pounds GVWR and 2005 and later model year new diesel-cycle heavy-duty engines. In cases where a provision applies only to a certain vehicle group based on its model year, vehicle class, motor fuel, engine type, or other distinguishing characteristics, the limited applicability is cited in the appropriate section or paragraph. The provisions of this subpart continue to generally apply to 2000 and earlier model year new Otto-cycle and diesel-cycle light-duty vehicles, 2000 and earlier model year new Otto-cycle and diesel-cycle light-duty trucks, and 2004 and earlier model year new Otto-cycle complete heavy-duty vehicles at or below 14,000 pounds GVWR. Provisions generally applicable to 2001 and later model year new Otto-cycle and diesel-cycle light-duty vehicles, 2001 and later model year new Otto-cycle and diesel-cycle light-duty trucks, and 2005 and later model year Otto-cycle complete heavy-duty vehicles at or below 14,000 pounds GVWR are located in subpart S of this part.

(b) *Optional applicability.* A manufacturer may request to certify any incomplete Otto-cycle heavy-duty vehicle of 14,000 pounds Gross Vehicle Weight Rating or less in accordance with the provisions for Otto-cycle complete heavy-duty vehicles located in subpart S of this part. Heavy-duty engine or heavy-duty vehicle provisions of this subpart A do not apply to such a vehicle.

(c) *Otto-cycle heavy-duty engines and vehicles.* The following requirements apply to Otto-cycle heavy-duty engines and vehicles:

(1) Exhaust emission standards according to the provisions of § 86.008–10 or § 86.1816, as applicable.

(2) On-board diagnostics requirements according to the provisions of § 86.007–17 or § 86.1806, as applicable.

(3) Evaporative emission standards as follows:

(i) Evaporative emission standards for complete vehicles according to the provisions of §§ 86.1810 and 86.1816.

(ii) For 2013 and earlier model years, evaporative emission standards for incomplete vehicles according to the provisions of § 86.008–10, or §§ 86.1810 and 86.1816, as applicable.

(iii) For 2014 and later model years, evaporative emission standards for incomplete vehicles according to the provisions of §§ 86.1810 and 86.1816, or 40 CFR part 1037, as applicable.

(4) Refueling emission requirements for Otto-cycle complete vehicles according to the provisions of §§ 86.1810 and 86.1816.

(d) *Non-petroleum fueled vehicles.* The standards and requirements of this part apply to model year 2016 and later non-petroleum fueled motor vehicles as follows:

(1) The standards and requirements of this part apply as specified for vehicles fueled with methanol, natural gas, and LPG.

(2) The standards and requirements of subpart S of this part apply as specified for light-duty vehicles and light-duty trucks.

(3) The standards and requirements of this part applicable to methanol-fueled heavy-duty vehicles and engines (including flexible fuel vehicles and engines) apply to heavy-duty vehicles and engines fueled with any oxygenated fuel (including flexible fuel vehicles and engines). Most significantly, this means that the hydrocarbon standards apply as NMHCE and the vehicles and engines must be tested using the applicable oxygenated fuel according to the test procedures in 40 CFR part 1065 applicable for oxygenated fuels. For purposes of this paragraph (d), oxygenated fuel means any fuel containing at least 50 volume percent oxygenated compounds. For example, a fuel mixture of 85 gallons of ethanol and 15 gallons of gasoline is an oxygenated fuel, while a fuel mixture of 15 gallons of ethanol and 85 gallons of gasoline is not an oxygenated fuel.

(4) The standards and requirements of subpart S of this part applicable to heavy-duty vehicles under 14,000 pounds GVWR apply to all heavy-duty vehicles powered solely by electricity, including plug-in electric vehicles and solar-powered vehicles. Use good engineering judgment to apply these requirements to these vehicles, including applying these provisions to vehicles over 14,000 pounds GVWR. Electric heavy-duty vehicles may not generate NO_X or PM emission credits. Heavy-duty vehicles powered solely by electricity are deemed to have zero emissions of regulated pollutants.

(5) The standards and requirements of this part applicable to diesel-fueled heavy-duty vehicles and engines apply to all other heavy-duty vehicles and engines not otherwise addressed in this paragraph (d).

(6) *See* 40 CFR parts 1036 and 1037 for requirements related to greenhouse gas emissions.

(7) Manufacturers may voluntarily certify to the standards of paragraphs (d)(3) through (5) of this section before model year 2016. Note that other provisions in this part require compliance with the standards described in paragraphs (d)(1) and (2) of this section for model years before 2016.

(e) *Small volume manufacturers.* Special certification procedures are available for any manufacturer whose projected combined U.S. sales of light-duty vehicles, light-duty trucks, heavy-duty vehicles, and heavy-duty engines in its product line (including all vehicles and engines imported under the provisions of 40 CFR 85.1505 and 85.1509 of this chapter) are fewer than 10,000 units for the model year in which the manufacturer seeks certification. To certify its product line under these optional procedures, the small-volume manufacturer must first obtain the Administrator's approval. The manufacturer must meet the eligibility criteria specified in § 86.092–14(b) before the Administrator's approval will be granted. The small-volume manufacturer's certification procedures are described in § 86.092–14.

(f) *Optional procedures for determining exhaust opacity.* (1) The provisions of subpart I of this part apply to tests which are performed by the Administrator, and optionally, by the manufacturer.

(2) Measurement procedures, other than those described in subpart I of this part, may be used by the manufacturer provided the manufacturer satisfies the requirements of § 86.091–23(f).

(3) When a manufacturer chooses to use an alternative measurement procedure it has the responsibility to determine whether the results obtained by the procedure will correlate with the results which would be obtained from the measurement procedure in subpart I of this part. Consequently, the

Administrator will not routinely approve or disapprove any alternative opacity measurement procedure or any associated correlation data which the manufacturer elects to use to satisfy the data requirements for subpart I of this part.

(4) If a confirmatory test(s) is performed and the results indicate there is a systematic problem suggesting that the data generated under an optional alternative measurement procedure do not adequately correlate with data obtained in accordance with the procedures described in subpart I of this part, EPA may require that all certificates of conformity not already issued be based on data obtained from procedures described in subpart I of this part.

Subpart N—[Amended]

6. Section 86.1305–2010 is amended by revising paragraph (b) to read as follows:

§ 86.1305–2010 Introduction; structure of subpart.

* * * * *

(b) Use the applicable equipment and procedures for spark-ignition or compression-ignition engines in 40 CFR part 1065 to determine whether engines meet the duty-cycle emission standards in subpart A of this part. Measure the emissions of all regulated pollutants as specified in 40 CFR part 1065. Use the duty cycles and procedures specified in §§ 86.1333–2010, 86.1360–2007, and 86.1362–2010. Adjust emission results from engines using aftertreatment technology with infrequent regeneration events as described in § 86.004–28.

* * * * *

7. Section 86.1362–2010 is amended by adding paragraph (f) to read as follows:

§ 86.1362–2010 Steady-state testing with a ramped-modal cycle.

* * * * *

(f) Starting in the 2014 model year, use continuous sampling to determine separate emission rates at each test mode during the test run for each pollutant except PM, as described in 40 CFR 1036.501.

Subpart S—[Amended]

8. Section 86.1863–07 is revised to read as follows:

§ 86.1863–07 Chassis certification for diesel vehicles.

(a) A manufacturer may optionally certify heavy-duty diesel vehicles 14,000 pounds GVWR or less to the standards specified in § 86.1816. Such vehicles must meet all the requirements of subpart S of this part that are applicable to Otto-cycle vehicles, except for evaporative, refueling, and OBD requirements where the diesel-specific OBD requirements would apply.

(b) For OBD, diesel vehicles optionally certified under this section are subject to the OBD requirements of § 86.1806.

(c) Diesel vehicles certified under this section may be tested using the test fuels, sampling systems, or analytical systems specified for diesel engines in subpart N of this part or in 40 CFR part 1065.

(d) Diesel vehicles optionally certified under this section to the standards of this subpart may not be included in any averaging, banking, or trading program under this part.

(e) The provisions of § 86.004–40 apply to the engines in vehicles certified under this section.

(f) Diesel vehicles may be certified under this section to the standards applicable to model year 2008 in earlier model years.

(g) Diesel vehicles optionally certified under this section in model years 2007, 2008, or 2009 shall be included in phase-in calculations specified in § 86.007–11(g).

(h) Diesel vehicles subject to the standards of 40 CFR 1037.104 are subject to the provisions of this subpart as specified in 40 CFR 1037.104.

9. A new part 1036 is added to subchapter U to read as follows:

PART 1036—CONTROL OF EMISSIONS FROM NEW AND IN-USE HEAVY-DUTY HIGHWAY ENGINES

Subpart A—Overview and Applicability

Sec.

1036.1 Does this part apply for my engines?
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1036.5 Which engines are excluded from this part's requirements?
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Subpart B—Emission Standards and Related Requirements

1036.100 Overview of exhaust emission standards.
1036.108 Greenhouse gas emission standards.
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1036.230 Selecting engine families.
1036.235 Testing requirements for certification.
1036.241 Demonstrating compliance with greenhouse gas pollutant standards.
1036.250 Reporting and recordkeeping for certification.
1036.255 What decisions may EPA make regarding my certificate of conformity?

Subpart D—[Reserved]

Subpart E—In-Use Testing

1036.401 In-use testing.

Subpart F—Test Procedures

1036.501 How do I run a valid emission test?
1036.525 Hybrid engines.
1036.530 Calculating greenhouse gas emission rates.

Subpart G—Special Compliance Provisions

1036.601 What compliance provisions apply to these engines?
1036.610 Innovative technology credits for reducing greenhouse gas emissions.
1036.615 Rankine-cycle engines and hybrid powertrains.
1036.620 Alternate CO_2 standards based on model year 2011 engines.

Subpart H—Averaging, Banking, and Trading for Certification

1036.701 General provisions.
1036.705 Generating and calculating emission credits.
1036.710 Averaging and using emission credits.
1036.715 Banking emission credits.
1036.720 Trading emission credits.
1036.725 What must I include in my application for certification?
1036.730 ABT reports.
1036.735 Recordkeeping.
1036.740 Restrictions for using emission credits.
1036.745 End-of-year CO_2 credit deficits.
1036.750 What can happen if I do not comply with the provisions of this subpart?
1036.755 Information provided to the Department of Transportation.

Subpart I—Definitions and Other Reference Information

1036.801 Definitions.
1036.805 Symbols, acronyms, and abbreviations.
1036.810 Incorporation by reference.
1036.815 What provisions apply to confidential information?
1036.820 Requesting a hearing.
1036.825 Reporting and recordkeeping requirements.

Authority: 42 U.S.C. 7401–7671q.

Subpart A—Overview and Applicability

§ 1036.1 Does this part apply for my engines?

(a) Except as specified in § 1036.5, the provisions of this part apply to all new 2014 model year and later heavy-duty

engines. This includes engines fueled by conventional and alternative fuels.

(b) This part does not apply with respect to exhaust emission standards for HC, CO, NO_X, or PM except that the provisions of § 1036.601 apply.

§ 1036.2 Who is responsible for compliance?

The regulations in this part 1036 contain provisions that affect both engine manufacturers and others. However, the requirements of this part are generally addressed to the engine manufacturer. The term "you" generally means the engine manufacturer, especially for issues related to certification.

§ 1036.5 Which engines are excluded from this part's requirements?

(a) The provisions of this part do not apply to engines used in medium-duty passenger vehicles that are subject to regulation under 40 CFR part 86, subpart S, except as specified in 40 CFR part 86, subpart S. For example, this exclusion applies for engines used in vehicles certified to the standards of 40 CFR 1037.104.

(b) Engines installed in heavy-duty vehicles that do not provide motive power are nonroad engines. The provisions of this part therefore do not apply to these engines. *See* 40 CFR parts 1039, 1048, or 1054 for other requirements that apply for these auxiliary engines. *See* 40 CFR part 1037 for requirements that may apply for vehicles using these engines, such as the evaporative emission requirements of 40 CFR 1037.103.

(c) The provisions of this part do not apply to aircraft or aircraft engines. Standards apply separately to certain aircraft engines, as described in 40 CFR part 87.

§ 1036.10 How is this part organized?

This part 1036 is divided into the following subparts:

(a) Subpart A of this part defines the applicability of part 1036 and gives an overview of regulatory requirements.

(b) Subpart B of this part describes the emission standards and other requirements that must be met to certify engines under this part. Note that § 1036.150 describes certain interim requirements and compliance provisions that apply only for a limited time.

(c) Subpart C of this part describes how to apply for a certificate of conformity.

(d) [Reserved]

(e) Subpart E of this part describes provisions for testing in-use engines.

(f) Subpart F of this part describes how to test your engines (including references to other parts of the Code of Federal Regulations).

(g) Subpart G of this part describes requirements, prohibitions, and other provisions that apply to engine manufacturers, vehicle manufacturers, owners, operators, rebuilders, and all others.

(h) Subpart H of this part describes how you may generate and use emission credits to certify your engines.

(i) [Reserved]

(j) Subpart J of this part contains definitions and other reference information.

§ 1036.15 Do any other regulation parts apply to me?

(a) Part 86 of this chapter describes additional requirements that apply to engines that are subject to this part 1036. This part extensively references portions of 40 CFR part 86. For example, the regulations of part 86 specify emission standards and certification procedures related to criteria pollutants.

(b) Part 1037 of this chapter describes requirements for controlling evaporative emissions and greenhouse gas emissions from heavy-duty vehicles, whether or not they use engines certified under this part. It also includes standards and requirements that apply instead of the standards and requirements of this part in some cases.

(c) Part 1065 of this chapter describes procedures and equipment specifications for testing engines to measure exhaust emissions. Subpart F of this part 1036 describes how to apply the provisions of part 1065 of this chapter to determine whether engines meet the exhaust emission standards in this part.

(d) Certain provisions of part 1068 of this chapter apply as specified in § 1036.601 to everyone, including anyone who manufactures, imports, installs, owns, operates, or rebuilds any of the engines subject to this part 1036, or vehicles containing these engines. Part 1068 of this chapter describes general provisions, including these seven areas:

(1) Prohibited acts and penalties for engine manufacturers, vehicle manufacturers, and others.

(2) Rebuilding and other aftermarket changes.

(3) Exclusions and exemptions for certain engines.

(4) Importing engines.

(5) Selective enforcement audits of your production.

(6) Recall.

(7) Procedures for hearings.

(e) Other parts of this chapter apply if referenced in this part.

§ 1036.30 Submission of information.

Send all reports and requests for approval to the Designated Compliance Officer (*see* § 1036.801). *See* § 1036.825 for additional reporting and recordkeeping provisions.

Subpart B—Emission Standards and Related Requirements

§ 1036.100 Overview of exhaust emission standards.

Engines used in vehicles certified to the applicable chassis standards for greenhouse gas pollutants described in 40 CFR 1037.104 are not subject to the standards specified in this part. All other engines subject to this part must meet the greenhouse gas standards in § 1036.108 in addition to the criteria pollutant standards of 40 CFR part 86.

§ 1036.108 Greenhouse gas emission standards.

This section describes the applicable CO_2, N_2O, and CH_4 standards for engines. These standards do not apply for engines used in vehicles subject to (or voluntarily certified to) the CO_2, N_2O, and CH_4 standards for vehicles specified in 40 CFR 1037.104.

(a) *Emission standards.* Emission standards apply for engines measured using the test procedures specified in subpart F of this part as follows:

(1) CO_2 emission standards apply as specified in this paragraph (a)(1). For medium and heavy heavy-duty engines used in tractors, measure emissions using only the steady-state duty cycle specified in 40 CFR part 86, subpart N (referred to as the SET cycle). For medium and heavy heavy-duty engines used in both tractors and vocational applications, measure emissions using the steady-state duty cycle and the transient duty cycle (commonly referred to as the FTP engine cycle) specified in 40 CFR part 86, subpart N. For all other engines, measure emissions using only the transient duty cycle specified in 40 CFR part 86, subpart N.

(i) The CO_2 standard for model year 2016 and later spark-ignition engines is 627 g/hp-hr.

(ii) The following CO_2 standards apply for compression-ignition engines and all other engines (in g/hp-hr):

Model Years	Light Heavy-Duty	Medium Heavy-Duty – Vocational	Heavy Heavy-Duty –Vocational	Medium Heavy-Duty –Tractor	Heavy Heavy-Duty – Tractor
2014-2016	600	600	567	502	475
2017 and later	576	576	555	487	460

(2) The CH_4 emission standard for all model year 2014 and later engines is 0.05 g/hp-hr when measured over the transient duty cycle specified in 40 CFR part 86, subpart N. Note that this standard applies for all fuel types just as the other standards of this section do.

(3) The N_2O emission standard for all model year 2014 and later engines is 0.05 g/hp-hr when measured over the transient duty cycle specified in 40 CFR part 86, subpart N.

(b) *Family certification levels.* You must specify a CO_2 Family Certification Level (FCL) for each engine family. The FCL may not be less than the certified emission level for the engine family. The CO_2 Family Emission Limit (FEL) for the engine family is equal to the FCL multiplied by 1.02.

(c) *Averaging, banking, and trading.* You may generate or use emission credits under the averaging, banking, and trading (ABT) program described in subpart H of this part for demonstrating compliance with CO_2 emission standards. Credits (positive and negative) are calculated from the difference between the FCL and the applicable emission standard. Except as specified in § 1036.705, you may not generate or use credits for N_2O or CH_4 emissions.

(d) *Useful life.* Your engines must meet the exhaust emission standards of this section over their full useful life, expressed in service miles or calendar years, whichever comes first. The useful life values applicable to the criteria pollutant standards of 40 CFR part 86 apply for the standards of this section.

(e) *Applicability for testing.* The emission standards in this subpart apply as specified in this paragraph (e) to all duty-cycle testing (according to the applicable test cycles), including certification, selective enforcement audits, and in-use testing. The FCLs serve as the emission standards for the engine family with respect to certification and confirmatory testing instead of the standards specified in paragraph (a)(1) of this section. The FELs serve as the emission standards for the engine family with respect to all other testing.

§ 1036.115 Other requirements.

(a) The warranty and maintenance requirements, adjustable parameter provisions, and defeat device prohibition of 40 CFR part 86 apply with respect to the standards of this part.

(b) You must design and produce your engines to comply with evaporative emission standards as follows:

(1) For complete heavy-duty vehicles you produce, you must certify the vehicles to the emission standards specified in 40 CFR 1037.103.

(2) For incomplete heavy-duty vehicles and engines used in vehicles you do not produce, you do not need to certify your engines to evaporative emission standards or otherwise meet those standards. However, vehicle manufacturers certifying their vehicles with your engines may depend on you to produce your engines according to their specifications. Also, your engines must meet applicable exhaust emission standards in the installed configuration.

§ 1036.130 Installation instructions for vehicle manufacturers.

(a) If you sell an engine for someone else to install in a vehicle, give the engine installer instructions for installing it consistent with the requirements of this part. Include all information necessary to ensure that an engine will be installed in its certified configuration.

(b) Make sure these instructions have the following information:

(1) Include the heading: "Emission-related installation instructions".

(2) State: "Failing to follow these instructions when installing a certified engine in a heavy-duty motor vehicle violates Federal law, subject to fines or other penalties as described in the Clean Air Act."

(3) Provide all instructions needed to properly install the exhaust system and any other components.

(4) Describe any necessary steps for installing any diagnostic system required under 40 CFR part 86.

(5) Describe how your certification is limited for any type of application. For example, if you certify heavy heavy-duty engines to the CO_2 standards using only steady-state testing, you must make clear that the engine may be installed only in tractors.

(6) Describe any other instructions to make sure the installed engine will operate according to design specifications in your application for certification. This may include, for example, instructions for installing aftertreatment devices when installing the engines.

(7) State: "If you install the engine in a way that makes the engine's emission control information label hard to read during normal engine maintenance, you must place a duplicate label on the vehicle, as described in 40 CFR 1068.105."

(c) You do not need installation instructions for engines that you install in your own vehicles.

(d) Provide instructions in writing or in an equivalent format. For example, you may post instructions on a publicly available Web site for downloading or printing. If you do not provide the instructions in writing, explain in your application for certification how you will ensure that each installer is informed of the installation requirements.

§ 1036.135 Labeling.

Label your engines as described in 40 CFR 86.007–35(a)(3), with the following additional information:

(a) State the FEL(s) to which the engines are certified under this part. If you certify your engines for use in both vocational and tractor applications, include both the FEL for the transient FTP cycle and the SET cycle.

(b) Identify the emission control system. Use terms and abbreviations as described in 40 CFR 1068.45 or other applicable conventions.

(c) Identify any limitations on your certification. For example, if you certify heavy heavy-duty engines to the CO_2 standards using only steady-state testing, include the statement "TRACTORS ONLY".

(d) You may ask us to approve modified labeling requirements in this part 1036 if you show that it is necessary or appropriate. We will approve your request if your alternate label is consistent with the requirements of this part. We may also specify modified labeling requirement to be consistent with the intent of 40 CFR part 1037.

§ 1036.140 Primary intended service class.

You must identify a single primary intended service class for each compression-ignition engine family. Select the class that best describes the majority of engines from the engine family based on the applicable design and operating characteristics as follows:

(a) Light heavy-duty engines usually are non-sleeved and not designed for rebuild; their rated power generally ranges from 70 to 170 horsepower. Vehicle body types in this group might include any heavy-duty vehicle built for a light-duty truck chassis, van trucks, multi-stop vans, motor homes and other recreational vehicles, and some straight trucks with a single rear axle. Typical applications would include personal transportation, light-load commercial delivery, passenger service, agriculture, and construction. The GVWR of these vehicles is normally below 19,500 pounds.

(b) Medium heavy-duty engines may be sleeved or non-sleeved and may be designed for rebuild. Rated power generally ranges from 170 to 250 horsepower. Vehicle body types in this group would typically include school buses, straight trucks with dual rear axles, city tractors, and a variety of special purpose vehicles such as small dump trucks, and refuse trucks. Typical applications would include commercial short haul and intra-city delivery and pickup. Engines in this group are normally used in vehicles whose GVWR ranges from 19,500 to 33,000 pounds.

(c) Heavy heavy-duty engines are sleeved and designed for multiple rebuilds. Their rated power generally exceeds 250 horsepower. Vehicles in this group are normally tractors, trucks, and buses used in inter-city, long-haul applications. These vehicles normally exceed 33,000 pounds GVWR.

§ 1036.150 Interim provisions.

The provisions in this section apply instead of other provisions in this part.

(a) *Early banking of greenhouse gas emissions.* You may generate emission credits for engines you certify in model year 2013 to the standards of § 1036.108. To do so, you must certify your entire U.S.-directed production volume within that averaging set to these standards. Calculate the emission credits as described in subpart H of this part relative to the standards that would apply for model year 2014. We recommend that you notify us of your intent to use this provision before submitting your applications.

(b) *Model year 2014 N_2O standards.* In model year 2014, manufacturers may show compliance with the N_2O standards using an engineering analysis.

(c) *Engine cycle classification.* Engines meeting the definition of spark-ignition, but regulated as diesel engines under 40 CFR part 86 must be certified to the requirements applicable to compression-ignition engines under this part. Similarly, engines meeting the definition of compression-ignition, but regulated as Otto-cycle under 40 CFR part 86 must be certified to the requirements applicable to spark-ignition engines under this part.

(d) *Small manufacturers.* Manufacturers meeting the small business criteria specified for "Gasoline Engine and Engine Parts Manufacturing" or "Other Engine Equipment Manufacturers" in 13 CFR 121.201 are not subject to the greenhouse gas emission standards in § 1036.108. Qualifying manufacturers must notify the Designated Compliance Officer before importing or introducing excluded engines into U.S. commerce. This notification must include a description of the manufacturer's qualification as a small business under 13 CFR 121.201.

Subpart C—Certifying Engine Families

§ 1036.205 What must I include in my application?

Submit an application for certification as described in 40 CFR 86.007–21, with the following additional information:

(a) Describe the engine family's specifications and other basic parameters of the engine's design and emission controls as related to compliance with the requirements of this part. Describe in detail all system components for controlling greenhouse gas emissions, including all auxiliary emission control devices (AECDs) and all fuel-system components you will install on any production or test engine. Identify the part number of each component you describe. For this paragraph (a), treat as separate AECDs any devices that modulate or activate differently from each other.

(b) Describe any test equipment and procedures that you used if you performed any tests that did not also involve measurement of criteria pollutants. Describe any special or alternate test procedures you used (*see* 40 CFR 1065.10(c)).

(c) Include the emission-related installation instructions you will provide if someone else installs your engines in their vehicles (*see* § 1036.130).

(d) Describe the label information specified in § 1036.135.

(e) Identify the FCLs with which you are certifying engines in the engine family.

(f) Identify the engine family's deterioration factors and describe how you developed them (*see* § 1036.245). Present any test data you used for this.

(g) Present emission data to show that you meet emission standards, as follows:

(1) Present exhaust emission data for CO_2, CH_4, and N_2O on an emission-data engine to show that your engines meet the applicable emission standards we specify in § 1036.108. Show emission figures before and after applying deterioration factors for each engine. In addition to the composite results, show individual measurements for cold-start testing and hot-start testing over the transient test cycle. Also show individual results by mode for steady-state testing for compression-ignition engines for each pollutant except PM.

(2) Note that §§ 1036.235 and 1036.245 allow you to submit an application in certain cases without new emission data.

(h) State whether your certification is limited for certain engines. This applies for engines such as the following:

(1) If you certify heavy heavy-duty engines to the CO_2 standards using only steady-state testing, the engines may be installed only in tractors.

(2) If you certify heavy heavy-duty engines to the CO_2 standards using only transient testing, the engines may be installed only in vocational vehicles.

(i) Unconditionally certify that all the engines in the engine family comply with the requirements of this part, other referenced parts of the CFR, and the Clean Air Act. Note that § 1036.235 specifies which engines to test to show that engines in the entire family comply with the requirements of this part.

(j) Include the information required by other subparts of this part. For example, include the information

required by § 1036.725 if you participate in the ABT program.

(k) Include other applicable information, such as information specified in this part or 40 CFR part 1068 related to requests for exemptions.

(l) For imported engines or equipment, identify the following:

(1) Describe your normal practice for importing engines. For example, this may include identifying the names and addresses of any agents you have authorized to import your engines. Engines imported by nonauthorized agents are not covered by your certificate.

(2) The location of a test facility in the United States where you can test your engines if we select them for testing under a selective enforcement audit, as specified in 40 CFR part 1068, subpart E.

§ 1036.210 May I get preliminary approval before I complete my application?

If you send us information before you finish the application, we may review it and make any appropriate determinations, especially for questions related to engine family definitions, auxiliary emission control devices, adjustable parameters, deterioration factors, testing for service accumulation, and maintenance. Decisions made under this section are considered to be preliminary approval, subject to final review and approval. We will generally not reverse a decision where we have given you preliminary approval, unless we find new information supporting a different decision. If you request preliminary approval related to the upcoming model year or the model year after that, we will make best-efforts to make the appropriate determinations as soon as practicable. We will generally not provide preliminary approval related to a future model year more than two years ahead of time.

§ 1036.225 Amending my application for certification.

Before we issue you a certificate of conformity, you may amend your application to include new or modified engine configurations, subject to the provisions of this section. After we have issued your certificate of conformity, but before the end of the model year, you may send us an amended application requesting that we include new or modified engine configurations within the scope of the certificate, subject to the provisions of this section. You must amend your application if any changes occur with respect to any information that is included or should be included in your application.

(a) You must amend your application before you take any of the following actions:

(1) Add an engine configuration to an engine family. In this case, the engine configuration added must be consistent with other engine configurations in the engine family with respect to the criteria listed in § 1036.230.

(2) Change an engine configuration already included in an engine family in a way that may affect emissions, or change any of the components you described in your application for certification. This includes production and design changes that may affect emissions any time during the engine's lifetime.

(3) Modify an FEL and FCL for an engine family as described in paragraph (f) of this section.

(b) To amend your application for certification, send the relevant information to the Designated Compliance Officer.

(1) Describe in detail the addition or change in the engine model or configuration you intend to make.

(2) Include engineering evaluations or data showing that the amended engine family complies with all applicable requirements. You may do this by showing that the original emission-data engine is still appropriate for showing that the amended family complies with all applicable requirements.

(3) If the original emission-data engine for the engine family is not appropriate to show compliance for the new or modified engine configuration, include new test data showing that the new or modified engine configuration meets the requirements of this part.

(c) We may ask for more test data or engineering evaluations. You must give us these within 30 days after we request them.

(d) For engine families already covered by a certificate of conformity, we will determine whether the existing certificate of conformity covers your newly added or modified engine. You may ask for a hearing if we deny your request (*see* § 1036.820).

(e) For engine families already covered by a certificate of conformity, you may start producing the new or modified engine configuration anytime after you send us your amended application and before we make a decision under paragraph (d) of this section. However, if we determine that the affected engines do not meet applicable requirements, we will notify you to cease production of the engines and may require you to recall the engines at no expense to the owner. Choosing to produce engines under this paragraph (e) is deemed to be consent to recall all engines that we determine do not meet applicable emission standards or other requirements and to remedy the nonconformity at no expense to the owner. If you do not provide information required under paragraph (c) of this section within 30 days after we request it, you must stop producing the new or modified engines.

(f) You may ask us to approve a change to your FEL in certain cases after the start of production, but before the end of the model year. If you change an FEL for CO_2, your FCL for CO_2 is automatically set to your new FEL divided by 1.02. The changed FEL may not apply to engines you have already introduced into U.S. commerce, except as described in this paragraph (f). If we approve a changed FEL after the start of production, you must include the new FEL on the emission control information label for all engines produced after the change. You may ask us to approve a change to your FEL in the following cases:

(1) You may ask to raise your FEL for your engine family at any time. In your request, you must show that you will still be able to meet the emission standards as specified in subparts B and H of this part. Use the appropriate FELs/FCLs with corresponding production volumes to calculate emission credits for the model year, as described in subpart H of this part.

(2) You may ask to lower the FEL for your engine family only if you have test data from production engines showing that emissions are below the proposed lower FEL (or below the proposed FCL for CO_2). The lower FEL/FCL applies only to engines you produce after we approve the new FEL/FCL. Use the appropriate FELs/FCLs with corresponding production volumes to calculate emission credits for the model year, as described in subpart H of this part.

§ 1036.230 Selecting engine families.

See 40 CFR 86.001–24 for instructions on how to divide your product line into families of engines that are expected to have similar emission characteristics throughout the useful life. You must certify your engines to the standards of § 1036.108 using the same engine families you use for criteria pollutants under 40 CFR part 86, except as follows:

(a) Engines certified as hybrid engines or power packs may not be included in an engine family with engines with conventional powertrains. Note this does not preclude you from including engines in a conventional family if they are used in hybrid vehicles, as long as you certify them conventionally.

(b) If you certify engines in the family for use as both vocational and tractor engines, you must split your family into two separate subfamilies. Indicate in the application for certification that the engine family is to be split. You may assign the numbers and configurations of engines within the respective subfamilies at any time before submitting the end-of-year report required by § 1036.730. You must identify the type of vehicle in which each engine is installed, although we may allow you to use statistical methods to determine this for a fraction of your engines. Keep records to document this determination.

§ 1036.235 Testing requirements for certification.

This section describes the emission testing you must perform to show compliance with the greenhouse gas emission standards in § 1036.108.

(a) Select a single emission-data engine from each engine family as specified in 40 CFR part 86. The standards of this part apply only with respect to emissions measured from this tested configuration. However, you must apply the same (or equivalent) emission controls to all other engine configurations in the engine family.

(b) Test your emission-data engines using the procedures and equipment specified in subpart F of this part. In the case of dual-fuel and flexible-fuel engines, measure emissions when operating with each type of fuel for which you intend to certify the engine. If you are certifying the engine for use only in tractors, you must measure emissions using the SET cycle. If you are certifying the engine for use only in vocational applications, you must measure emissions using the specified transient duty cycle, including cold-start and hot-start testing as specified in 40 CFR part 86, subpart N.

(c) We may measure emissions from any of your emission-data engines.

(1) We may decide to do the testing at your plant or any other facility. If we do this, you must deliver the engine to a test facility we designate. The engine you provide must include appropriate manifolds, aftertreatment devices, electronic control units, and other emission-related components not normally attached directly to the engine block. If we do the testing at your plant, you must schedule it as soon as possible and make available the instruments, personnel, and equipment we need.

(2) If we measure emissions on your engine, the results of that testing become the official emission results for the engine at that test point. Unless we later invalidate these data, we may decide not to consider your data at that test point in determining if your engine family meets applicable requirements.

(3) Before we test one of your engines, we may set its adjustable parameters to any point within the physically adjustable ranges.

(4) Before we test one of your engines, we may calibrate it within normal production tolerances for anything we do not consider an adjustable parameter. For example, this would apply for an engine parameter that is subject to production variability because it is adjustable during production, but is not considered an adjustable parameter (as defined in § 1036.801) because it is permanently sealed.

(d) You may ask to use carryover emission data from a previous model year instead of doing new tests, but only if all the following are true:

(1) The engine family from the previous model year differs from the current engine family only with respect to model year or other characteristics unrelated to emissions.

(2) The emission-data engine from the previous model year remains the appropriate emission-data engine under paragraph (b) of this section.

(3) The data show that the emission-data engine would meet all the requirements that apply to the engine family covered by the application for certification.

(e) We may require you to test a second engine of the same configuration in addition to the engine tested under paragraph (b) of this section.

(f) If you use an alternate test procedure under 40 CFR 1065.10 and later testing shows that such testing does not produce results that are equivalent to the procedures specified in subpart F of this part, we may reject data you generated using the alternate procedure.

§ 1036.241 Demonstrating compliance with greenhouse gas pollutant standards.

(a) For purposes of certification, your engine family is considered in compliance with the emission standards in § 1036.108 if all emission-data engines representing the tested configuration of that engine family have test results showing official emission results and deteriorated emission levels at or below the standards. Note that your FCLs are considered to be the applicable emission standards with which you must comply for certification.

(b) Your engine family is deemed not to comply if any emission-data engine representing the tested configuration of that engine family has test results showing an official emission result or a deteriorated emission level for any pollutant that is above an applicable emission standard. Note that you may increase your FCL if any certification test results exceed your initial FCL.

(c) Do not apply deterioration factors to measured low-mileage emission levels from the emission-data engine unless good engineering judgment indicates that significant emission deterioration will occur during the useful life. However, where good engineering judgment indicates that significant emission deterioration will occur during the useful life, apply deterioration factors to the measured emission levels for each pollutant to show compliance with the applicable emission standards. Your deterioration factors must take into account any available data from in-use testing with similar engines. Apply deterioration factors as follows:

(1) *Additive deterioration factor for greenhouse gas emissions.* Except as specified in paragraph (c)(2) of this section, use an additive deterioration factor for exhaust emissions. An additive deterioration factor is the difference between exhaust emissions at the end of the useful life and exhaust emissions at the low-hour test point. In these cases, adjust the official emission results for each tested engine at the selected test point by adding the factor to the measured emissions. If the factor is less than zero, use zero. Additive deterioration factors must be specified to one more decimal place than the applicable standard.

(2) *Multiplicative deterioration factor for greenhouse gas emissions.* Use a multiplicative deterioration factor for a pollutant if good engineering judgment calls for the deterioration factor for that pollutant to be the ratio of exhaust emissions at the end of the useful life to exhaust emissions at the low-hour test point. Adjust the official emission results for each tested engine at the selected test point by multiplying the measured emissions by the deterioration factor. If the factor is less than one, use one. A multiplicative deterioration factor may not be appropriate in cases where testing variability is significantly greater than engine-to-engine variability. Multiplicative deterioration factors must be specified to one more significant figure than the applicable standard.

(d) Collect emission data using measurements to one more decimal place than the applicable standard. Apply the deterioration factor to the official emission result, as described in paragraph (c) of this section, then round the adjusted figure to the same number of decimal places as the emission standard. Compare the rounded

emission levels to the emission standard for each emission-data engine.

§ 1036.250 Reporting and recordkeeping for certification.

(a) [Reserved]

(b) Organize and maintain the following records:

(1) A copy of all applications and any summary information you send us.

(2) Any of the information we specify in § 1036.205 that you were not required to include in your application.

(c) Keep data from routine emission tests (such as test cell temperatures and relative humidity readings) for one year after we issue the associated certificate of conformity. Keep all other information specified in this section for eight years after we issue your certificate.

(d) Store these records in any format and on any media, as long as you can promptly send us organized, written records in English if we ask for them. You must keep these records readily available. We may review them at any time.

§ 1036.255 What decisions may EPA make regarding my certificate of conformity?

(a) If we determine your application is complete and shows that the engine family meets all the requirements of this part and the Act, we will issue a certificate of conformity for your engine family for that model year. We may make the approval subject to additional conditions.

(b) We may deny your application for certification if we determine that your engine family fails to comply with emission standards or other requirements of this part or the Clean Air Act. We will base our decision on all available information. If we deny your application, we will explain why in writing.

(c) In addition, we may deny your application or suspend or revoke your certificate if you do any of the following:

(1) Refuse to comply with any testing or reporting requirements.

(2) Submit false or incomplete information (paragraph (e) of this section applies if this is fraudulent).

(3) Render inaccurate any test data.

(4) Deny us from completing authorized activities despite our presenting a warrant or court order (*see* 40 CFR 1068.20). This includes a failure to provide reasonable assistance. However, you may ask us to reconsider our decision by showing that your failure under this paragraph (c)(4) did not involve engines related to the certificate or application in question to a degree that would justify our decision.

(5) Produce engines for importation into the United States at a location where local law prohibits us from carrying out authorized activities.

(6) Fail to supply requested information or amend your application to include all engines being produced.

(7) Take any action that otherwise circumvents the intent of the Act or this part.

(d) We may void your certificate if you do not keep the records we require or do not give us information as required under this part or the Act.

(e) We may void your certificate if we find that you intentionally submitted false or incomplete information.

(f) If we deny your application or suspend, revoke, or void your certificate, you may ask for a hearing (*see* § 1036.820).

Subpart D—[Reserved]

Subpart E—In-Use Testing

§ 1036.401 In-use testing.

You must test your in-use engines as described in 40 CFR part 86, subpart T. We may perform in-use testing of any engine family subject to the standards of this part, consistent with the provisions of § 1036.235.

Subpart F—Test Procedures

§ 1036.501 How do I run a valid emission test?

(a) Use the equipment and procedures specified in 40 CFR 86.1305–2010 to determine whether engines meet the emission standards in § 1036.108.

(b) You may use special or alternate procedures to the extent we allow them under 40 CFR 1065.10.

(c) This subpart is addressed to you as a manufacturer, but it applies equally to anyone who does testing for you, and to us when we perform testing to determine if your engines meet emission standards.

(d) For engines that use aftertreatment technology with infrequent regeneration events, invalidate any test interval in which such a regeneration event occurs with respect to CO_2, N_2O, and CH_4 measurements.

(e) Test hybrid engines as described in 40 CFR part 1065 and § 1036.525.

(f) For compression-ignition engines, use continuous sampling to determine separate emission rates at each test mode during the test run over the ramped-modal cycle for each pollutant except PM. Perform this emission sampling using good engineering judgment by measuring emissions during the whole mode; do not measure emissions during the transitions between modes. Calculate emission results for each mode using the procedures of 40 CFR part 1065.

§ 1036.525 Hybrid engines.

(a) If your engine system includes features that recover and store energy during engine motoring operation, we may allow you to modify the test procedure calculations of 40 CFR part 1065, consistent with good engineering judgment, considering especially 40 CFR 1065.10(c)(1). *See* § 1036.615 for engine system intended to include features that recover and store energy from braking unrelated to engine motoring operation.

(b) If you produce a hybrid engine designed with PTO capability and sell the engine coupled with a transmission, you may calculate a reduction in CO_2 emissions resulting from the PTO operation as described in 40 CFR 1037.525. Use good engineering judgment to use the vehicle-based procedures to quantify the CO_2 reduction for your engines.

(c) If your engine system requires special components for proper testing, you must provide any such components to us if we need to test your engine.

§ 1036.530 Calculating greenhouse gas emission rates.

This section describes how to calculate official emission results for CO_2, CH_4, and N_2O.

(a) Calculate brake-specific emission rates for each applicable duty cycle as specified in 40 CFR 1065.650. Do not apply infrequent regeneration adjustment factors to your results.

(b) Adjust CO_2 emission rates calculated under paragraph (a) of this section for test fuel properties as specified in this paragraph (b) to obtain the official emission results. Note that the purpose of this adjustment is to make official emission results independent of small differences in test fuels within a fuel type.

(1) For liquid fuels, determine the net energy content (BTU per pound of fuel) and carbon weight fraction (dimensionless) of your test fuel according to ASTM D240–09 (incorporated by reference in § 1036.810). Use good engineering judgment to determine the net energy content and carbon weight fraction of your gaseous test fuel. (Note: Net energy content is also sometimes known as lower heating value.) Calculate the test fuel's carbon-specific net energy content (BTU/lbC) by dividing the net energy content by the carbon fraction and rounding to the nearest BTU/lbC.

(2) Calculate the adjustment factor for carbon-specific net energy content by dividing the carbon-specific net energy

content of your test fuel by the reference level in the following table and rounding to five decimal places.

Fuel Type	Reference carbon-specific net energy content (BTU/lbC)
Diesel fuel	21,200
Gasoline	21,700
Natural Gas	28,500
LPG	24,300

(3) Your official emission result equals your calculated brake-specific emission rate multiplied by the adjustment factor specified in paragraph (b)(2) of this section. For example, if the net energy content and carbon fraction of your diesel test fuel are 18,400 BTU/lb and 0.870, the carbon-specific net energy content of the test fuel would be 21,149 BTU/lbC. The adjustment factor in the example above would be 0.99759 (21,149/21,200). If your brake-specific CO_2 emission rate was 630.0 g/hp-hr, your official emission result would be 628.5 g/hp-hr.

Subpart G—Special Compliance Provisions

§ 1036.601 What compliance provisions apply to these engines?

(a) Engine and equipment manufacturers, as well as owners, operators, and rebuilders of engines subject to the requirements of this part, and all other persons, must observe the provisions of this part, the provisions of the Clean Air Act, and the following provisions of 40 CFR part 1068:

(1) The exemption and importation provisions of 40 CFR part 1068, subparts C and D, apply for engines subject to this part 1036, except that the hardship exemption provisions of 40 CFR 1068.245, 1068.250, and 1068.255 do not apply for motor vehicle engines.

(2) The recall provisions of 40 CFR part 1068, subpart F, apply for engines subject to this part 1036.

(b) Engines exempted from the applicable standards of 40 CFR part 86 are exempt from the standards of this part without request.

§ 1036.610 Innovative technology credits for reducing greenhouse gas emissions.

This section applies for CO_2 reductions not reflected by the specified test procedure and that result from technologies that were not in common use before 2010. For model years through 2018, we may allow you to generate emission credits consistent with the provisions of 40 CFR 86.1866–12(d).

§ 1036.615 Rankine-cycle engines and hybrid powertrains.

This section specifies how to generate advanced technology-specific emission credits for hybrid powertrains that include energy storage systems and regenerative braking (including regenerative engine braking) and for Rankine-cycle engines.

(a) *Hybrid powertrains.* Measure the effectiveness of the hybrid system by simulating the chassis test procedure applicable for hybrid vehicles under 40 CFR part 1037, using good engineering judgment. You need our approval before you begin testing.

(b) *Rankine-cycle engines.* Test Rankine-cycle engines according to the specified test procedures unless we approve alternate procedures.

(c) *Calculating credits.* Calculate credits as specified in subpart H of this part. Credits generated from engines and powertrains certified under this section may be used in other averaging sets and under 40 CFR part 1037, consistent with good engineering judgment.

§ 1036.620 Alternate CO_2 standards based on model year 2011 engines.

For model years 2014 through 2016, you may certify your engines to the CO_2 standards of this section instead of the CO_2 standards in § 1036.108. However, you may not certify to these alternate standards engines in a given averaging set that will be produced while you retain banked credits in that averaging set.

(a) The standards of this section are determined from the measured emission rate of the test engine of the applicable baseline 2011 engine family. Calculate the CO_2 emission rate of the baseline test engine using the same equations used for showing compliance with the otherwise applicable standard. The alternate CO_2 standard for vocational engines is equal to the baseline emission rate multiplied by 0.950. The alternate CO_2 standard for tractor engines is equal to the baseline emission rate multiplied by 0.970. The in-use FEL for these engines is equal to the standard multiplied by 1.02.

(b) To be considered the baseline engine family, an engine family must meet the following criteria:

(1) It must have been certified to all applicable emission standards in model year 2011.

(2) The configuration tested for certification must have the same engine displacement as the engines in the engine family being certified to the alternate standards, and its rated power must be within 5.00 percent of the highest rated power in the engine family being certified to the alternate standards.

(c) Include the following statement on the emission control information label: "THIS ENGINE WAS CERTIFIED TO AN ALTERNATE CO_2 STANDARD UNDER § 1036.620."

(d) You may not generate or use CO_2 emission credits for any engine family in the same averaging set and model year in which you certify engines to the standards of this section, except that you may use up your banked credits in

the same model year, but before you begin producing engines under this section.

(e) You need our approval before you may certify under this section, especially with respect to the numerical value of the alternate standards.

Subpart H—Averaging, Banking, and Trading for Certification

§ 1036.701 General provisions.

(a) You may use averaging, banking, and trading (ABT) for purposes of certification as described in this subpart and in subpart B of this part to show compliance with the standards of § 1036.108. Participation in this emission credit program is voluntary. (**Note:** As described in subpart B of this part, you must assign an FCL to all engine families, whether or not they participate in the ABT provisions of this subpart.)

(b) [Reserved].

(c) The definitions of subpart I of this part apply to this subpart. The following definitions also apply:

(1) *Actual emission credits* means emission credits you have generated that we have verified by reviewing your final report.

(2) *Averaging set* means a set of engines in which emission credits may be exchanged. Credits generated by one engine may only be used by other engines in the same averaging set. *See* § 1036.740.

(3) *Broker* means any entity that facilitates a trade of emission credits between a buyer and seller.

(4) *Buyer* means the entity that receives emission credits as a result of a trade.

(5) *Reserved emission credits* means emission credits you have generated that we have not yet verified by reviewing your final report.

(6) *Seller* means the entity that provides emission credits during a trade.

(7) *Standard* means the emission standard that applies under subpart B of this part for engines not participating in the ABT program of this subpart.

(8) *Trade* means to exchange emission credits, either as a buyer or seller.

(d) Emission credits may be exchanged only within an averaging set as specified in § 1036.740.

(e) You may not use emission credits generated under this subpart to offset any emissions that exceed an FCL or standard. This applies for all testing, including certification testing, in-use testing, selective enforcement audits, and other production-line testing. However, if emissions from an engine exceed an FCL or standard (for example, during a selective enforcement audit), you may use emission credits to recertify the engine family with a higher FCL that applies only to future production.

(f) Emission credits may be used in the model year they are generated or in future model years. Emission credits may not be used for past model years, except as specified in paragraph (i) of this section.

(g) You may increase or decrease an FCL during the model year by amending your application for certification under § 1036.225. The new FCL may apply only to engines you have not already introduced into commerce. Each engine's emission control information label must include the applicable FELs.

(h) You may trade emission credits generated from any number of your engines to the engine purchasers or other parties so that they may be retired. Identify any such credits in the reports described in § 1036.725. Engines must comply with the applicable FELs even if you donate or sell the corresponding emission credits under this paragraph (h). Those credits may no longer be used by anyone to demonstrate compliance with any EPA emission standards.

(i) *See* § 1036.745 for provisions that allow you to have a negative credit balance for up to three consecutive model years with respect to CO_2 emissions.

§ 1036.705 Generating and calculating emission credits.

(a) The provisions of this section apply separately for calculating emission credits for each pollutant.

(b) For each participating family, calculate positive or negative emission credits relative to the otherwise applicable emission standard based on the engine family's FCL for greenhouse gases. Calculate positive emission credits for a family that has an FCL below the standard. Calculate negative emission credits for a family that has an FCL above the standard. Sum your positive and negative credits for the model year before rounding. Round the sum of emission credits to the nearest megagram (Mg), using consistent units throughout the following equations:

(1) For vocational engines:

$$\text{Emission credits (Mg)} = (\text{Std} - \text{FCL}) \cdot (\text{CF}) \cdot (\text{Volume}) \cdot (\text{UL}) \cdot (10^{-6})$$

Where:

Std = the emission standard, in g/hp-hr, that applies under subpart B of this part for engines not participating in the ABT program of this subpart (the "otherwise applicable standard").

FCL = the Family Certification Level for the engine family, in g/hp-hr, measured over the transient duty cycle rounded to the same number of decimal places as the emission standard.

CF = a transient cycle conversion factor, calculated by dividing the total (integrated) horsepower-hour over the duty cycle by 6.3 miles for spark-ignition engines and 6.5 miles for compression-ignition engines. This represents the work performed over the mileage represented by operation over the duty cycle.

Volume = the number of engines eligible to participate in the averaging, banking, and trading program within the given engine family during the model year, as described in paragraph (c) of this section.

UL = the useful life for the given engine family, in miles.

(2) For tractor engines:

$$\text{Emission credits (Mg)} = (\text{Std} - \text{FCL}) \cdot (\text{CF}) \cdot (\text{Volume}) \cdot (\text{UL}) \cdot (10^{-6})$$

Where:

Std = the emission standard, in g/hp-hr, that applies under subpart B of this part for engines not participating in the ABT program of this subpart (the "otherwise applicable standard").

FCL = the Family Certification Level for the engine family, in g/hp-hr, measured over the SET duty cycle rounded to the same number of decimal places as the emission standard.

CF = the transient cycle conversion factor calculated under paragraph (b)(1) of this section.

Volume = the number of engines eligible to participate in the averaging, banking, and trading program within the given engine family during the model year, as described in paragraph (c) of this section.

UL = the useful life for the given engine family, in miles.

(3) We may allow you to use statistical methods to estimate the total production volumes where a small fraction of the engines cannot be tracked precisely.

(c) As described in § 1036.730, compliance with the requirements of this subpart is determined at the end of the model year based on actual U.S.-directed production volumes. Keep appropriate records to document these production volumes. Do not include any of the following engines to calculate emission credits:

(1) Engines permanently exempted under subpart G of this part or under 40 CFR part 1068.

(2) Exported engines.

(3) Engines not subject to the requirements of this part, such as those excluded under § 1036.5. For example, do not include engines used in vehicles certified to the greenhouse gas standards of 40 CFR 1037.104.

(4) [Reserved].

(5) Any other engines if we indicate elsewhere in this part 1036 that they are not to be included in the calculations of this subpart.

(d) You may use CO_2 emission credits to show compliance with CH_4 and/or N_2O FELs instead of the otherwise applicable emission standards. To do this, calculate the CH_4 and/or N_2O emission credits needed (negative credits) using the equation in paragraph (b) of this section, using the FEL(s) you specify for your engines during certification. You must use 25 Mg of positive CO_2 credits to offset 1 Mg of negative CH_4 credits. You must use 298 Mg of positive CO_2 credits to offset 1 Mg of negative N_2O credits.

§ 1036.710 Averaging and using emission credits.

(a) Averaging is the exchange of emission credits among your engine families. You may average emission credits only within the same averaging set.

(b) You may certify one or more engine families to an FCL above the applicable standard, subject to the provisions in subpart B of this part, if you show in your application for certification that your projected balance of all emission-credit transactions in that model year is greater than or equal to zero, or that a negative balance is allowed under § 1036.745.

(c) If you certify an engine family to an FCL that exceeds the otherwise applicable standard, you must obtain enough emission credits to offset the engine family's deficit by the due date for the final report required in § 1036.730. The emission credits used to address the deficit may come from your other engine families that generate emission credits in the same model year, from emission credits you have banked, or from emission credits you obtain through trading.

§ 1036.715 Banking emission credits.

(a) Banking is the retention of emission credits by the manufacturer generating the emission credits for use in future model years for averaging or trading.

(b) You may designate any emission credits you plan to bank in the reports you submit under § 1036.730 as reserved credits. During the model year and before the due date for the final report, you may designate your reserved emission credits for averaging or trading.

(c) Reserved credits become actual emission credits when you submit your final report. However, we may revoke these emission credits if we are unable to verify them after reviewing your reports or auditing your records.

§ 1036.720 Trading emission credits.

(a) Trading is the exchange of emission credits between manufacturers. You may use traded emission credits for averaging, banking, or further trading transactions. Traded emission credits may be used only within the averaging set in which they were generated.

(b) You may trade actual emission credits as described in this subpart. You may also trade reserved emission credits, but we may revoke these emission credits based on our review of your records or reports or those of the company with which you traded emission credits. You may trade banked credits within an averaging set to any certifying manufacturer.

(c) If a negative emission credit balance results from a transaction, both the buyer and seller are liable, except in cases we deem to involve fraud. *See* § 1036.255(e) for cases involving fraud. We may void the certificates of all engine families participating in a trade that results in a manufacturer having a negative balance of emission credits. *See* § 1036.745.

§ 1036.725 What must I include in my application for certification?

(a) You must declare in your application for certification your intent to use the provisions of this subpart for each engine family that will be certified using the ABT program. You must also declare the FELs/FCL you select for the engine family for each pollutant for which you are using the ABT program. Your FELs must comply with the specifications of subpart B of this part, including the FEL caps. FELs/FCL must be expressed to the same number of decimal places as the applicable standards.

(b) Include the following in your application for certification:

(1) A statement that you will or will not have a negative balance for any averaging set when all emission credits are calculated at the end of the year.

(2) Detailed calculations of projected emission credits (positive or negative) based on projected U.S.-directed production volumes. We may require you to include similar calculations from your other engine families to demonstrate that you will be able to avoid negative credit balances for the model year. If you project negative emission credits for a family, state the source of positive emission credits you expect to use to offset the negative emission credits.

§ 1036.730 ABT reports.

(a) If any of your engine families are certified using the ABT provisions of this subpart, you must send an end-of-year report within 90 days after the end of the model year and a final report within 270 days after the end of the model year. We may waive the requirement to send the end-of-year report, conditioned upon you sending the final report on time. We will not waive this requirement where you have a deficit for that model year or an outstanding deficit for an earlier model year.

(b) Your end-of-year and final reports must include the following information for each engine family participating in the ABT program:

(1) Engine-family designation and averaging set.

(2) The emission standards that would otherwise apply to the engine family.

(3) The FCL for each pollutant. If you change the FCL after the start of production, identify the date that you started using the new FCL and/or give the engine identification number for the first engine covered by the new FCL. In this case, identify each applicable FCL and calculate the positive or negative emission credits as specified in § 1036.225.

(4) The projected and actual U.S.-directed production volumes for the model year. If you changed an FCL during the model year, identify the actual production volume associated with each FCL.

(5) The transient cycle conversion factor for each engine configuration as described in § 1036.705.

(6) Useful life.

(7) Calculated positive or negative emission credits for the whole engine family. Identify any emission credits that you traded, as described in paragraph (d)(1) of this section.

(c) Your end-of-year and final reports must include the following additional information:

(1) Show that your net balance of emission credits from all your participating engine families in each averaging set in the applicable model year is not negative, except as allowed under § 1036.745.

(2) State whether you will reserve any emission credits for banking.

(3) State that the report's contents are accurate.

(d) If you trade emission credits, you must send us a report within 90 days after the transaction, as follows:

(1) As the seller, you must include the following information in your report:

(i) The corporate names of the buyer and any brokers.

(ii) A copy of any contracts related to the trade.

(iii) The engine families that generated emission credits for the trade, including the number of emission credits from each family.

(2) As the buyer, you must include the following information in your report:

(i) The corporate names of the seller and any brokers.

(ii) A copy of any contracts related to the trade.

(iii) How you intend to use the emission credits, including the number of emission credits you intend to apply to each engine family (if known).

(e) Send your reports electronically to the Designated Compliance Officer using an approved information format. If you want to use a different format, send us a written request with justification for a waiver.

(f) Correct errors in your end-of-year report or final report as follows:

(1) You may correct any errors in your end-of-year report when you prepare the final report, as long as you send us the final report by the time it is due.

(2) If you or we determine within 270 days after the end of the model year that errors mistakenly decreased your balance of emission credits, you may correct the errors and recalculate the balance of emission credits. You may not make these corrections for errors that are determined more than 270 days after the end of the model year. If you report a negative balance of emission credits, we may disallow corrections under this paragraph (f)(2).

(3) If you or we determine anytime that errors mistakenly increased your balance of emission credits, you must correct the errors and recalculate the balance of emission credits.

§ 1036.735 Recordkeeping.

(a) You must organize and maintain your records as described in this section. We may review your records at any time.

(b) Keep the records required by this section for at least eight years after the due date for the end-of-year report. You may not use emission credits for any engines if you do not keep all the records required under this section. You must therefore keep these records to continue to bank valid credits. Store these records in any format and on any media, as long as you can promptly send us organized, written records in English if we ask for them. You must keep these records readily available.

(c) Keep a copy of the reports we require in §§ 1036.725 and 1036.730.

(d) Keep records of the engine identification number for each engine you produce that generates or uses emission credits under the ABT program. You may identify these numbers as a range. If you change the FEL after the start of production, identify the date you started using each FCL and the range of engine identification numbers associated with each FCL. You must also identify the purchaser and destination for each engine you produce to the extent this information is available.

(e) We may require you to keep additional records or to send us relevant information not required by this section in accordance with the Clean Air Act.

§ 1036.740 Restrictions for using emission credits.

The following restrictions apply for using emission credits:

(a) *Averaging sets.* Emission credits may be exchanged only within the following averaging sets:

(1) Spark-ignition engines.

(2) Compression-ignition light heavy-duty engines used in vocational vehicles.

(3) Compression-ignition medium heavy-duty engines used in vocational vehicles.

(4) Compression-ignition heavy heavy-duty engines used in vocational vehicles.

(5) Compression-ignition medium heavy-duty engines used in tractors.

(6) Compression-ignition heavy heavy-duty engines used in tractors.

(b) *Emission credits for later tiers of standards.* CO_2 credits generated relative to the standards of this part may not be used for later tiers of standards, except that credits generated before model year 2017 may be used for the tier of standards that begins in 2017.

(c) *Applying credits to prior year deficits.* Where your credit balance for the previous year is negative (*i.e.*, there was a credit deficit) you may apply only credits that are surplus after meeting your credit obligations for the current year.

(d) *Credits from hybrids and advanced technologies.* Averaging set restrictions do not apply for credits generated from hybrid engine power systems with regenerative braking, or from other advanced technologies. Such credits may also be used under 40 CFR part 1037, provided they are converted using good engineering judgment to be equivalent to credits calculated under that part.

(e) *Other restrictions.* Other sections of this part specify additional restrictions for using emission credits under certain special provisions.

§ 1036.745 End-of-year CO_2 credit deficits.

Except as allowed by this section, the certificate of any engine family certified to an FCL above the applicable standard for which you do not have sufficient credits is void.

(a) Your certificate for an engine family for which you do not have sufficient CO_2 credits will be not be void if you remedy the deficit with surplus credits within three model years. For example, if you have a credit deficit of 500 Mg for an engine family at the end of model year 2015, you must generate (or otherwise obtain) a surplus of at least 500 Mg in that same averaging set by the end of model year 2018.

(b) You may not bank or trade away credits in the averaging set in any model year in which you have a deficit.

(c) You may only apply surplus credits to your deficit. You may not apply credits to a deficit from an earlier model year if the new credits are generated in a model year in which you have a net credit deficit at the end of the year for that averaging set.

(d) If you do not remedy the deficit with surplus credits within three model years, your certificate is void for that engine family. We may void the certificate based on your end-of-year report. Note that voiding a certificate applies *ab initio* (*i.e.*, retroactively). Where the net deficit is less than the total amount of negative credits originally generated by the family, we will only void the certificate with respect to enough engines to reach the amount of the net deficit. For example, if the original engine family generated 500 Mg of negative credits, and the manufacturer's net deficit after three years was 250 Mg, we would void the certificate with respect to half of the engines in the family.

§ 1036.750 What can happen if I do not comply with the provisions of this subpart?

(a) For each engine family participating in the ABT program, the certificate of conformity is conditioned upon full compliance with the provisions of this subpart during and after the model year. You are responsible to establish to our satisfaction that you fully comply with applicable requirements. We may void the certificate of conformity for an engine family if you fail to comply with any provisions of this subpart.

(b) You may certify your engine family to an FCL above an applicable standard based on a projection that you will have enough emission credits to offset the deficit for the engine family. However, we may void the certificate of conformity if you cannot show in your final report that you have enough actual emission credits to offset a deficit for any pollutant in an engine family.

(c) We may void the certificate of conformity for an engine family if you fail to keep records, send reports, or give us information we request. Note that failing to keep records, send reports, or give us information we request is also a violation of 42 U.S.C. 7522(a)(2).

(d) You may ask for a hearing if we void your certificate under this section (see § 1036.820).

§ 1036.755 Information provided to the Department of Transportation.

(a) We may require you to submit a pre-certification compliance report to us for the upcoming model year or the year after the upcoming model year.

(b) After receipt of each manufacturer's final report as specified in § 1036.730 and completion of any verification testing required to validate the manufacturer's submitted final data, we will issue a report to the Department of Transportation with CO2 emission information and will verify the accuracy of the manufacturer's equivalent fuel consumption data that must be reported by NHTSA in 49 CFR 535.8. We will send a report to DOT for each engine manufacturer based on each regulatory category and subcategory, including sufficient information for NHTSA to determine fuel consumption and associated credit values. See 49 CFR 535.8 to determine if NHTSA deems submission of this information to EPA to also be a submission to NHTSA.

Subpart I—Definitions and Other Reference Information

§ 1036.801 Definitions.

The following definitions apply to this part. The definitions apply to all subparts unless we note otherwise. All undefined terms have the meaning the Act gives to them. The definitions follow:

Act means the Clean Air Act, as amended, 42 U.S.C. 7401–7671q.

Adjustable parameter means any device, system, or element of design that someone can adjust (including those which are difficult to access) and that, if adjusted, may affect emissions or engine performance during emission testing or normal in-use operation. This includes, but is not limited to, parameters related to injection timing and fueling rate. You may ask us to exclude a parameter that is difficult to access if it cannot be adjusted to affect emissions without significantly degrading engine performance, or if you otherwise show us that it will not be adjusted in a way that affects emissions during in-use operation.

Aftertreatment means relating to a catalytic converter, particulate filter, or any other system, component, or technology mounted downstream of the exhaust valve (or exhaust port) whose design function is to decrease emissions in the engine exhaust before it is exhausted to the environment. Exhaust-gas recirculation (EGR) and turbochargers are not aftertreatment.

Aircraft means any vehicle capable of sustained air travel above treetop heights.

Alcohol-fueled engine mean an engine that is designed to run using an alcohol fuel. For purposes of this definition, alcohol fuels do not include fuels with a nominal alcohol content below 25 percent by volume.

Auxiliary emission control device means any element of design that senses temperature, motive speed, engine RPM, transmission gear, or any other parameter for the purpose of activating, modulating, delaying, or deactivating the operation of any part of the emission control system.

Averaging set has the meaning given in § 1036.701.

Calibration means the set of specifications and tolerances specific to a particular design, version, or application of a component or assembly capable of functionally describing its operation over its working range.

Carryover means relating to certification based on emission data generated from an earlier model year as described in § 1036.235(d).

Certification means relating to the process of obtaining a certificate of conformity for an engine family that complies with the emission standards and requirements in this part.

Certified emission level means the highest deteriorated emission level in an engine family for a given pollutant from either transient or steady-state testing.

Complete vehicle means a vehicle meeting the definition of complete vehicle in 40 CFR 1037.801 when it is first sold as a vehicle. For example, where a vehicle manufacturer sells an incomplete vehicle to a secondary manufacturer, the vehicle is not a complete vehicle under this part, even after its final assembly.

Compression-ignition means relating to a type of reciprocating, internal-combustion engine that is not a spark-ignition engine.

Crankcase emissions means airborne substances emitted to the atmosphere from any part of the engine crankcase's ventilation or lubrication systems. The crankcase is the housing for the crankshaft and other related internal parts.

Criteria pollutants means emissions of NO_X, HC, PM, and CO. Note that these pollutants are also sometimes described collectively as "non-greenhouse gas pollutants," although they do not necessarily have negligible global warming potentials.

Designated Compliance Officer means the Manager, Heavy-Duty and Nonroad Engine Group (6405–J), U.S. Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460.

Designated Enforcement Officer means the Director, Air Enforcement Division (2242A), U.S. Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460.

Deteriorated emission level means the emission level that results from applying the appropriate deterioration factor to the official emission result of the emission-data engine. Note that where no deterioration factor applies, references in this part to the deteriorated emission level mean the official emission result.

Deterioration factor means the relationship between emissions at the end of useful life and emissions at the low-hour/low-mileage test point, expressed in one of the following ways:

(1) For multiplicative deterioration factors, the ratio of emissions at the end of useful life to emissions at the low-hour test point.

(2) For additive deterioration factors, the difference between emissions at the end of useful life and emissions at the low-hour test point.

Dual fuel means relating to an engine designed for operation on two different types of fuel but not on a continuous mixture of those fuels.

Emission control system means any device, system, or element of design that controls or reduces the emissions of regulated pollutants from an engine.

Emission-data engine means an engine that is tested for certification. This includes engines tested to establish deterioration factors.

Emission-related maintenance means maintenance that substantially affects emissions or is likely to substantially affect emission deterioration.

Engine configuration means a unique combination of engine hardware and calibration within an engine family. Engines within a single engine configuration differ only with respect to normal production variability or factors unrelated to emissions.

Engine family has the meaning given in § 1036.230.

Excluded means relating to engines that are not subject to some or all of the requirements of this part as follows:

(1) An engine that has been determined to not be a heavy-duty engine is excluded from this part.

(2) Certain heavy-duty engines are excluded from the requirements of this part under § 1036.5.

(3) Specific regulatory provisions of this part may exclude a heavy-duty engine generally subject to this part from one or more specific standards or requirements of this part.

Exempted has the meaning given in 40 CFR 1068.30.

Exhaust-gas recirculation means a technology that reduces emissions by routing exhaust gases that had been exhausted from the combustion chamber(s) back into the engine to be mixed with incoming air before or during combustion. The use of valve timing to increase the amount of residual exhaust gas in the combustion chamber(s) that is mixed with incoming air before or during combustion is not considered exhaust-gas recirculation for the purposes of this part.

Family certification level (FCL) means a CO_2 emission level declared by the manufacturer that is at or above emission test results for all emission-data engines. The FCL serves as the emission standard for the engine family with respect to certification testing if it is different than the otherwise applicable standard. The FCL must be expressed to the same number of decimal places as the emission standard it replaces.

Family emission limit (FEL) means an emission level declared by the manufacturer to serve in place of an otherwise applicable emission standard (other than CO_2 standards) under the ABT program in subpart H of this part. The FEL must be expressed to the same number of decimal places as the emission standard it replaces. The FEL serves as the emission standard for the engine family with respect to all required testing except certification testing for CO_2. The CO_2 FEL is equal to the CO_2 FCL multiplied by 1.02 and rounded to the appropriate number of decimal places.

Flexible fuel means relating to an engine designed for operation on any mixture of two or more different types of fuels.

Fuel type means a general category of fuels such as diesel fuel, gasoline, or natural gas. There can be multiple grades within a single fuel type, such as premium gasoline, regular gasoline, or gasoline with 10 percent ethanol.

Good engineering judgment has the meaning given in 40 CFR 1068.30. *See* 40 CFR 1068.5 for the administrative process we use to evaluate good engineering judgment.

Greenhouse gas pollutants and *greenhouse gases* means compounds regulated under this part based primarily on their impact on the climate. This includes CO_2, CH_4, and N_2O.

Gross vehicle weight rating (GVWR) means the value specified by the vehicle manufacturer as the maximum design loaded weight of a single vehicle, consistent with good engineering judgment.

Heavy-duty vehicle means any motor vehicle above 8,500 pounds GVWR or that has a vehicle curb weight above 6,000 pounds or that has a basic vehicle frontal area greater than 45 square feet.

(1) *Curb weight* has the meaning given in 40 CFR 86.1803–01, consistent with the provisions of 40 CFR 1037.140.

(2) *Basic vehicle frontal area* has the meaning given in 40 CFR 86.1803–01.

Heavy-duty engine means any engine which the engine manufacturer could reasonably expect to be used for motive power in a heavy-duty vehicle.

Hybrid engine or *hybrid powertrain* means an engine or powertrain that includes energy storage features other than a conventional battery system or conventional flywheel. Supplemental electrical batteries and hydraulic accumulators are examples of hybrid energy storage systems. Note that certain provisions in this part treat hybrid engines and powertrains intended for vehicles that include regenerative braking different than those intended for vehicles that do not include regenerative braking.

Hydrocarbon (HC) means the hydrocarbon group on which the emission standards are based for each fuel type. For alcohol-fueled engines, HC means nonmethane hydrocarbon equivalent (NMHCE). For all other engines, HC means nonmethane hydrocarbon (NMHC).

Identification number means a unique specification (for example, a model number/serial number combination) that allows someone to distinguish a particular engine from other similar engines.

Incomplete vehicle means a vehicle meeting the definition of incomplete vehicle in 40 CFR 1037.801 when it is first sold as a vehicle.

Liquefied petroleum gas (LPG) means a liquid hydrocarbon fuel that is stored under pressure and is composed primarily of nonmethane compounds that are gases at atmospheric conditions.

Low-hour means relating to an engine that has stabilized emissions and represents the undeteriorated emission level. This would generally involve less than 125 hours of operation.

Manufacture means the physical and engineering process of designing, constructing, and assembling a heavy-duty engine or a heavy-duty vehicle.

Manufacturer has the meaning given in section 216(1) of the Act. In general, this term includes any person who manufactures an engine, vehicle, or piece of equipment for sale in the United States or otherwise introduces a new engine into commerce in the United States. This includes importers who import engines or vehicles for resale.

Medium-duty passenger vehicle has the meaning given in 40 CFR 86.1803–01.

Model year means the manufacturer's annual new model production period, except as restricted under this definition. It must include January 1 of the calendar year for which the model year is named, may not begin before January 2 of the previous calendar year, and it must end by December 31 of the named calendar year. Manufacturers may not adjust model years to circumvent or delay compliance with emission standards or to avoid the obligation to certify annually.

Motor vehicle has the meaning given in 40 CFR 85.1703.

Natural gas means a fuel whose primary constituent is methane.

New motor vehicle engine means a motor vehicle engine meeting the criteria of either paragraph (1) or (2) of this definition.

(1) A motor vehicle engine for which the ultimate purchaser has never received the equitable or legal title is a *new motor vehicle engine.* This kind of engine might commonly be thought of as "brand new" although a *new motor vehicle engine* may include previously used parts. Under this definition, the engine is new from the time it is produced until the ultimate purchaser receives the title or places it into service, whichever comes first.

(2) An imported motor vehicle engine is a *new motor vehicle engine* if it was originally built on or after January 1, 1970.

Noncompliant engine means an engine that was originally covered by a certificate of conformity, but is not in the certified configuration or otherwise does not comply with the conditions of the certificate.

Nonconforming engine means an engine not covered by a certificate of conformity that would otherwise be subject to emission standards.

Nonmethane hydrocarbons (NMHC) means the sum of all hydrocarbon species except methane, as measured according to 40 CFR part 1065.

Official emission result means the measured emission rate for an emission-data engine on a given duty cycle before the application of any deterioration factor, but after the applicability of any required regeneration adjustment factors.

Owners manual means a document or collection of documents prepared by the engine or vehicle manufacturer for the owner or operator to describe appropriate engine maintenance, applicable warranties, and any other

information related to operating or keeping the engine. The owners manual is typically provided to the ultimate purchaser at the time of sale.

Oxides of nitrogen has the meaning given in 40 CFR 1065.1001.

Percent has the meaning given in 40 CFR 1065.1001. Note that this means percentages identified in this part are assumed to be infinitely precise without regard to the number of significant figures. For example, one percent of 1,493 is 14.93.

Petroleum means gasoline or diesel fuel or other fuels normally derived from crude oil. This does not include methane or LPG.

Placed into service means put into initial use for its intended purpose.

Primary intended service class has the meaning given in § 1036.140.

Rated power has the meaning given in 40 CFR part 86.

Revoke has the meaning given in 40 CFR 1068.30.

Round has the meaning given in 40 CFR 1065.1001.

Scheduled maintenance means adjusting, repairing, removing, disassembling, cleaning, or replacing components or systems periodically to keep a part or system from failing, malfunctioning, or wearing prematurely. It also may mean actions you expect are necessary to correct an overt indication of failure or malfunction for which periodic maintenance is not appropriate.

Spark-ignition means relating to a gasoline-fueled engine or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark-ignition engines usually use a throttle to regulate intake air flow to control power during normal operation.

Steady-state has the meaning given in 40 CFR 1065.1001.

Suspend has the meaning given in 40 CFR 1068.30.

Test engine means an engine in a test sample.

Test sample means the collection of engines selected from the population of an engine family for emission testing. This may include testing for certification, production-line testing, or in-use testing.

Tractor means a vehicle meeting the definition of "tractor" in 40 CFR 1037.801, or relating to such a vehicle.

Tractor engine means an engine certified for use in tractors. Where an engine family is certified for use in both tractors and vocational vehicles, "tractor engine" means an engine that the engine manufacturer reasonably believes will be (or has been) installed in a tractor. Note that the provisions of this part may require a manufacturer to document how it determines that an engine is a tractor engine.

Ultimate purchaser means, with respect to any new engine or vehicle, the first person who in good faith purchases such new engine or vehicle for purposes other than resale.

United States has the meaning given in 40 CFR 1068.30.

Upcoming model year means for an engine family the model year after the one currently in production.

U.S.-directed production volume means the number of engine units, subject to the requirements of this part, produced by a manufacturer for which the manufacturer has a reasonable assurance that sale was or will be made to ultimate purchasers in the United States. This does not include engines certified to state emission standards that are different than the emission standards in this part.

Vehicle has the meaning given in 40 CFR 1037.801.

Vocational engine means an engine certified for use in vocational vehicles. Where an engine family is certified for use in both tractors and vocational vehicles, "vocational engine" means an engine that the engine manufacturer reasonably believes will be (or has been) installed in a vocational vehicle. Note that the provisions of this part may require a manufacturer to document how it determines that an engine is a vocational engine.

Vocational vehicle means a vehicle meeting the definition of "vocational" vehicle in 40 CFR 1037.801.

Void has the meaning given in 40 CFR 1068.30.

We (us, our) means the Administrator of the Environmental Protection Agency and any authorized representatives.

§ 1036.805 Symbols, acronyms, and abbreviations.

The following symbols, acronyms, and abbreviations apply to this part:

ABT averaging, banking, and trading
AECD auxiliary emission control device
ASTM American Society for Testing and Materials
BTU British thermal units
CFR Code of Federal Regulations
CH4 methane
CO carbon monoxide
CO_2 carbon dioxide
DOT Department of Transportation
EPA Environmental Protection Agency
FCL Family Certification Level
FEL Family Emission Limit
g/hp-hr grams per brake horsepower-hour
GVWR gross vehicle weight rating
HC hydrocarbon
LPG liquefied petroleum gas
Mg megagrams (10^6 grams)
N_2O nitrous oxide
NARA National Archives and Records Administration
NHTSA National Highway Traffic Safety Administration
NMHC Nonmethane hydrocarbons
NO_X oxides of nitrogen (NO and NO_2)
NTE not-to-exceed
PM particulate matter
RPM revolutions per minute
SET Supplemental Emission Test (see 40 CFR 86.1362–2010)
THC total hydrocarbon
THCE total hydrocarbon equivalent
U.S.C. United States Code

§ 1036.810 Incorporation by reference.

(a) Documents listed in this section have been incorporated by reference into this part. The Director of the Federal Register approved the incorporation by reference as prescribed in 5 U.S.C. 552(a) and 1 CFR part 51. Anyone may inspect copies at the U.S. EPA, Air and Radiation Docket and Information Center, 1301 Constitution Ave., NW., Room B102, EPA West Building, Washington, DC 20460, (202) 566–1744, or 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/code_of_federal_regulations/ibr_locations.html.*

(b) *ASTM material.* This paragraph (b) lists material from the American Society for Testing and Materials that we have incorporated by reference. Anyone may purchase copies of these materials from the American Society for Testing and Materials, 100 Barr Harbor Dr., P.O. Box C700, West Conshohocken, PA 19428 or *http://www.astm.com.*

(1) ASTM D240–09 Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter; IBR approved for § 1036.530(b).

(2) [Reserved].

§ 1036.815 What provisions apply to confidential information?

The provisions of 40 CFR 1068.10 apply for information you consider confidential.

§ 1036.820 Requesting a hearing.

(a) You may request a hearing under certain circumstances, as described elsewhere in this part. To do this, you must file a written request, including a description of your objection and any supporting data, within 30 days after we make a decision.

(b) For a hearing you request under the provisions of this part, we will approve your request if we find that your request raises a substantial factual issue.

(c) If we agree to hold a hearing, we will use the procedures specified in 40 CFR part 1068, subpart G.

§ 1036.825 Reporting and recordkeeping requirements.

(a) This part includes various requirements to submit and record data or other information. Unless we specify otherwise, store required records in any format and on any media and keep them readily available for eight years after you send an associated application for certification, or eight years after you generate the data if they do not support an application for certification. You may not rely on anyone else to meet recordkeeping requirements on your behalf unless we specifically authorize it. We may review these records at any time. You must promptly send us organized, written records in English if we ask for them. We may require you to submit written records in an electronic format.

(b) The regulations in § 1036.255, 40 CFR 1068.25, and 40 CFR 1068.101 describe your obligation to report truthful and complete information. This includes information not related to certification. Failing to properly report information and keep the records we specify violates 40 CFR 1068.101(a)(2), which may involve civil or criminal penalties.

(c) Send all reports and requests for approval to the Designated Compliance Officer (*see* § 1036.801).

(d) Any written information we require you to send to or receive from another company is deemed to be a required record under this section. Such records are also deemed to be submissions to EPA. Keep these records for eight years unless the regulations specify a different period. We may require you to send us these records whether or not you are a certificate holder.

(e) Under the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*), the Office of Management and Budget approves the reporting and recordkeeping specified in the applicable regulations. The following items illustrate the kind of reporting and recordkeeping we require for engines and equipment regulated under this part:

(1) We specify the following requirements related to engine certification in this part 1036:

(i) In § 1036.135 we require engine manufacturers to keep certain records related to duplicate labels sent to equipment manufacturers.

(ii) In subpart C of this part we identify a wide range of information required to certify engines.

(iii) [Reserved].

(iv) In § 1036.725, 1036.730, and 1036.735 we specify certain records related to averaging, banking, and trading.

(2) We specify the following requirements related to testing in 40 CFR part 1066:

(i) In 40 CFR 1066.2 we give an overview of principles for reporting information.

(ii) [Reserved].

10. A new part 1037 is added to subchapter U to read as follows:

PART 1037—CONTROL OF EMISSIONS FROM NEW HEAVY-DUTY MOTOR VEHICLES

Subpart A—Overview and Applicability

Sec.

1037.1 Applicability
1037.5 Excluded vehicles.
1037.10 How is this part organized?
1037.15 Do any other regulation parts apply to me?
1037.30 Submission of information.

Subpart B—Emission Standards and Related Requirements

1037.101 Overview of emission standards for heavy-duty vehicles.
1037.102 Exhaust emission standards for NO_X, HC, PM, and CO.
1037.103 Evaporative emission standards.
1037.104 Exhaust emission standards for CO_2, CH_4, and N_2O for heavy-duty vehicles at or below 14,000 pounds GVWR.
1037.105 Exhaust emission standards for CO_2, CH_4, and N_2O for vocational vehicles.
1037.106 Exhaust emission standards for CO_2, CH_4, and N_2O for tractors above 26,000 pounds GVWR.
1037.115 Other requirements.
1037.120 Emission-related warranty requirements.
1037.125 Maintenance instructions and allowable maintenance.
1037.135 Labeling.
1037.140 Curb weight and roof height.
1037.141 Determining aerodynamic bins for tractors.
1037.150 Interim provisions.

Subpart C—Certifying Vehicle Families

1037.201 General requirements for obtaining a certificate of conformity.
1037.205 What must I include in my application?
1037.210 Preliminary approval before certification.
1037.220 Amending maintenance instructions.
1037.225 Amending applications for certification.
1037.230 Vehicle families.
1037.241 Demonstrating compliance with exhaust emission standards for greenhouse gas pollutants.
1037.243 Demonstrating compliance with evaporative emission standards.
1037.250 Reporting and recordkeeping.
1037.255 What decisions may EPA make regarding my certificate of conformity?

Subpart D—[Reserved]

Subpart E—In-Use Testing

1037.401 General provisions.

Subpart F—Test and Modeling Procedures

1037.501 General testing and modeling provisions.
1037.510 Duty-cycle testing.
1037.520 Modeling CO_2 emissions to show compliance.
1037.525 Special procedures for testing hybrid vehicles with power take-off.

Subpart G—Special Compliance Provisions

1037.601 What compliance provisions apply to these vehicles?
1037.610 Hybrid vehicles and other advanced technologies.
1037.611 Vehicles with innovative technologies.
1037.620 Shipment of incomplete vehicles to secondary vehicle manufacturers.
1037.630 Exemption for vehicles intended for offroad use.

Subpart H—Averaging, Banking, and Trading for Certification

1037.701 General provisions.
1037.705 Generating and calculating emission credits.
1037.710 Averaging.
1037.715 Banking.
1037.720 Trading.
1037.725 What must I include in my application for certification?
1037.730 ABT reports.
1037.735 Recordkeeping.
1037.740 What restrictions apply for using emission credits?
1037.745 End-of-year CO_2 credit deficits.
1037.750 What can happen if I do not comply with the provisions of this subpart?
1037.755 Information provided to the Department of Transportation.

Subpart I—Definitions and Other Reference Information

1037.801 Definitions.
1037.805 Symbols, acronyms, and abbreviations.
1037.810 Incorporation by reference.
1037.815 What provisions apply to confidential information?
1037.820 Requesting a hearing.
1037.825 Reporting and recordkeeping requirements.
Appendix I to Part 1037—Heavy-Duty Transient Chassis Test Cycle
Appendix II to Part 1037—Power Take-Off Test Cycle

Authority: 42 U.S.C. 7401–7671q.

Subpart A—Overview and Applicability

§ 1037.1 Applicability

The regulations in this part 1037 apply for all new heavy-duty vehicles, except as provided in § 1037.5. This includes electric vehicles and vehicles fueled by conventional and alternative fuels.

§ 1037.5 Excluded vehicles.

Except for the definitions specified in § 1037.801, this part does not apply to the following vehicles:

(a) Vehicles excluded from the definition of "heavy-duty vehicle" because of vehicle weight or weight rating (such as light-duty vehicles and light-duty trucks).

(b) Medium-duty passenger vehicles.

(c) Vehicles produced in model years before 2014, unless they are certified under § 1037.150.

(d) Vehicles not meeting the definition of "motor vehicle."

§ 1037.10 How is this part organized?

This part 1037 is divided into subparts as described in this section. Note that only subparts A, B and I of this part apply for vehicles subject to the standards of § 1037.104, as described in that section.

(a) Subpart A of this part defines the applicability of part 1037 and gives an overview of regulatory requirements.

(b) Subpart B of this part describes the emission standards and other requirements that must be met to certify vehicles under this part. Note that § 1037.150 discusses certain interim requirements and compliance provisions that apply only for a limited time.

(c) Subpart C of this part describes how to apply for a certificate of conformity for vehicles subject to the standards of § 1037.105 or § 1037.106.

(d) [Reserved].

(e) [Reserved].

(f) Subpart F of this part describes how to test your vehicles and perform emission modeling (including references to other parts of the Code of Federal Regulations) for vehicles subject to the standards of § 1037.105 or § 1037.106.

(g) Subpart G of this part and 40 CFR part 1068 describe requirements, prohibitions, and other provisions that apply to manufacturers, owners, operators, rebuilders, and all others. See § 1037.601 for a specification of how 40 CFR part 1068 applies for heavy-duty vehicles.

(h) Subpart H of this part describes how you may generate and use emission credits to certify your vehicles for vehicles subject to the standards of § 1037.105 or § 1037.106.

(i) Subpart I of this part contains definitions and other reference information.

§ 1037.15 Do any other regulation parts apply to me?

(a) Parts 1065 and 1066 of this chapter describe procedures and equipment specifications for testing engines and vehicles to measure exhaust emissions. Subpart F of this part 1037 describes how to apply the provisions of part 1065 and part 1066 of this chapter to determine whether vehicles meet the exhaust emission standards in this part.

(b) As described in § 1037.601, certain requirements and prohibitions of part 1068 of this chapter apply to everyone, including anyone who manufactures, imports, installs, owns, operates, or rebuilds any of the vehicles subject to this part 1037. Part 1068 of this chapter describes general provisions, including these seven areas:

(1) Prohibited acts and penalties for manufacturers and others.

(2) Rebuilding and other aftermarket changes.

(3) Exclusions and exemptions for certain vehicles.

(4) Importing vehicles.

(5) Selective enforcement audits of your production.

(6) Recall.

(7) Procedures for hearings.

(c) Part 86 of this chapter applies for certain vehicles as specified in this part. For example, the test procedures and most of subpart S of part 86 applies for vehicles subject to § 1037.104.

(d) Other parts of this chapter apply if referenced in this part.

§ 1037.30 Submission of information.

Send all reports and requests for approval to the Designated Compliance Officer (*see* § 1037.801). *See* § 1037.825 for additional reporting and recordkeeping provisions.

Subpart B—Emission Standards and Related Requirements

§ 1037.101 Overview of emission standards for heavy-duty vehicles.

(a) This part specifies emission standards for certain vehicles and for certain pollutants. It also summarizes other standards that apply under 40 CFR part 86.

(b) The regulated emissions are addressed in three groups:

(1) Exhaust emissions of NOx, HC, PM, and CO. These pollutants are sometimes described collectively as "criteria pollutants" because they are either criteria pollutants under the Clean Air Act or precursors to the criteria pollutant ozone. These pollutants are also sometimes described collectively as "non-greenhouse gas pollutants," although they do not necessarily have negligible global warming potentials. As described in § 1037.102, standards for these pollutants are provided in 40 CFR part 86.

(2) Exhaust emissions of CO_2, CH_4, and N_2O. These pollutants are described collectively as "greenhouse gas pollutants" because they are regulated primarily based on their impact on the climate. These standards are provided in §§ 1037.104 through 1037.106.

(3) Fuel evaporative emissions. These requirements are described in § 1037.103.

(c) The regulated heavy-duty vehicles are addressed in different groups as follows:

(1) For criteria pollutants, vehicles are regulated based on gross vehicle weight rating (GVWR), whether they are considered "spark-ignition" or "compression-ignition," and whether they are first sold as complete or incomplete vehicles. These groupings apply as described in 40 CFR part 86.

(2) For greenhouse gas pollutants, vehicles are regulated in the following groups:

(i) Complete and certain incomplete vehicles at or below 14,000 pounds GVWR (see § 1037.104 for further specification). Certain provisions of 40 CFR part 86 apply for these vehicles; see § 1037.104(i) for a list of provisions in this part 1037 that also apply for these vehicles.

(ii) Tractors above 26,000 pounds GVWR.

(iii) All other vehicles. These other vehicles are referred to as "vocational" vehicles.

(3) For evaporative emissions, vehicles are regulated based on the type of fuel they use. Vehicles fueled with volatile liquid fuels and gaseous fuels are subject to evaporative emission standards, while other vehicles are not.

§ 1037.102 Exhaust emission standards for NOx, HC, PM, and CO.

See 40 CFR part 86 for the exhaust emission standards for NOx, HC, PM, and CO that apply for heavy-duty vehicles.

§ 1037.103 Evaporative emission standards.

New vehicles that run on volatile liquid fuel (such as gasoline or ethanol) or gaseous fuel (such as natural gas or LPG) must meet evaporative emission standards as specified in this section. The standards specified in paragraphs (a) and (b) of this section apply over a useful life period of 10 years or 110,000 miles, whichever comes first. Note that

this section and § 1037.243 allow you to certify without testing in certain circumstances. Evaporative emission standards do not apply for diesel-fueled vehicles.

(a) *Diurnal and hot soak emissions.* Evaporative hydrocarbon emissions may not exceed the following standards when measured using the test procedures specified in § 1037.501:

(1) The sum of diurnal and hot soak measurements from the full three-day diurnal test sequence described in 40 CFR 86.1230–96 may not exceed 1.4 g for vehicles with GVWR at or below 14,000 pounds, and may not exceed 1.9 g for vehicles with GVWR above 14,000 pounds.

(2) The sum of diurnal and hot soak measurements from the two-day diurnal test sequence described in 40 CFR 86.1230–96 may not exceed 1.75 g for vehicles with GVWR at or below 14,000 pounds, and may not exceed 2.3 g for vehicles with GVWR above 14,000 pounds. The standards in this paragraph (a)(2) do not apply for vehicles that run on natural gas or LPG.

(b) *Running loss.* Running losses may not exceed 0.05 g/mile when measured using the test procedures specified in § 1037.501. The running loss standard does not apply for vehicles that run on natural gas or LPG.

(c) *Fuel spitback.* Fuel spitback emissions from vehicles with GVWR at or below 14,000 pounds may not exceed 1.0 g when measured using the test procedures specified in § 1037.501. This standard does not apply for vehicles with GVWR above 14,000 pounds or any vehicles that run on natural gas or LPG. The fuel spitback standard applies only to newly assembled vehicles.

(d) *Refueling emissions.* Complete vehicles with GVWR at or below 10,000 pounds must meet refueling emission standards as specified in 40 CFR part 86, subpart S. Incomplete heavy-duty vehicles are not subject to refueling emission standards.

(e) *Compliance demonstration for vehicles with GVWR above 26,000 pounds.* For vehicles with GVWR above 26,000 pounds, the standards described in paragraphs (a) and (b) of this section are based on an engineering analysis showing that the vehicle design adequately controls emissions. We would expect emission control components and systems to exhibit a comparable degree of control relative to vehicles that comply based on testing. For example, vehicles that comply under this paragraph (e) should rely on comparable material specifications to limit fuel permeation, and components should be sized and calibrated to correspond with the appropriate fuel capacities, fuel flow rates, and vehicle operating characteristics.

(f) *Incomplete vehicles.* If you sell incomplete vehicles, you must identify the maximum fuel tank capacity for which you designed the vehicle's evaporative emission control system.

(g) *Auxiliary engines and separate fuel systems.* The provisions of this paragraph (g) apply for vehicles with auxiliary engines. This includes any engines installed in the final vehicle configuration that contribute no motive power through the vehicle's transmission.

(1) Auxiliary engines and associated fuel-system components must be installed when testing complete vehicles. If the auxiliary engine draws fuel from a separate fuel tank, you must fill the extra fuel tank before the start of diurnal testing as described for the vehicle's main fuel tank. Use good engineering judgment to ensure that any nonmetal portions of the fuel system related to the auxiliary engine have reached stabilized levels of permeation emissions. The auxiliary engine must not operate during the running loss test or any other portion of testing under this section.

(2) For testing with incomplete vehicles, you may omit installation of auxiliary engines and associated fuel-system components as long as those components installed in the final configuration are certified to meet the applicable emission standards for Small SI equipment described in 40 CFR 1054.112 or for Large SI engines in 40 CFR 1048.105. For any fuel-system components that you do not install, your installation instructions must describe this certification requirement.

§ 1037.104 Exhaust emission standards for CO_2, CH_4, and N_2O for heavy-duty vehicles at or below 14,000 pounds GVWR.

This section applies for heavy-duty vehicles at or below 14,000 pounds GVWR. See paragraphs (f) and (g) of this section for provisions excluding certain vehicles from this section.

(a) *Fleet-average CO_2 emission standards.* Fleet-average CO_2 emission standards apply for each manufacturer as follows:

(1) First calculate a work factor, WF, for each vehicle configuration rounded to the nearest pound using the following equation:

$$WF = 0.75 \times (GVWR - \text{Curb Weight} + xwd) + 0.25 \times (GCWR - GVWR)$$

Where:

xwd = 500 pounds if the vehicle has four-wheel drive or all-wheel drive; xwd = 0 pounds for all other vehicles.

(2) Using the appropriate work factor, calculate a target value for each vehicle configuration (or submodel groups of configurations we approve) you produce using the applicable equation of this paragraph (a)(2), rounding the target value to the nearest 0.1 g/mile.

(i) For spark-ignition vehicles: CO_2 Target (g/mile) = $0.0440 \times WF + 339$

(ii) For compression-ignition vehicles and vehicles that operate without engines (such as electric vehicles and fuel cell vehicles): CO_2 Target (g/mile) = $0.0416 \times WF + 320$

(3) Calculate a production-weighted average of the target values and round it to the nearest 0.1 g/mile. This is your fleet-average standard. All vehicles subject to the standards of this section form a single averaging set. Use the following equation to calculate your fleet-average standard from the target value for each vehicle configuration or submodel ($Target_i$) and U.S.-directed production volume of each vehicle configuration or submodel for the given model year ($Volume_i$):

$$\text{Fleet-Average Standard} = \frac{\sum[\text{Target}_i \times \text{Volume}_i]}{\sum[\text{Volume}_i]}$$

(b) *Production and in-use CO_2 standards.* Each vehicle you produce that is subject to the standards of this section has an "in-use" CO_2 standard that is calculated from your test result and that applies for SEA testing and in-use testing. The in-use CO_2 standard for each vehicle is the deteriorated emission level applicable for that vehicle multiplied by 1.10 and rounded to the nearest 0.1 g/mile.

(c) *$N_2O$and CH_4 standards.* Except as allowed under this paragraph (c), all vehicles subject to the standards of this section must comply with an N_2O standard of 0.05 g/mile and a CH_4 standard of 0.05 g/mile. You may

specify CH_4 and/or N_2O FELs and use CO_2 emission credits to show compliance with those FELs instead of these otherwise applicable emission standards for one or more test groups. To do this, calculate the CH_4 and/or N_2O emission credits needed (negative credits) using the equation in this paragraph (c) based on the FEL(s) you specify for your vehicles during certification. You must adjust the calculated emissions by the relative global warming potential (RGWP): RGWP equals 25 for CH_4 and 298 for N_2O. This means you must use 25 Mg of positive CO_2 credits to offset 1 Mg of negative CH_4 credits and 298 Mg of positive CO_2 credits to offset 1 Mg of negative N_2O credits. Note that 40 CFR 86.1818–08(f)(2) does not apply for vehicles subject to the standards of this section. Calculate credits using the following equation:

CO_2 Credits Needed (Mg) = [(Std − FEL) × (U.S.-directed production volume) × (Useful Life)] × (RGWP) ÷ 1,000,000

(d) *Compliance provisions.* Except as specified in this paragraph (d) or elsewhere in this section, the provisions of 40 CFR part 86, describing compliance with the greenhouse gas standards of subpart S of that part apply with respect to the standards of paragraphs (a) through (c) of this section.

(1) The CO_2 standards of this section apply with respect to CO_2 emissions instead of carbon-related exhaust emissions (CREE).

(2) Vehicles subject to the standards of this section are included in a single greenhouse gas averaging set separate from any averaging sets otherwise included in 40 CFR part 86.

(3) Special credit and incentive provisions related to flexible-fuel vehicles and air conditioning in 40 CFR part 86 do not apply for vehicles subject to the standards of this section.

(4) The CO_2, N_2O, and CH_4 standards apply for a weighted average of the city (55%) and highway (45%) test cycle results as specified for light-duty vehicles in 40 CFR part 86, subpart S. Note that this differs from the way the criteria pollutant standards apply for heavy-duty vehicles.

(5) Apply an additive deterioration factor of zero to measured CO_2 emissions unless good engineering judgment indicates that emissions are likely to deteriorate in actual use. Use good engineering judgment to develop separate deterioration factors for N_2O and CH_4.

(6) Credits are calculated using the useful life value (in miles) in place of the "vehicle lifetime miles" specified in subpart S of 40 CFR part 86.

(7) Credits generated from hybrid vehicles with regenerative braking or vehicles with advanced technologies may be used to show compliance with any standards of this part or 40 CFR part 1036, provided they are converted using good engineering judgment to be equivalent to credits calculated under that part.

(8) The provisions of 40 CFR 86.1818 do not apply.

(e) *Useful life.* The useful life values for the standards of this section are those that apply for criteria pollutants under 40 CFR part 86.

(f) *Rolling chassis exclusion.* The standards of this section apply for each vehicle that is in a complete or cab-complete configuration when first sold as a vehicle. The standards of this section do not apply for other vehicles. The vehicle standards and requirements of § 1037.105 apply for the excluded vehicles. The GHG standards of 40 CFR part 1036 also apply for engines used in these excluded vehicles. If you are not the engine manufacturer, you must notify the engine manufacturers that their engines are subject to 40 CFR part 1036 because you intend to use their engines in your excluded vehicles.

(g) *Low-volume exclusion.* You may exclude a limited number of vehicles from the standards of this section, as specified in this paragraph (g). The number of excluded vehicles may not exceed 2,000 in any model year, unless your total production of vehicles in this category for that model year is greater than 100,000 vehicles and your excluded vehicles are not more than 2.000 percent of your actual U.S.-directed production volume in this category for any model year. For example, a vehicle manufacturer producing 200,000 vehicles in a given model year could exclude up to 4,000 vehicles under this paragraph (g). The vehicle standards and requirements of § 1037.105 apply for the excluded vehicles. The GHG standards of 40 CFR part 1036 also apply for engines used in these excluded vehicles. We may require you to submit a pre-production plan describing how you will use the provisions of this paragraph (g). If you are not the engine manufacturer, you must notify the engine manufacturers that their engines are subject to 40 CFR part 1036 because you intend to use their engines in your excluded vehicles.

(h) *Cab-complete vehicles.* The provisions of this section apply to cab-complete vehicles in the same manner as they apply to complete vehicles, except as specified in this paragraph (h). Calculate the target value based on the same work factor value that applies for the most similar complete vehicle you certify. Test these cab-complete vehicles using the same test weight and other dynamometer settings that apply for the complete vehicle from which you used the work factor value. For certification, you may submit the test data from that similar vehicle instead of performing the test on the cab-complete vehicle.

(i) *Applicability of part 1037 provisions.* Except as specified in this section, the requirements of this part do not apply to vehicles certified to the standards of this section. The following provisions are the only provisions of this part that apply to vehicles certified under this section:

(1) The provisions of this section.

(2) The evaporative emission standards in § 1037.103.

(3) The air conditioning standards in § 1037.115.

(3) The curb weight provisions of § 1037.140.

(4) The interim provisions of § 1037.150.

(5) The reporting provisions of § 1037.755.

(6) The definitions of § 1037.801.

§ 1037.105 Exhaust emission standards for CO_2, CH_4, and N_2O for vocational vehicles.

(a) The standards of this section apply for the following vehicles:

(1) Vehicles above 14,000 pounds GVWR but at or below 26,000 pounds GVWR.

(2) Vehicles above 26,000 pounds GVWR that are not tractors.

(3) Vehicles at or below 14,000 pounds GVWR that are excluded from the standards in § 1037.104 under § 1037.104(f) or (g).

(b) The CO_2 standards of this section are given in Table 1 to this section. The provisions of § 1037.241 specify how to comply with these standards.

Table 1 to § 1037.105—CO_2 Standards for Vocational Vehicles

GVWR (pounds)	CO_2 Standard (g/ton-mile) for Model Years 2014-2016	CO_2 Standard (g/ton-mile) for Model Year 2017 and later
GVWR ≤ 19,500	358	344
19,500 < GVWR ≤ 33,000	212	204
33,000 < GVWR	109	107

(c) No CH_4 or N_2O standards apply under this section. *See* 40 CFR part 1036 for CH_4 or N_2O standards that apply to engines used in these vehicles.

(d) You may generate or use emission credits under the ABT program, as described in subpart H of this part. This requires that you specify a Family Emission Limit (FEL) for each pollutant you include in the ABT program for each vehicle family. The FEL may not be less than the result of emission modeling from § 1037.520. These FELs serve as the emission standards for the vehicle family instead of the standards specified in paragraph (b) of this section.

(e) The useful life values for the standards of this section are those that apply for criteria pollutants under 40 CFR part 86.

(f) See § 1037.630 for provisions that exempt certain vehicles used in offroad operation from the standards of this section.

§ 1037.106 Exhaust emission standards for CO_2, CH_4, and N_2O for tractors above 26,000 pounds GVWR.

The following CO_2 standards apply for tractors above 26,000 pounds GVWR:

Table 1 to § 1037.106—CO_2 Standards for Tractors above 26,000 Pounds GVWR

GVWR (pounds)	Sub-category	CO_2 Standard (g/ton-mile) for Model Years 2014-2016	CO_2 Standard (g/ton-mile) for Model Year 2017 and later
26,000 < GVWR ≤ 33,000	Low-Roof and Mid-Roof (all cab styles)	104	103
	High-Roof (all cab styles)	118	116
GVWR > 33,000	Low-Roof Day Cab	79	78
	Low-Roof Sleeper Cab	65	64
	Mid-Roof Day Cab	79	78
	Mid-Roof Sleeper Cab	70	69
	High-Roof Day Cab	87	86
	High-Roof Sleeper Cab	73	71

(b) No CH_4 or N_2O standards apply under this section. *See* 40 CFR part 1036 for CH_4 or N_2O standards that apply to engines used in these vehicles.

(c) You may generate or use emission credits under the ABT program, as described in subpart H of this part. This requires that you specify a Family Emission Limit (FEL) for each pollutant you include in the ABT program for each vehicle family. The FEL may not be less than the result of emission modeling from § 1037.520. These FELs serve as the emission standards for the specific vehicle family instead of the standards specified in paragraph (a) of this section.

(d) The useful life values for the standards of this section are those that apply to the engine or vehicle for criteria pollutants under 40 CFR part 86.

(e) *See* § 1037.630 for provisions that exempt certain vehicles use in offroad

operation from the standards of this section.

§ 1037.115 Other requirements.

Vehicles required to meet the emission standards of this part must meet the following additional requirements, except as noted elsewhere in this part:

(a) *Adjustable parameters.* Vehicles that have adjustable parameters must meet all the requirements of this part for any adjustment in the physically adjustable range. We may require that you set adjustable parameters to any specification within the adjustable range during any testing. *See* 40 CFR part 86 for information related to determining whether or not an operating parameter is considered adjustable. You must ensure safe vehicle operation throughout the physically adjustable range of each adjustable parameter, including consideration of production tolerances. Note that adjustable roof fairings are deemed to not be adjustable parameters.

(b) *Prohibited controls.* You may not design your vehicles with emission control devices, systems, or elements of design that cause or contribute to an unreasonable risk to public health, welfare, or safety while operating. For example, this would apply if the vehicle emits a noxious or toxic substance it would otherwise not emit that contributes to such an unreasonable risk.

(c) *Air conditioning leakage.* Loss of refrigerant from your air conditioning systems may not exceed 1.50 percent per year. Calculate the absolute leakage rate in g/year as specified in 40 CFR 86.166–12. Calculate the percent leakage rate as: [absolute leakage rate (g/yr)] ÷ [total refrigerant capacity (g)] × 100. *See* § 1037.150 for vocational vehicles.

(1) For purpose of this requirement, "refrigerant capacity" is the total mass of refrigerant recommended by the vehicle manufacturer as representing a full charge. Where full charge is specified as a pressure, use good engineering judgment to convert the pressure and system volume to a mass.

(2) If your system uses a refrigerant other than HFC–134a, adjust your leakage rate by multiplying it by the global warming potential of your refrigerant and dividing the product by 124 (which is the global warming potential of HFC–134a). Determine global warming potentials consistent with 40 CFR 86.1866–12.

§ 1037.120 Emission-related warranty requirements.

(a) *General requirements.* You must warrant to the ultimate purchaser and each subsequent purchaser that the new vehicle, including all parts of its emission control system, meets two conditions:

(1) It is designed, built, and equipped so it conforms at the time of sale to the ultimate purchaser with the requirements of this part.

(2) It is free from defects in materials and workmanship that may keep it from meeting these requirements.

(b) *Warranty period.* Your emission-related warranty with respect to greenhouse gas and evaporative emissions must be valid for at least as long as the minimum periods specified in 40 CFR part 86 for the engine used in the vehicle. You may offer an emission-related warranty more generous than we require. The emission-related warranty for the vehicle may not be shorter than any published warranty you offer with or without charge for the vehicle. Similarly, the emission-related warranty for any component may not be shorter than any published warranty you offer with or without charge for that component. The warranty period begins when the vehicle is placed into service.

(c) *Components covered.* The emission-related warranty covers vehicle speed limiters, idle shutdown systems, fairings, hybrid system components, and all components whose failure would increase a vehicle's evaporative emissions. The emission-related warranty covers these components even if another company produces the component. Your emission-related warranty does not need to cover components whose failure would not increase a vehicle's emissions of any regulated pollutant.

(d) *Limited applicability.* You may deny warranty claims under this section if the operator caused the problem through improper maintenance or use, as described in 40 CFR 1068.115.

(e) *Owners manual.* Describe in the owners manual the emission-related warranty provisions from this section that apply to the vehicle.

§ 1037.125 Maintenance instructions and allowable maintenance.

Give the ultimate purchaser of each new vehicle written instructions for properly maintaining and using the vehicle, including the emission control system. The maintenance instructions also apply to service accumulation on any of your emission-data vehicles. *See* paragraph (i) of this section for requirements related to tire replacement.

(a) *Critical emission-related maintenance.* Critical emission-related maintenance includes any adjustment, cleaning, repair, or replacement of critical emission-related components. This may also include additional emission-related maintenance that you determine is critical if we approve it in advance. You may schedule critical emission-related maintenance on these components if you demonstrate that the maintenance is reasonably likely to be done at the recommended intervals on in-use vehicles. We will accept scheduled maintenance as reasonably likely to occur if you satisfy any of the following conditions:

(1) You present data showing that, if a lack of maintenance increases emissions, it also unacceptably degrades the vehicle's performance.

(2) You present survey data showing that at least 80 percent of vehicles in the field get the maintenance you specify at the recommended intervals.

(3) You provide the maintenance free of charge and clearly say so in your maintenance instructions.

(4) You otherwise show us that the maintenance is reasonably likely to be done at the recommended intervals.

(b) *Recommended additional maintenance.* You may recommend any additional amount of maintenance on the components listed in paragraph (a) of this section, as long as you state clearly that these maintenance steps are not necessary to keep the emission-related warranty valid. If operators do the maintenance specified in paragraph (a) of this section, but not the recommended additional maintenance, this does not allow you to disqualify those vehicles from in-use testing or deny a warranty claim. Do not take these maintenance steps during service accumulation on your emission-data vehicles.

(c) *Special maintenance.* You may specify more frequent maintenance to address problems related to special situations, such as atypical vehicle operation. You must clearly state that this additional maintenance is associated with the special situation you are addressing. We may disapprove your maintenance instructions if we determine that you have specified special maintenance steps to address vehicle operation that is not atypical, or that the maintenance is unlikely to occur in use. If we determine that certain maintenance items do not qualify as special maintenance under this paragraph (c), you may identify this as recommended additional maintenance under paragraph (b) of this section.

(d) *Noncritical emission-related maintenance.* Subject to the provisions of this paragraph (d), you may schedule any amount of emission-related inspection or maintenance that is not

covered by paragraph (a) of this section (that is, maintenance that is neither explicitly identified as critical emission-related maintenance, nor that we approve as critical emission-related maintenance). Noncritical emission-related maintenance generally includes maintenance on the components we specify in 40 CFR part 1068, Appendix I, that is not covered in paragraph (a) of this section. You must state in the owners manual that these steps are not necessary to keep the emission-related warranty valid. If operators fail to do this maintenance, this does not allow you to disqualify those vehicles from in-use testing or deny a warranty claim. Do not take these inspection or maintenance steps during service accumulation on your emission-data vehicles.

(e) *Maintenance that is not emission-related.* For maintenance unrelated to emission controls, you may schedule any amount of inspection or maintenance. You may also take these inspection or maintenance steps during service accumulation on your emission-data vehicles, as long as they are reasonable and technologically necessary. This might include adding engine oil, changing air, fuel, or oil filters, servicing engine-cooling systems, and adjusting idle speed, governor, engine bolt torque, valve lash, or injector lash. You may perform this nonemission-related maintenance on emission-data vehicles at the least frequent intervals that you recommend to the ultimate purchaser (but not the intervals recommended for severe service).

(f) *Source of parts and repairs.* State clearly on the first page of your written maintenance instructions that a repair shop or person of the owner's choosing may maintain, replace, or repair emission control devices and systems. Your instructions may not require components or service identified by brand, trade, or corporate name. Also, do not directly or indirectly condition your warranty on a requirement that the vehicle be serviced by your franchised dealers or any other service establishments with which you have a commercial relationship. You may disregard the requirements in this paragraph (f) if you do one of two things:

(1) Provide a component or service without charge under the purchase agreement.

(2) Get us to waive this prohibition in the public's interest by convincing us the vehicle will work properly only with the identified component or service.

(g) [Reserved]

(h) *Owners manual.* Explain the owner's responsibility for proper maintenance in the owners manual.

(i) *Tire maintenance and replacement.* Include instructions that will enable the owner to replace tires so that the vehicle conforms to the original certified vehicle configuration.

§ 1037.135 Labeling.

(a) Assign each vehicle a unique identification number and permanently affix, engrave, or stamp it on the vehicle in a legible way. For example, the vehicle identification number (VIN) serves this purpose.

(b) At the time of manufacture, affix a permanent and legible label identifying each vehicle. The label must be—

(1) Attached in one piece so it is not removable without being destroyed or defaced.

(2) Secured to a part of the vehicle needed for normal operation and not normally requiring replacement.

(3) Durable and readable for the vehicle's entire life.

(4) Written in English.

(c) The label must—

(1) Include the heading "VEHICLE EMISSION CONTROL INFORMATION".

(2) Include your full corporate name and trademark. You may identify another company and use its trademark instead of yours if you comply with the branding provisions of 40 CFR 1068.45.

(3) Include EPA's standardized designation for the vehicle family (and subfamily, where applicable).

(4) State the regulatory sub-category that determines the applicable emission standards for the vehicle family (*see* definition in § 1037.801).

(5) State the date of manufacture [DAY (optional), MONTH, and YEAR]. You may omit this from the label if you keep a record of the vehicle-manufacture dates and provide it to us upon request.

(6) State the FELs to which the vehicles are certified if certification depends on the ABT provisions of subpart H of this part.

(7) Identify the emission control system. Use terms and abbreviations as described in 40 CFR 1068.45 or other applicable conventions.

(8) Identify any requirements for fuel and lubricants that do not involve fuel-sulfur levels.

(9) State: "THIS VEHICLE COMPLIES WITH U.S. EPA REGULATIONS FOR [MODEL YEAR] HEAVY-DUTY-VEHICLES."

(10) Include the following statement, if applicable: "THIS VEHICLE IS DESIGNED TO COMPLY WITH EVAPORATIVE EMISSION STANDARDS WITH UP TO x GALLONS OF FUEL TANK CAPACITY." Complete this statement by identifying the maximum specified fuel tank capacity associated with your certification.

(d) You may add information to the emission control information label to identify other emission standards that the vehicle meets or does not meet (such as European standards). You may also add other information to ensure that the vehicle will be properly maintained and used. However, if you provide additional information on the label, you may not omit any required information on the basis that a label containing all of the required information will not fit on the vehicle.

(e) You may ask us to approve modified labeling requirements in this part 1037 if you show that it is necessary or appropriate. We will approve your request if your alternate label is consistent with the requirements of this part.

§ 1037.140 Curb weight and roof height.

(a) Where applicable, a vehicle's curb weight and roof height are determined from nominal design specifications, as provided in this section. Round the weight to the nearest pound and height to the nearest inch.

(b) The nominal design specifications must be within the range of the actual weights and roof heights of production vehicles considering normal production variability. If after production begins it is determined that your nominal design specifications do not represent production vehicles, we may require you to amend your application for certification under § 1037.225.

(c) If your vehicle is equipped with an adjustable roof fairing, measure the roof height with the fairing in its lowest setting.

§ 1037.141 Determining aerodynamic bins for tractors.

Demonstrating compliance with the emission standards in § 1037.106 depends on computer modeling as described in § 1037.520, which in turn depends on establishing a vehicle's drag coefficient. This section differentiates vehicles into apparent bin categories based on vehicle design characteristics that affect aerodynamic drag. These apparent bin categories are used to verify drag coefficients determined under § 1037.520. Each of these apparent bin categories is associated with a range of expected drag coefficient values. Section 1037.520 describes how to establish input values for emission modeling based on the empirical value for a specific vehicle and how that value

relates to the apparent bin category as described in this section. Determine the apparent bin category for your vehicle as follows:

(a) Your vehicle is in the "Classic" category if either of the following is true:

(1) It includes an external air cleaner and/or a B-pillar exhaust stack.

(2) It includes two or more of the following: Bug deflectors, custom sunshades, external horns, external lights, or more than two external mirrors that are not streamlined (*i.e.,* aerodynamically efficient).

(b) Your vehicle is in the "Conventional" category if it does not meet the criteria specified for any other apparent bin category.

(c) Your vehicle is in the "Smartway" category if it does not meet the criteria for "Advanced Smartway" or "Advanced Smartway II" and either of the following is true:

(1) The vehicle has all of the following:

(i) A fully enclosed roof fairing.

(ii) Side extending gap reducers.

(iii) Fuel tank fairings or aerodynamic fuel tanks.

(iv) Streamlined grill, hood, mirrors, and bumper.

(2) The vehicle has a low-roof or mid-roof design and has all the features identified in paragraph (c)(1) of this section except for the roof fairing.

(d) Your vehicle is in the "Advanced Smartway" category if it meets the criteria of either paragraph (c)(1) or (2) of this section but not the criteria for "Advanced Smartway II", and the vehicle incorporates at least two of the following features:

(1) Underbody airflow treatment.

(2) Down exhaust.

(3) Lowered ride height.

(e) Your vehicle is in the "Advanced Smartway II" category if it meets the criteria of either paragraph (c)(1) or (2) of this section; it meets all the criteria of paragraph (d)(1) through (3) of this section; and it incorporates aerodynamic improvements not in commercial use in 2010.

§ 1037.150 Interim provisions.

The provisions in this section apply instead of other provisions in this part.

(a) *Incentives for early introduction.* The provisions of this paragraph (a) apply with respect to vehicles produced in model years before 2014. Manufacturers may voluntarily certify in model year 2013 (or earlier model years for electric vehicles) to the greenhouse gas standards of this part. To do so for any vehicles other than electric vehicles, you must certify your entire U.S.-directed production volume within the averaging set to these standards. Calculate credits relative to the standard that would apply in model year 2014 using the equations in subpart H of this part. These credits may be used to show compliance with the standards of this part for 2014 and later model years. We recommend that you notify EPA of your intent to use this provision before submitting your applications.

(b) *Phase-in provisions.* Each manufacturer must choose one of the following options for phasing in the standards of § 1037.104:

(1) To implement the phase-in under this paragraph (b)(1), the standards in § 1037.104 apply as specified for model year 2018, with compliance for those vehicles in model years 2014 through 2017 based on the CO_2 target values specified in the following table:

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Table 1 to § 1037.150

Model Year and Engine Cycle	Alternate CO_2 Target (g/mile)
2014 Spark-Ignition	[0.0482 × (WF)] + 371
2015 Spark-Ignition	[0.0479 × (WF)] + 369
2016 Spark-Ignition	[0.0469 × (WF)] + 362
2017 Spark-Ignition	[0.0460 × (WF)] + 354
2014 Compression-Ignition	[0.0478 × (WF)] + 368
2015 Compression-Ignition	[0.0474 × (WF)] + 366
2016 Compression-Ignition	[0.0460 × (WF)] + 354
2017 Compression-Ignition	[0.0445 × (WF)] + 343

To implement the phase-in under this paragraph (b)(2), the standards in § 1037.104 apply as specified for model year 2019, with compliance for those vehicles in model years 2014 through 2018 based on the CO_2 target values specified in the following table:

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Table 2 to § 1037.150

Model Year and Engine Cycle	Alternate CO_2 Target (g/mile)
2014 Spark-Ignition	[0.0482 × (WF)] + 371
2015 Spark-Ignition	[0.0479 × (WF)] + 369
2016-2018 Spark-Ignition	[0.0456 × (WF)] + 352
2014 Compression-Ignition	[0.0478 × (WF)] + 368
2015 Compression-Ignition	[0.0474 × (WF)] + 366
2016-2018 Compression-Ignition	[0.0440 × (WF)] + 339

(c) *Provisions for small manufacturers.* Manufacturers meeting the small business criteria specified in 13 CFR 121.201 for "Heavy Duty Truck Manufacturing" are not subject to the greenhouse gas standards of §§ 1037.104 through 1037.106, as specified in this paragraph (c). Qualifying manufacturers must notify the Designated Compliance Officer before introducing these excluded vehicles into U.S. commerce. This notification must include a description of the manufacturer's qualification as a small business under 13 CFR 121.201.

(d) *Air conditioning leakage for vocational vehicles.* The air conditioning leakage standard of § 1037.115 does not apply for vocational vehicles.

(e) *Approval of alternate methods to determine drag coefficients.* For model years before 2017, you must obtain preliminary approval before using any methods other than coastdown testing to determine drag coefficients under § 1037.520.

(f) *Model year 2014 N_2O standards.* In model year 2014, manufacturers may show compliance with the N_2O standards using an engineering analysis.

(g) *Electric vehicles.* All electric vehicles are deemed to have zero emissions of CO_2, CH_4, and N_2O. No emission testing is required for such electric vehicles.

Subpart C—Certifying Vehicle Families

§ 1037.201 General requirements for obtaining a certificate of conformity.

(a) You must send us a separate application for a certificate of conformity for each vehicle family. A certificate of conformity is valid from the indicated effective date until December 31 of the model year for which it is issued. You must renew your certification annually for any vehicles you continue to produce.

(b) The application must contain all the information required by this part and must not include false or incomplete statements or information (*see* § 1037.255).

(c) We may ask you to include less information than we specify in this subpart, as long as you maintain all the information required by § 1037.250.

(d) You must use good engineering judgment for all decisions related to your application (*see* 40 CFR 1068.5).

(e) An authorized representative of your company must approve and sign the application.

(f) *See* § 1037.255 for provisions describing how we will process your application.

(g) We may require you to deliver your test vehicles to a facility we designate for our testing. Alternatively, you may choose to deliver another vehicle that is identical in all material respects to the test vehicle. Where certification is based on testing components such as tires, we may require you to deliver test components to a facility we designate for our testing.

§ 1037.205 What must I include in my application?

This section specifies the information that must be in your application, unless we ask you to include less information under § 1037.201(c). We may require you to provide additional information to evaluate your application. Note that references to testing and emission-data vehicles refer to testing vehicles to measure aerodynamic drag, assess hybrid vehicle performance, and/or measure evaporative emissions.

(a) Describe the vehicle family's specifications and other basic parameters of the vehicle's design and emission controls. List the fuel type on which your vehicles are designed to operate (for example, ultra low-sulfur diesel fuel). List each distinguishable vehicle configuration in the vehicle family.

(b) Explain how the emission control system operates. As applicable, describe in detail all system components for controlling greenhouse gas and evaporative emissions, including all auxiliary emission control devices (AECDs) and all fuel-system components you will install on any production vehicle. Identify the part number of each component you describe. For this paragraph (b), treat as separate AECDs any devices that modulate or activate differently from each other.

(c) [Reserved]

(d) Describe any vehicles you selected for testing and the reasons for selecting them.

(e) Describe any test equipment and procedures that you used, including any special or alternate test procedures you used (*see* § 1037.501).

(f) Describe how you operated any emission-data vehicle before testing, including the duty cycle and the number of vehicle operating miles used to stabilize emission levels. Explain why you selected the method of service accumulation. Describe any scheduled maintenance you did.

(g) List the specifications of any test fuel to show that it falls within the required ranges we specify in 40 CFR part 1065.

(h) Identify the vehicle family's useful life.

(i) Include the maintenance instructions you will give to the ultimate purchaser of each new vehicle (*see* § 1037.125).

(j) Describe your emission control information label (*see* § 1037.135).

(k) Identify the emission standards or FELs to which you are certifying vehicles in the vehicle family. For families containing multiple subfamilies, identify the FELs for each subfamily.

(l) Where applicable, identify the vehicle family's deterioration factors and describe how you developed them. Present any emission test data you used for this.

(m) Where applicable, state that you operated your emission-data vehicles as described in the application (including the test procedures, test parameters, and

test fuels) to show you meet the requirements of this part.

(n) Present evaporative test data to show your vehicles meet the evaporative emission standards we specify in subpart B of this part, if applicable. Report all test results, including test results from invalid tests or from any other tests, whether or not they were conducted according to the test procedures of subpart F of this part. We may ask you to send other information to confirm that your tests were valid under the requirements of this part and 40 CFR part 86.

(o) Report modeling results for each subfamily. Include modeling inputs and detailed descriptions of how they were derived.

(p) Describe all adjustable operating parameters (*see* § 1037.115(e)), including production tolerances. You do not need to include parameters that do not affect emissions covered by your application. Include the following in your description of each parameter:

(1) The nominal or recommended setting.

(2) The intended physically adjustable range.

(3) The limits or stops used to establish adjustable ranges.

(4) Information showing why the limits, stops, or other means of inhibiting adjustment are effective in preventing adjustment of parameters on in-use vehicles to settings outside your intended physically adjustable ranges.

(q) [Reserved]

(r) Unconditionally certify that all the vehicles in the vehicle family comply with the requirements of this part, other referenced parts of the CFR, and the Clean Air Act.

(s) Include good-faith estimates of U.S.-directed production volumes. Include a justification for the estimated production volumes if they are substantially different than actual production volumes in earlier years for similar vehicle models.

(t) Include the information required by other subparts of this part. For example, include the information required by § 1037.725 if you participate in the ABT program.

(u) Include other applicable information, such as information specified in this part or 40 CFR part 1068 related to requests for exemptions.

(v) Name an agent for service located in the United States. Service on this agent constitutes service on you or any of your officers or employees for any action by EPA or otherwise by the United States related to the requirements of this part.

§ 1037.210 Preliminary approval before certification.

If you send us information before you finish the application, we may review it and make any appropriate determinations. Decisions made under this section are considered to be preliminary approval, subject to final review and approval. We will generally not reverse a decision where we have given you preliminary approval, unless we find new information supporting a different decision. If you request preliminary approval related to the upcoming model year or the model year after that, we will make best-efforts to make the appropriate determinations as soon as practicable. We will generally not provide preliminary approval related to a future model year more than two years ahead of time.

§ 1037.220 Amending maintenance instructions.

You may amend your emission-related maintenance instructions after you submit your application for certification as long as the amended instructions remain consistent with the provisions of § 1037.125. You must send the Designated Compliance Officer a written request to amend your application for certification for a vehicle family if you want to change the emission-related maintenance instructions in a way that could affect emissions. In your request, describe the proposed changes to the maintenance instructions. If operators follow the original maintenance instructions rather than the newly specified maintenance, this does not allow you to disqualify those vehicles from in-use testing or deny a warranty claim.

(a) If you are decreasing or eliminating any specified maintenance, you may distribute the new maintenance instructions to your customers 30 days after we receive your request, unless we disapprove your request. This would generally include replacing one maintenance step with another. We may approve a shorter time or waive this requirement.

(b) If your requested change would not decrease the specified maintenance, you may distribute the new maintenance instructions anytime after you send your request. For example, this paragraph (b) would cover adding instructions to increase the frequency of filter changes for vehicles in severe-duty applications.

(c) You need not request approval if you are making only minor corrections (such as correcting typographical mistakes), clarifying your maintenance instructions, or changing instructions for maintenance unrelated to emission control. We may ask you to send us copies of maintenance instructions revised under this paragraph (c).

§ 1037.225 Amending applications for certification.

Before we issue you a certificate of conformity, you may amend your application to include new or modified vehicle configurations, subject to the provisions of this section. After we have issued your certificate of conformity, you may send us an amended application requesting that we include new or modified vehicle configurations within the scope of the certificate, subject to the provisions of this section. You must amend your application if any changes occur with respect to any information that is included or should be included in your application.

(a) You must amend your application before you take any of the following actions:

(1) Add a vehicle configuration to a vehicle family. In this case, the vehicle configuration added must be consistent with other vehicle configurations in the vehicle family with respect to the criteria listed in § 1037.230.

(2) Change a vehicle configuration already included in a vehicle family in a way that may affect emissions, or change any of the components you described in your application for certification. This includes production and design changes that may affect emissions any time during the vehicle's lifetime.

(3) Modify an FEL for a vehicle family as described in paragraph (f) of this section.

(b) To amend your application for certification, send the relevant information to the Designated Compliance Officer.

(1) Describe in detail the addition or change in the vehicle model or configuration you intend to make.

(2) Include engineering evaluations or data showing that the amended vehicle family complies with all applicable requirements. You may do this by showing that the original emission-data vehicle is still appropriate for showing that the amended family complies with all applicable requirements.

(3) If the original emission-data vehicle or emission modeling for the vehicle family is not appropriate to show compliance for the new or modified vehicle configuration, include new test data or emission modeling showing that the new or modified vehicle configuration meets the requirements of this part.

(c) We may ask for more test data or engineering evaluations. You must give

us these within 30 days after we request them.

(d) For vehicle families already covered by a certificate of conformity, we will determine whether the existing certificate of conformity covers your newly added or modified vehicle. You may ask for a hearing if we deny your request (*see* § 1037.820).

(e) For vehicle families already covered by a certificate of conformity, you may start producing the new or modified vehicle configuration anytime after you send us your amended application and before we make a decision under paragraph (d) of this section. However, if we determine that the affected vehicles do not meet applicable requirements, we will notify you to cease production of the vehicles and may require you to recall the vehicles at no expense to the owner. Choosing to produce vehicles under this paragraph (e) is deemed to be consent to recall all vehicles that we determine do not meet applicable emission standards or other requirements and to remedy the nonconformity at no expense to the owner. If you do not provide information required under paragraph (c) of this section within 30 days after we request it, you must stop producing the new or modified vehicles.

(f) You may ask us to approve a change to your FEL in certain cases after the start of production. The changed FEL may not apply to vehicles you have already introduced into U.S. commerce, except as described in this paragraph (f). If we approve a changed FEL after the start of production, you must include the new FEL on the emission control information label for all vehicles produced after the change. You may ask us to approve a change to your FEL in the following cases:

(1) You may ask to raise your FEL for your vehicle family at any time. In your request, you must show that you will still be able to meet the emission standards as specified in subparts B and H of this part. Use the appropriate FELs with corresponding production volumes to calculate emission credits for the model year, as described in subpart H of this part.

(2) Where testing applies, you may ask to lower the FEL for your vehicle family only if you have test data from production vehicles showing that emissions are below the proposed lower FEL. Otherwise, you may ask to lower your FEL for your vehicle family at any time. The lower FEL applies only to vehicles you produce after we approve the new FEL. Use the appropriate FELs with corresponding production volumes to calculate emission credits for the model year, as described in subpart H of this part.

§ 1037.230 Vehicle families.

(a) For purposes of certifying your vehicles to greenhouse gas standards, divide your product line into families of vehicles that have similar basic structures and are subject to the same standards. Your vehicle family is limited to a single model year. Group vehicles in the same vehicle family if they are the same in all the following aspects:

(1) The regulatory sub-category, as follows:

(i) Vocational vehicles at or below 19,500 pounds GVWR.

(ii) Vocational vehicles above 19,500 pounds GVWR but at or below 33,000 pounds GVWR.

(iii) Vocational vehicles above 33,000 pounds GVWR.

(iv) Low-roof and mid-roof day cab tractors above 26,000 pounds GVWR but at or below 33,000 pounds GVWR.

(v) High-roof tractors above 26,000 pounds GVWR but at or below 33,000 pounds GVWR.

(vi) Low-roof day cab tractors above 33,000 pounds GVWR.

(vii) Low-roof sleeper cab tractors above 33,000 pounds GVWR.

(viii) Mid-roof day cab tractors above 33,000 pounds GVWR.

(ix) Mid-roof sleeper cab tractors above 33,000 pounds GVWR.

(x) High-roof day cab tractors above 33,000 pounds GVWR.

(xi) High-roof sleeper cab tractors above 33,000 pounds GVWR.

(2) Vehicle width (as measured from hub to hub on the front axle).

(3) Basic design of the vehicle passenger and engine compartments. For purposes of this criterion, consider only those features from the B-pillar forward.

(4) Whether or they are certified using the provisions of this part for hybrid vehicles or other advanced technologies.

(b) Subdivide your greenhouse gas vehicle families into subfamilies that include vehicles from identical bins for the aerodynamic drag coefficient for each modeling input, as specified in § 1037.520(b). For example, all vehicles within a tractor vehicle family would be included in the same subfamily if they are all in the "SmartWay" aerodynamic bin and in the "Automatic Engine Shut-Off Only" bin, none of them include weight reduction or vehicle speed limiters, and they all use the same tires.

(c) For a vehicle model that straddles a roof-height division, you may include all the vehicles in the same vehicle family if you certify the vehicle family to the more stringent standards.

(d) Divide your vehicles that are subject to evaporative emission standards into groups of vehicles with similar physical features expected to affect evaporative emissions. Group vehicles in the same evaporative emission family if they are the same in all the following aspects, unless we approve a better way of grouping vehicles into families that have similar emission control characteristics:

(1) Method of vapor storage, including the number of vapor storage devices, the working material, and the total working capacity of vapor storage (as determined under 40 CFR 86.1232–96(h)(1)(iv)). You may consider the working capacity to be the same if the values differ by 20 grams or less.

(2) Method of purging stored vapors.

(3) Material for liquid fuel hose.

§ 1037.241 Demonstrating compliance with exhaust emission standards for greenhouse gas pollutants.

(a) For purposes of certification, your vehicle family is considered in compliance with the emission standards in § 1037.105 or § 1037.106 if all vehicle configurations in that family have modeled CO_2 emission rates (as specified in subpart F of this part) at or below the applicable standards. *See* 40 CFR part 86, subpart S, for showing compliance with the standards of § 1037.104. Note that your FELs are considered to be the applicable emission standards with which you must comply if you participate in the ABT program in subpart H of this part.

(b) Your vehicle family is deemed not to comply if any vehicle configuration in that family has a modeled CO_2 emission rate that is above its FEL.

(c) We may require you to provide an engineering analysis showing that the performance of your emission controls will not deteriorate during the useful life with proper maintenance. If we determine that your emission controls are likely to deteriorate during the useful life, we may require you to develop and apply deterioration factors (DFs) consistent with good engineering judgment. For example, you may need to apply a DF to address deterioration of battery performance for a hybrid-electric vehicle.

§ 1037.243 Demonstrating compliance with evaporative emission standards.

(a) For purposes of certification, your evaporative emission family is considered in compliance with the evaporative emission standards in subpart B of this part if you do either of the following:

(1) You have test results showing emission levels at or below the standards in § 1037.103.

(2) For vehicles above 26,000 pounds GVWR, you prepare an engineering analysis showing that your vehicles in the family will comply with applicable standards throughout the useful life.

(b) Your evaporative emission family is deemed not to comply if any vehicle representing the family has test results showing emission levels above any of the standards in § 1037.103, with or without deterioration factors. For vehicles above 26,000 pounds GVWR, your evaporative emission family is deemed not to comply if your engineering analysis is not adequate to show that all the vehicles in the family will comply with applicable emission standards throughout the useful life.

(c) To compare emission levels with emission standards, apply deterioration factors to the measured emission levels. Establish an additive deterioration factor for the vehicle family, as described in 40 CFR 86.007–23(b).

(1) For vehicles at or below 26,000 pounds GVWR, establish the deterioration factor based on testing before and after service accumulation. Collect emission data using measurements to one more decimal place than the applicable standard. Use good engineering judgment to perform service accumulation in a way that incorporates the effects of ambient conditions and engine and vehicle operation to ensure that emission measurements represent actual degradation of emission controls from in-use vehicles over the useful life.

(2) For vehicles above 26,000 pounds GVWR, establish the deterioration factor based on an engineering analysis that takes into account the expected aging from in-use vehicles. Your analysis must take into account your testing to establish deterioration factors under paragraph (c)(1) of this section.

(d) You may ask us to approve deterioration factors for a vehicle family based on emission measurements from similar highway vehicles if you have already given us these data for certifying the other vehicles in the same or earlier model years. Use good engineering judgment to decide whether the two vehicles are similar. We will approve your request if you show us that the emission measurements from other vehicles reasonably represent in-use deterioration for the vehicle family for which you have not yet determined deterioration factors.

(e) Apply the deterioration factor to the official emission result, as described in paragraph (c) of this section, then round the adjusted figure to the same number of decimal places as the emission standard. Compare the rounded emission levels to the emission standard for each emission-data vehicle.

§ 1037.250 Reporting and recordkeeping.

(a) Within 45 days after the end of the model year, send the Designated Compliance Officer a report including the total U.S.-directed production volume of vehicles you produced in each vehicle family during the model year. Report the volumes by vehicle configuration, and identify the transmission, axle ratio, and engine in addition to subfamily identifiers. Small manufacturers may omit this requirement.

(b) Organize and maintain the following records:

(1) A copy of all applications and any summary information you send us.

(2) Any of the information we specify in § 1037.205 that you were not required to include in your application.

(3) A detailed history of each emission-data vehicle, if applicable.

(4) Production figures for each vehicle family divided by assembly plant.

(5) Keep a list of vehicle identification numbers for all the vehicles you produce under each certificate of conformity.

(c) Keep data from routine emission tests (such as test cell temperatures and relative humidity readings) for one year after we issue the associated certificate of conformity. Keep all other information specified in this section for eight years after we issue your certificate.

(d) Store these records in any format and on any media, as long as you can promptly send us organized, written records in English if we ask for them. You must keep these records readily available. We may review them at any time.

§ 1037.255 What decisions may EPA make regarding my certificate of conformity?

(a) If we determine your application is complete and shows that the vehicle family meets all the requirements of this part and the Act, we will issue a certificate of conformity for your vehicle family for that model year. We may make the approval subject to additional conditions.

(b) We may deny your application for certification if we determine that your vehicle family fails to comply with emission standards or other requirements of this part or the Clean Air Act. We will base our decision on all available information. If we deny your application, we will explain why in writing.

(c) In addition, we may deny your application or suspend or revoke your certificate if you do any of the following:

(1) Refuse to comply with any testing or reporting requirements.

(2) Submit false or incomplete information (paragraph (e) of this section applies if this is fraudulent).

(3) Render any test data inaccurate.

(4) Deny us from completing authorized activities despite our presenting a warrant or court order (*see* 40 CFR 1068.20). This includes a failure to provide reasonable assistance.

(5) Produce vehicles for importation into the United States at a location where local law prohibits us from carrying out authorized activities.

(6) Fail to supply requested information or amend your application to include all vehicles being produced.

(7) Take any action that otherwise circumvents the intent of the Act or this part.

(d) We may void your certificate if you do not keep the records we require or do not give us information as required under this part or the Act.

(e) We may void your certificate if we find that you intentionally submitted false or incomplete information.

(f) If we deny your application or suspend, revoke, or void your certificate, you may ask for a hearing (*see* § 1037.820).

Subpart D—[Reserved]

Subpart E—In-Use Testing

§ 1037.401 General provisions.

We may perform in-use testing of any vehicle subject to the standards of this part.

Subpart F—Test and Modeling Procedures

§ 1037.501 General testing and modeling provisions.

This subpart specifies how to perform emission testing and emission modeling required elsewhere in this part.

(a) Use the equipment and procedures specified in 40 CFR part 86, subpart M, to determine whether vehicles meet the diurnal, running loss, hot soak, and spitback standards specified in § 1037.103. For certification vehicles only, you may ask us to approve subtraction of nonfuel emissions (such as from off-gassing plastic components) from your measured test results. In your request, describe the sources of nonfuel emissions and estimate the decay rate. Quantify the nonfuel emissions based on separate testing.

(b) Where emission testing is required, use the equipment and procedures in 40 CFR part 1066 to determine whether your vehicles meet the duty-cycle emission standards in subpart B of this part. Measure the

emissions of all the exhaust constituents subject to emission standards as specified in 40 CFR part 1066. Use the applicable duty cycles specified in § 1037.510.

(c) [Reserved]

(d) Use the applicable fuels specified 40 CFR part 1065 to perform valid tests.

(1) For service accumulation, use the test fuel or any commercially available fuel that is representative of the fuel that in-use vehicles will use.

(2) For diesel-fueled vehicles, use the appropriate diesel fuel specified for emission testing. Unless we specify otherwise, the appropriate diesel test fuel is the ultra low-sulfur diesel fuel.

(3) For gasoline-fueled vehicles, use the gasoline specified for "General Testing".

(e) You may use special or alternate procedures to the extent we allow them under 40 CFR 1065.10.

(f) This subpart is addressed to you as a manufacturer, but it applies equally to anyone who does testing for you, and to us when we perform testing to determine if your vehicles meet emission standards.

(g) Apply the specification of this paragraph (g) whenever we specify use of standard trailers. A tolerance of ± 2 inches applies for all trailer dimensions. Manufacturers may test with longer trailers. For coastdown testing, load trailers as necessary to reach test weight.

(1) The standard trailer for high-roof tractors is a two-axle dry van box trailer with dimensions of 53.0 feet long, by 102 inches wide, by 162 inches high. The standard trailer has a minimized trailer gap (maximum of 45 inches) and does not include any aerodynamic features such as side fairings, boat tails, or gap reducers.

(2) The standard trailer for mid-roof tractors is a two-axle tanker trailer with dimensions of 40.0 feet long by 124 inches high, and having a 7200 ± 7 gallon tank capacity. The standard trailer does not include any aerodynamic features such as side fairings.

(3) The standard trailer for low-roof tractors is a two-axle flat bed trailer with dimensions of 48.0 feet long and 102 inches wide. The standard trailer does not include any aerodynamic features such as side fairings. It includes a payload of dense material (such as steel plate) covered completely with one or more tarps. For aerodynamic modeling, use an amount equivalent to a standard payload of 25,000 pounds for Class 7 and 38,000 pounds for Class 8.

§ 1037.510 Duty-cycle testing.

This section applies where exhaust emission testing is required, such as when applying the provisions of § 1037.610.

(a) Where applicable, measure emissions by testing the vehicle on a dynamometer with the applicable test cycles. Each test cycle consists of a series of speed commands over time: Variable speeds for the transient test and constant speed for the cruise tests. None of these cycles include vehicle starting or warmup; each test cycle begins with a running, warmed-up vehicle. Start sampling emissions at the start of each cycle. The transient cycle is specified in Appendix I to this part. The 55 mph and 65 mph Cruise cycles are 300 second cycles with constant vehicle speeds of 55.0 mph and 65.0 mph, respectively. The tolerance around these speed setpoints is ±1.0 mph.

(b) Calculate the official emission result from the following weighting factors:

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Table 1 to § 1037.510—Weighting Factors for Duty Cycles

	Transient	55 mph Cruise	65 mph Cruise	PTO
Vocational	42%	21%	37%	0%
Vocational, with PTO	30%	15%	27%	28%
Day Cabs	19%	17%	64%	0%
Sleeper Cabs	5%	9%	86%	0%

(c) For transient testing, compare actual second-by-second vehicle speed with the speed specified in the test cycle and ensure any differences are consistent with the criteria as specified in 40 CFR part 1066. If the speeds do not conform to these criteria, the test is not valid and must be repeated.

(d) Run test cycles as specified in 40 CFR part 86. For cruise cycle testing of vehicles equipped with cruise control, use the vehicle's cruise control to control the vehicle speed.

§ 1037.520 Modeling CO_2 emissions to show compliance.

This section describes how to use the GEM computer model (incorporated by reference in § 1037.810) to show compliance with the CO_2 standards of §§ 1037.105 and 1037.106. Use good engineering judgment when demonstrating compliance using the GEM model.

(a) *General modeling provisions.* To run the GEM model, enter all applicable inputs as specified by the model. All seven of the following inputs apply for sleeper cab tractors, while some do not apply for other regulatory subcategories:

(1) Regulatory class (such as "Class 8 Combination—Sleeper Cab—High Roof").

(2) Coefficient of aerodynamic drag, as described in paragraph (b) of this section. Leave this field blank for vocational vehicles.

(3) Steer tire rolling resistance, as described in paragraph (c) of this section.

(4) Drive tire rolling resistance, as described in paragraph (c) of this section.

(5) Vehicle speed limit, as described in paragraph (d) of this section. Leave this field blank for vocational vehicles.

(6) Vehicle weight reduction, as described in paragraph (e) of this section. Leave this field blank for vocational vehicles.

(7) Extended idle reduction credit, as described in paragraph (f) of this section. Leave this field blank for vehicles other than Class 8 sleeper cabs.

(b) *Coefficient of aerodynamic drag.* Determine the appropriate drag coefficient as follows:

(1) Use the recommended method or an alternate method to establish a value for the vehicle's drag coefficient, rounded to two decimal places as follows:

(i) *Recommended method.* Perform coastdown testing as described in this paragraph (b)(1)(i) to establish the drag coefficient. Use the procedures specified in 40 CFR part 1066, subpart C, with a standard trailer.

(A) Calculate the drag coefficient, C_D, from the following equation:

$$C_D = \frac{D}{2\rho A}$$

Where:

D = a coefficient derived from the coastdown procedures in 40 CFR part 1066, as described in paragraph (b)(1)(i)(B) of this section.

ρ = standard air density. Use $\rho = 1.167$ kg/m^3.

A = standard frontal area, in m^2, as shown in the following table:

Table 1 to § 1037.520—Standard Frontal Area

Class 7		Class 8				
Day Cab		Day Cab		Sleeper Cab		
Low-Roof and Mid-Roof	High-Roof	Low-Roof and Mid-Roof	High-Roof	Low-Roof	Mid-Roof	High-Roof
6.0	9.8	6.0	9.8	6.0	7.7	9.8

(B) Determine the value of D analytically from the data collected during coastdown testing as specified in 40 CFR 1066.210, based on one of the following equations:

$$-M_e \frac{dS}{dt} = A_m + DS_r^2 + ES_r^2 Y^2$$

or

$$-M_e \frac{dS}{dt} = A_m + DS_r^2$$

(ii) *Alternate methods.* You may determine a drag coefficient using an alternate method, consistent with good engineering judgment, based on wind tunnel testing, computational fluid dynamic modeling, or constant-speed road load testing. *See* 40 CFR 1068.5 for provisions describing how we may evaluate your engineering judgment. Use (or assume) a standard trailer for tractor testing and modeling.

(2) Determine the bin category for your vehicle based on the drag coefficient from paragraph (b)(1) of this section as shown in the following table:

Table 2 to § 1037.510—Bin Categories Corresponding to Drag Coefficients

Bin Category	Class 7		Class 8				
	Day Cab		Day Cab		Sleeper Cab		
	Low-Roof and Mid-Roof	High-Roof	Low-Roof and Mid-Roof	High-Roof	Low-Roof	Mid-Roof	High-Roof
Classic	≥0.83	≥0.73	≥0.83	≥0.73	≥0.83	≥0.78	≥0.73
Conventional	0.78-0.82	0.63-0.72	0.78-0.82	0.63-0.72	0.78-0.82	0.73-0.77	0.63-0.72
SmartWay	0.73-0.77	0.58-0.62	0.73-0.77	0.58-0.62	0.73-0.77	0.68-0.72	0.58-0.62
Advanced SmartWay	0.68-0.72	0.53-0.57	0.68-0.72	0.53-0.57	0.68-0.72	0.63-0.67	0.53-0.57
Advanced SmartWay II	≤0.67	≤0.52	≤0.67	≤0.52	≤0.67	≤0.62	≤0.52

(3) Except as specified in paragraph (b)(4) of this section, determine the modeling input for drag coefficient from the following table, based on the vehicle's bin category as described in paragraph (b)(2) of this section:

Table 3 to § 1037.510—**Aerodynamic Input to GEM (C_D)**

Bin Category	Class 7		Class 8				
	Day Cab		Day Cab		Sleeper Cab		
	Low-Roof and Mid-Roof	High-Roof	Low-Roof and Mid-Roof	High-Roof	Low-Roof	Mid-Roof	High-Roof
Classic	0.85	0.75	0.85	0.75	0.85	0.80	0.75
Conventional	0.80	0.68	0.80	0.68	0.80	0.75	0.68
SmartWay	0.75	0.60	0.75	0.60	0.75	0.70	0.60
Advanced SmartWay	0.70	0.55	0.70	0.55	0.70	0.65	0.55
Advanced SmartWay II	0.65	0.50	0.65	0.50	0.65	0.60	0.50

(4) If your drag coefficient from paragraph (b)(1) of this section is below the range of drag coefficient values specified for the applicable bin category in § 1037.141, you may use the drag coefficient determined in paragraph (b)(3) of this section only with our approval. We will approve your request if you demonstrate that you developed your drag coefficient consistent with good engineering judgment. If we deny your request, you must use the drag coefficient corresponding to your vehicle's apparent bin category.

(c) *Steer and drive tire rolling resistance.* Measure tire rolling resistance in kg per metric ton as specified in ISO test method 28580:2009 (incorporated by reference in § 1037.810). For each tire design (including size), measure rolling resistance of at least three different tires of that specific design and perform the test three times for each tire (for a total of at least nine tests per tire design). Use the arithmetic mean of these results. If you obtain your test results from the tire manufacturer or another third party, you must obtain a signed statement from them verifying the tests were conducted according to the requirements of this part. Such statements are deemed to be submissions to EPA.

(d) *Vehicle speed limit.* If the vehicles will be equipped with a tamper-proof vehicle speed limiter, input the maximum vehicle speed to which the vehicle will be limited, in miles per hour. Otherwise leave this field blank. Use good engineering judgment to ensure the limiter is tamper proof. We may require you to obtain preliminary approval for your designs.

(e) *Vehicle weight reduction.* Vehicle weight reduction inputs are specified relative to dual-wide tires with conventional steel wheels. For purposes of this paragraph (e), a light-weight aluminum wheel is one that weighs at least 21 lb less than a comparable conventional steel wheel, and a high-strength steel wheel is one that weighs at least 8 lb less than a comparable conventional steel wheel. The inputs are listed in Table 4 to this section. For example, a tractor with aluminum steer wheels and eight (4 × 2) dual-wide aluminum drive wheels would have an input of 210 lb (2 × 21 + 8 × 21).

Table 4 to § 1037.520—Tire-Related Weight Reductions

Weight Reduction Technology		Weight Reduction (lb per tire or wheel)
Single-Wide Drive Tire with . . .	Steel Wheel	84
	Aluminum Wheel	139
	Light-Weight Aluminum Wheel	147
Steer Tire or Dual-wide Drive Tire with . . .	High-Strength Steel Wheel	8
	Aluminum Wheel	21
	Light-Weight Aluminum Wheel	30

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(f) *Extended idle reduction credit.* If your vehicle is equipped with idle reduction technology that will automatically shut off the main engine after 300 seconds or less, use 5 g/ton-mile as the input. Otherwise leave this field blank.

§ 1037.525 Special procedures for testing hybrid vehicles with power take-off.

This section describes the procedure for quantifying the reduction in greenhouse gas emissions as a result of running power take-off (PTO) devices with a hybrid powertrain. You may ask us to modify the provisions of this section to allow testing non-electric hybrid vehicles, consistent with good engineering judgment.

(a) Select two vehicles for testing as follows:

(1) Select a vehicle with a hybrid powertrain to represent the vehicle family. If your vehicle family includes

more than one vehicle model, use good engineering judgment to select the vehicle type with the maximum number of PTO circuits that has the smallest potential reduction in greenhouse gas emissions.

(2) Select an equivalent conventional vehicle as specified in § 1037.610.

(b) Measure PTO emissions from the conventional vehicle as follows:

(1) Start the engine.

(2) Operate the vehicle over the PTO duty cycle(s) specified in Appendix II of this part. If there is only one PTO circuit, use duty cycle #1; if there are two PTO circuits, use both specified duty cycles. Collect CO_2 emissions during operation over the specified duty cycle(s).

(3) Use the provisions of 40 CFR part 1066 to collect and measure emissions. Calculate emission rates in grams per test without rounding.

(4) Continue testing over the three vehicle drive cycles, as otherwise required by this part.

(5) Calculate combined cycle-weighted emissions of the four cycles as specified in paragraph (d) of this section.

(c) Measure PTO emissions from the hybrid vehicle as follows:

(1) Prepare the vehicle for testing by operating it as needed to stabilize the battery at a full state of charge.

(2) Turn the vehicle "on" such that the PTO system is functional, whether it draws power from the engine or a battery.

(3) Operate the vehicle over the PTO cycle(s) and measure emissions as described in paragraphs (b)(2) and (3) of this section. Use good engineering judgment to minimize the variability in testing between the two types of vehicles.

(4) Continue testing over the three vehicle drive cycles, as otherwise required by this part.

(5) Calculate combined cycle-weighted emissions of the four cycles as specified in paragraph (d) of this section.

(d) Calculate combined cycle-weighted emissions of the four cycles for vocational vehicles as follows:

$$Emissions\,(g/ton-mile) = \frac{1}{payload} \times \frac{0.28\times m_1 + 0.30\times m_2 + 0.15\times m_3 + 0.27\times m_4}{0.30\times 2.84\,miles + 0.15\times 4.58\,miles + 0.27\times 5.41\,miles}$$

Where:

payload = the standard payload, in tons, as specified in § 1037.705.

m_1 = grams of CO_2 emitted over the PTO test cycle.

m_2 = grams of CO_2 emitted over the transient test cycle.

m_3 = grams of CO_2 emitted over the 55 mph cruise test cycle.

m_4 = grams of CO_2 emitted over the 65 mph cruise test cycle.

(e) Follow the provisions of § 1037.610 to calculate improvement factors and benefits for advanced technologies.

Subpart G—Special Compliance Provisions

§ 1037.601 What compliance provisions apply to these vehicles?

(a) Engine and vehicle manufacturers, as well as owners and operators of vehicles subject to the requirements of this part, and all other persons, must observe the provisions of this part, the provisions of the Clean Air Act, and the following provisions of 40 CFR part 1068:

(1) The exemption and importation provisions of 40 CFR part 1068, subparts C and D, apply for vehicles subject to this part 1037, except that the hardship exemption provisions of 40 CFR 1068.245, 1068.250, and 1068.255 do not apply for motor vehicles.

(2) The recall provisions of 40 CFR part 1068, subpart F, apply for vehicles subject to this part 1037. The recall provisions of 40 CFR part 85, subpart S do not apply.

(b) Vehicles exempted from the applicable standards of 40 CFR part 86 are exempt from the standards of this part without request. Similarly, vehicles are exempt without request if the installed engine is exempted from the applicable standards in 40 CFR part 86.

(c) The prohibitions of 40 CFR 86.1854–12 apply for vehicles subject to the requirements of this part.

(d) Except as specifically allowed by this part, it is a violation of section 203(a)(1) of the Clean Air Act (42 U.S.C. 7522(a)(1)) to introduce into U.S. commerce a tractor containing an engine not certified for use in tractors or to introduce into U.S. commerce a vocational vehicle containing an engine not certified for use in vocational vehicles. This prohibition generally applies to the vehicle manufacturer.

§ 1037.610 Hybrid vehicles and other advanced technologies.

(a) This section applies for hybrid vehicles with regenerative braking, vehicles equipped with Rankine-cycle engines, electric vehicles, and fuel cell vehicles. You may not generate credits for engine features for which the engines generate credits under 40 CFR part 1036.

(b) Generate advanced technology emission credits for hybrid vehicles that include regenerative braking (or the equivalent) and energy storage systems and vehicles equipped with Rankine-cycle engines as follows:

(1) Measure the effectiveness of the hybrid system by chassis testing a vehicle equipped with the hybrid system and an equivalent conventional vehicle. For purposes of this paragraph (b), a conventional vehicle is considered to be equivalent if it has the same footprint, intended service class, aerodynamic drag, and other factors not directly related to the hybrid powertrain. If you do not produce an equivalent vehicle, you may create and test a prototype equivalent vehicle. The conventional vehicle is considered Vehicle A and the hybrid vehicle is considered Vehicle B. We may specify an alternate cycle if your vehicle includes a power take-off.

(2) Calculate an improvement factor and g/ton-mile benefit using the following equations and parameters:

(i) Improvement Factor = [(Emission Rate A) − (Emission Rate B)]/(Emission Rate A)

(ii) g/ton-mile benefit = Improvement Factor × (Modeling Result B)

(iii) Emission Rates A and B are the g/ton-mile CO_2 emission rates of the conventional and hybrid vehicles, respectively, as measured under the test procedures specified in this section. Modeling Result B is the g/ton-mile CO_2 emission rate resulting from emission modeling of the hybrid vehicle as specified in § 1037.520.

(3) Use the equations of § 1037.705 to convert the g/ton-mile benefit to emission credits (in Mg). Use the g/ton-mile benefit in place of the (Std-FEL) term.

(c) *See* § 1037.525 for special testing provisions related to hybrid vehicles equipped with power take-off units.

(d) You may use an engineering analysis to calculate an improvement factor for fuel cell vehicles based on measured emissions from the fuel cell vehicle.

(e) For electric vehicles, calculate CO_2 credits using an FEL of 0 g/ton-mile.

(f) Credits generated under this section may be used outside of the averaging set in which they were generated, or you may convert the credits into engine-based credits for use under 40 CFR part 1036, consistent with good engineering judgment.

§ 1037.611 Vehicles with innovative technologies.

This section applies for CO_2 reductions resulting from technologies that were not in common use before 2010 that are not reflected in the specified test procedures and emission models. We may allow you to generate emission credits for model years through 2018 consistent with the provisions of 40 CFR 86.1866–12(d).

§ 1037.620 Shipment of incomplete vehicles to secondary vehicle manufacturers.

This section specifies how manufacturers may introduce partially complete vehicles into U.S. commerce.

(a) The provisions of this section allow manufacturers to ship partially complete vehicles to secondary vehicle manufacturers or otherwise introduce them into U.S. commerce in the following circumstances:

(1) *Tractors.* Manufacturers may introduce partially complete tractors into U.S. commerce if they are covered by a certificate of conformity for tractors and will be in their certified tractor configuration before they reach the ultimate purchasers. Note that delegated assembly provisions may apply.

(2) *Vehicles meeting the definition of* "*tractor*" *intended for vocational use.* A manufacturer may introduce into U.S. commerce a partially complete vehicle meeting the definition of "tractor" that is covered by a certificate of conformity for vocational vehicles only as allowed by paragraph (b) of this section.

(3) *Other vocational vehicles.* Manufacturers may introduce partially complete vocational vehicles (not meeting the definition of "tractor") into U.S. commerce if they are covered by a certificate of conformity for vocational vehicles and will be in their certified vocational configuration before they reach the ultimate purchasers. Note that delegated assembly provisions may apply.

(4) *Uncertified vehicles that will be certified by secondary vehicle manufacturers.* Manufacturers may introduce into U.S. commerce partially complete vehicles for which they do not hold a certificate of conformity only as allowed by paragraph (c) of this section.

(b) Manufacturers introducing partially complete vehicles into U.S. commerce under paragraph (a)(2) of this section must have a written request for such vehicles from the manufacturer that will complete assembly of the vehicle. The written request must include a statement that the manufacturer completing assembly is aware that the vehicle must not be delivered to an ultimate purchaser in a configuration that meets the definition of a tractor.

(c) The provisions of this paragraph (c) generally apply where the secondary vehicle manufacturer has substantial control over the design and assembly of emission controls. In determining whether a manufacturer has substantial control over the design and assembly of emission controls, we would consider the degree to which the secondary manufacturer would be able to ensure that the engine and vehicle will conform to the regulations in their final configurations.

(1) Secondary manufacturers may finish assembly of partially complete vehicles in the following cases:

(i) You obtain a vehicle that is not fully assembled with the intent to manufacture a complete vehicle.

(ii) You obtain a vehicle with the intent to modify it before it reaches the ultimate purchaser. For example, this may apply for converting a gasoline-fueled vehicle to operate on natural gas.

(2) Manufacturers may introduce partially complete vehicles into U.S. commerce as described in this section if they have a written request for such vehicles from a secondary vehicle manufacturer that has certified the vehicle and will finish the vehicle assembly. The written request must include a statement that the secondary manufacturer has a certificate of conformity for the vehicle and identify a valid vehicle family name associated with each vehicle model ordered (or the basis for an exemption). The original vehicle manufacturer must apply a removable label meeting the requirements of 40 CFR 1068.45 that identifies the corporate name of the original manufacturer and states that the vehicle is exempt under the provisions of § 1037.620. The name of the certifying manufacturer must also be on the label or, alternatively, on the bill of lading that accompanies the vehicles during shipment. The original manufacturer may not apply a permanent emission control information label identifying the vehicle's eventual status as a certified vehicle.

(3) The manufacturer that will hold the certificate must include the following information in its application for certification:

(i) Identify the original manufacturer of the partially complete vehicle or of the complete vehicle you will modify.

(ii) Describe briefly how and where final assembly will be completed. Specify how you have the ability to ensure that the vehicles will conform to the regulations in their final configuration. (Note: This section prohibits using the provisions of this section unless you have substantial control over the design and assembly of emission controls.)

(iii) State unconditionally that you will not distribute the vehicles without conforming to all applicable regulations.

(4) If you are a certificate holder, you may receive shipment of partially complete vehicles after you apply for a certificate of conformity but before the certificate's effective date. This exemption allows the original manufacturer to ship vehicles after you have applied for a certificate of conformity. Manufacturers may introduce partially complete vehicles into U.S. commerce as described in this paragraph (c)(4) if they have a written request for such vehicles from a secondary manufacturer stating that the application for certification has been submitted (instead of the information we specify in paragraph (c)(2) of this section). We may set additional conditions under this paragraph (c)(4) to prevent circumvention of regulatory requirements.

(5) The provisions of this section also apply for shipping partially complete vehicles if the vehicle is covered by a valid exemption and there is no valid vehicle family name that could be used to represent the vehicle model. Unless we approve otherwise in advance, you may do this only when shipping vehicles to secondary manufacturers that are certificate holders. In this case, the secondary manufacturer must identify the regulatory cite identifying the applicable exemption instead of a valid vehicle family name when ordering vehicles from the original manufacturer.

(6) Both original and secondary manufacturers must keep the records described in this section for at least five years, including the written request for vehicles and the bill of lading for each shipment (if applicable). The written request is deemed to be a submission to EPA.

(7) These provisions are intended only to allow you to obtain or transport vehicles in the specific circumstances identified in this section so any exemption under this section expires when the vehicle reaches the point of final assembly identified in paragraph (c)(3)(ii) of this section.

(8) For purposes of this section, an allowance to introduce partially complete vehicles into U.S. commerce includes a conditional allowance to sell, introduce, or deliver such vehicles into commerce in the United States or import them into the United States. It does not include a general allowance to offer such vehicles for sale because this exemption is intended to apply only for cases in which the certificate holder already has an arrangement to purchase the vehicles from the original manufacturer. This exemption does not allow the original manufacturer to subsequently offer the vehicles for sale to a different manufacturer who will hold the certificate unless that second manufacturer has also complied with the requirements of this part. The exemption does not apply for any individual vehicles that are not labeled as specified in this section or which are shipped to someone who is not a certificate holder.

(9) We may suspend, revoke, or void an exemption under this section, as follows:

(i) We may suspend or revoke your exemption if you fail to meet the requirements of this section. We may suspend or revoke your exemption for a specific secondary manufacturer if that manufacturer sells vehicles that are in not in a certified configuration in violation of the regulations. We may disallow this exemption for future shipments to the affected secondary manufacturer or set additional conditions to ensure that vehicles will be assembled in the certified configuration.

(ii) We may void your exemption for all the affected vehicles if you intentionally submit false or incomplete information or fail to keep and provide to EPA the records required by this section.

(iii) The exemption is void for a vehicle that is shipped to a company that is not a certificate holder or for a vehicle that is shipped to a secondary manufacturer that is not in compliance with the requirements of this section.

(d) Provide instructions along with partially complete vehicles including all information necessary to ensure that an engine will be installed in its certified configuration.

§ 1037.630 Exemption for vehicles intended for offroad use.

This section provides an exemption from the greenhouse gas standards of this part for certain vehicles intended to be used extensively in offroad environments such as forests, oil fields, and construction sites. This exemption does not exempt the engine from the standards of 40 CFR part 86 or part 1036.

(a) *Vocational vehicles.* Vocational vehicles meeting both of the following criteria are exempt without request, subject to the provisions of this section:

(1) The tires installed on the vehicle must be lug tires or contain a speed rating at or below 60 mph. For purposes of this section, a lug tire is one for which the elevated portion of the tread covers less than one-half of the tread surface.

(2) The vehicle must include a vehicle speed limiter governed to 55 mph or less.

(b) *Tractors.* Tractors meeting all the following criteria are exempt without request, subject to the provisions of this section:

(1) The tires installed on the vehicle must be lug tires or contain a speed rating at or below 60 mph. For purposes of this section, a lug tire is one for which the elevated portion of the tread covers less than one-half of the tread surface.

(2) The vehicle must include a vehicle speed limiter governed to 55 mph or less.

(3) The vehicle must either—

(i) Contain PTO controls; or

(ii) Have GVWR greater than 57,000 pounds and have axle configurations other than 4×2, 6×2, or 6×4 (axle configurations are expressed as total number of wheel hubs by number of drive wheel hubs).

(4) The frame of the vehicle must have a resisting bending moment (RBM) greater than 2,000,000 inch-pounds. Use good engineering judgment to determine the RBM for the frame.

(c) *Recordkeeping and reporting.* (1) You must keep records to document that your exempted vehicle configurations meet all applicable requirements of this section. Keep these records for at least eight years after you stop producing the exempted vehicle model. We may review these records at any time.

(2) You must also keep records of the individual exempted vehicles you produce, including the vehicle identification number and a description of the vehicle configuration.

(3) Within 90 days after the end of each model year, you must send to the Designated Compliance Officer a report with the following information:

(i) A description of each exempted vehicle configuration, including an explanation of why it qualifies for this exemption.

(ii) The number of vehicles exempted for each vehicle configuration.

(d) *Preapproval.* You may ask for preliminary approval that your vehicles qualify for this exemption. We may also require you to ask for preliminary approval for this exemption if we determine that you have not acted in good faith when applying this exemption in earlier model years.

(e) *Other vehicles.* In unusual circumstances, you may ask us to approve an exemption under this section for vehicles not fully meeting the criteria of either paragraph (a) or (b) of this section. We will approve your request only where we determine conclusively that the vehicles will be used primarily in offroad applications and cannot practically incorporate the greenhouse gas reducing design features.

Subpart H—Averaging, Banking, and Trading for Certification

§ 1037.701 General provisions.

(a) You may average, bank, and trade (ABT) emission credits for purposes of certification as described in this subpart to show compliance with the standards of §§ 1037.105 and 1037.106. Participation in this program is voluntary.

(b) Section 1037.740 restricts the use of emission credits to certain averaging sets.

(c) The definitions of subpart I of this part apply to this subpart. The following definitions also apply:

(1) *Actual emission credits* means emission credits you have generated that we have verified by reviewing your final report.

(2) *Averaging set* means a set of vehicles in which emission credits may be exchanged. Credits generated by one vehicle may only be used by other vehicles in the same averaging set. Note that an averaging set may comprise more than one regulatory subcategory. *See* § 1037.740.

(3) *Broker* means any entity that facilitates a trade of emission credits between a buyer and seller.

(4) *Buyer* means the entity that receives emission credits as a result of a trade.

(5) *Reserved emission credits* means emission credits you have generated that we have not yet verified by reviewing your final report.

(6) *Seller* means the entity that provides emission credits during a trade.

(7) *Standard* means the emission standard that applies under subpart B of this part for vehicles not participating in the ABT program of this subpart.

(8) *Trade* means to exchange emission credits, either as a buyer or seller.

(d) You may not use emission credits generated under this subpart to offset any emissions that exceed an FEL or standard.

(e) [Reserved]

(f) Emission credits may be used in the model year they are generated. Surplus emission credits may be used for past model years or banked for future model years.

(g) You may increase or decrease an FEL during the model year by amending your application for certification under § 1037.225. The new FEL may apply only to vehicles you have not already introduced into commerce. Each vehicle's emission control information label must include the applicable FELs.

§ 1037.705 Generating and calculating emission credits.

The provisions of this section apply separately for calculating emission credits by pollutant.

(a) [Reserved]

(b) For each participating family or subfamily, calculate positive or negative emission credits relative to the otherwise applicable emission standard. Calculate positive emission credits for a family or subfamily that has an FEL below the standard. Calculate negative emission credits for a family or subfamily that has an FEL above the standard. Sum your positive and negative credits for the model year before rounding. Round the sum of emission credits to the nearest megagram (Mg), using consistent units throughout the following equations:

(1) For vocational vehicles:

$$\text{Emission credits (Mg)} = (\text{Std} - \text{FEL}) \times (\text{Payload Tons}) \times (\text{Volume}) \times (\text{UL}) \times (10^{-6})$$

Where:

Std = the standard associated with the specific tractor regulatory subcategory (g/ton-mile).

FEL = the family emission limit for the vehicle subfamily (g/ton-mile).

Payload tons = the prescribed payload for each class in tons (2.85 tons for light heavy-duty vehicles, 5.6 tons for medium heavy-duty vehicles, and 19 tons for heavy heavy-duty vehicles).

Volume = (projected or actual) production volume of the vehicle subfamily.

UL = useful life of the vehicle (110,000 miles for light heavy-duty vehicles, 185,000 miles for medium heavy-duty vehicles, and 435,000 miles for heavy heavy-duty vehicles).

(2) For tractors:

$$\text{Emission credits (Mg)} = (\text{Std} - \text{FEL}) \times (\text{Payload tons}) \times (\text{Volume}) \times (\text{UL}) \times (10^{-6})$$

Where:

Std = the standard associated with the specific tractor regulatory subcategory (g/ton-mile).

FEL = the family emission limit for the vehicle subfamily (g/ton-mile).

Payload tons = the prescribed payload for each class in tons (12.5 tons for Class 7 and 19 tons for Class 8).

Volume = (projected or actual) production volume of the vehicle subfamily.

UL = useful life of the tractor (435,000 miles for Class 8 and 185,000 miles for Class 7).

(c) As described in § 1037.730, compliance with the requirements of this subpart is determined at the end of the model year based on actual values for U.S.-directed production volumes. *See* § 1037.745 for provisions allowing you to continue production in cases where you have (or expect to have) a negative credit balance at the end of the year. Do not include any of the following vehicles to calculate emission credits:

(1) Vehicles that you do not certify because they are exempted under subpart G of this part or under 40 CFR part 1068.

(2) Exported vehicles.

(3) Vehicles not subject to the requirements of this part, such as those excluded under § 1037.5.

(4) Any other vehicles, where we indicate elsewhere in this part 1037 that they are not to be included in the calculations of this subpart.

§ 1037.710 Averaging.

(a) Averaging is the exchange of emission credits among your vehicle families. You may average emission credits only within the same averaging set.

(b) You may certify one or more vehicle families to an FEL above the applicable standard, subject to any applicable FEL caps and other provisions in subpart B of this part, if you show in your application for certification that your projected balance of all emission-credit transactions in that model year is greater than or equal to zero (or is otherwise allowed by this part).

(c) If you certify a vehicle family to an FEL that exceeds the otherwise applicable standard, you must obtain enough emission credits to offset the vehicle family's deficit by the applicable due date: The due date for the final report required in § 1037.730. The emission credits used to address the deficit may come from your other vehicle families that generate emission credits in the same model year (or from later model years as specified in § 1037.745), from emission credits you have banked, or from emission credits you obtain through trading.

§ 1037.715 Banking.

(a) Banking is the retention of surplus emission credits by the manufacturer generating the emission credits for use in future model years for averaging or trading.

(b) You may designate any emission credits you plan to bank in the reports you submit under § 1037.730 as reserved credits. During the model year and before the due date for the final report, you may designate your reserved emission credits for averaging or trading.

(c) Reserved credits become actual emission credits when you submit your final report. However, we may revoke these emission credits if we are unable to verify them after reviewing your reports or auditing your records.

§ 1037.720 Trading.

(a) Trading is the exchange of emission credits between manufacturers. You may use traded emission credits for averaging, banking, or further trading transactions. Traded emission credits may be used only within the averaging set in which they were generated.

(b) You may trade actual emission credits as described in this subpart. You may also trade reserved emission credits, but we may revoke these emission credits based on our review of your records or reports or those of the company with which you traded emission credits. You may trade banked credits within an averaging set to any certifying manufacturer.

(c) If a negative emission credit balance results from a transaction, both the buyer and seller are liable, except in cases we deem to involve fraud. *See* § 1037.255(e) for cases involving fraud. We may void the certificates of all vehicle families participating in a trade that results in a manufacturer having a negative balance of emission credits. *See* § 1037.745.

§ 1037.725 What must I include in my application for certification?

(a) You must declare in your application for certification your intent to use the provisions of this subpart for each vehicle family that will be certified using the ABT program. You must also declare the FELs you select for the vehicle family or subfamily for each pollutant for which you are using the ABT program. Your FELs must comply with the specifications of subpart B of this part, including the FEL caps. FELs must be expressed to the same number of decimal places as the applicable standards.

(b) Include the following in your application for certification:

(1) A statement that, to the best of your belief, you will not have a negative balance of emission credits for any

averaging set when all emission credits are calculated at the end of the year; or a statement that you will have a negative balance of emission credits for one or more averaging sets but that it is allowed under § 1037.745.

(2) Detailed calculations of projected emission credits (positive or negative) based on projected U.S.-directed production volumes. We may require you to include similar calculations from your other vehicle families to project your net credit balance for the model year. If you project negative emission credits for a family or subfamily, state the source of positive emission credits you expect to use to offset the negative emission credits.

§ 1037.730 ABT reports.

(a) If any of your vehicle families are certified using the ABT provisions of this subpart, you must send an end-of-year report within 90 days after the end of the model year and a final report within 270 days after the end of the model year. We may waive the requirement to send the end-of year report, conditioned upon you sending the final report on time. We will not waive this requirement where you have a deficit for that model year or an outstanding deficit for a prior model year.

(b) Your end-of-year and final reports must include the following information for each vehicle family participating in the ABT program:

(1) Vehicle-family and subfamily designations.

(2) The emission standards that would otherwise apply to the vehicle family.

(3) The FEL for each pollutant. If you change the FEL after the start of production, identify the date that you started using the new FEL and/or give the vehicle identification number for the first vehicle covered by the new FEL. In this case, identify each applicable FEL and calculate the positive or negative emission credits as specified in § 1037.225.

(4) The projected and actual U.S.-directed production volumes for the model year. If you changed an FEL during the model year, identify the actual production volume associated with each FEL.

(5) Useful life.

(6) Calculated positive or negative emission credits for the whole vehicle family. Identify any emission credits that you traded, as described in paragraph (d)(1) of this section.

(7) If you have a negative credit balance for the averaging set in the given model year, specify whether the vehicle family (or certain subfamilies with the vehicle family) have a credit deficit for the year. Consider for example, a manufacturer with three vehicle families ("A", "B", and "C") in a given averaging set. If family A generates enough credits to offset the negative credits of family B but not enough to also offset the negative credits of family C (and the manufacturer has no banked credits in the averaging set), the manufacturer may designate families A and B as having no deficit for the model year, provided it designates family C as having a deficit for the model year.

(c) Your end-of-year and final reports must include the following additional information:

(1) Show that your net balance of emission credits from all your participating vehicle families in each averaging set in the applicable model year is not negative (or is negative but allowed under § 1037.745).

(2) State whether you will reserve any emission credits for banking.

(3) State that the report's contents are accurate.

(d) If you trade emission credits, you must send us a report within 90 days after the transaction, as follows:

(1) As the seller, you must include the following information in your report:

(i) The corporate names of the buyer and any brokers.

(ii) A copy of any contracts related to the trade.

(iii) The vehicle families that generated emission credits for the trade, including the number of emission credits from each family.

(2) As the buyer, you must include the following information in your report:

(i) The corporate names of the seller and any brokers.

(ii) A copy of any contracts related to the trade.

(iii) How you intend to use the emission credits, including the number of emission credits you intend to apply to each vehicle family (if known).

(e) Send your reports electronically to the Designated Compliance Officer using an approved information format. If you want to use a different format, send us a written request with justification for a waiver.

(f) Correct errors in your end-of-year report or final report as follows:

(1) You may correct any errors in your end-of-year report when you prepare the final report, as long as you send us the final report by the time it is due.

(2) If you or we determine within 270 days after the end of the model year that errors mistakenly decreased your balance of emission credits, you may correct the errors and recalculate the balance of emission credits. You may not make these corrections for errors that are determined more than 270 days after the end of the model year. If you report a negative balance of emission credits, we may disallow corrections under this paragraph (f)(2).

(3) If you or we determine anytime that errors mistakenly increased your balance of emission credits, you must correct the errors and recalculate the balance of emission credits.

§ 1037.735 Recordkeeping.

(a) You must organize and maintain your records as described in this section. We may review your records at any time.

(b) Keep the records required by this section for at least eight years after the due date for the end-of-year report. You may not use emission credits for any vehicles if you do not keep all the records required under this section. You must therefore keep these records to continue to bank valid credits. Store these records in any format and on any media, as long as you can promptly send us organized, written records in English if we ask for them. You must keep these records readily available. We may review them at any time.

(c) Keep a copy of the reports we require in §§ 1037.725 and 1037.730.

(d) Keep records of the vehicle identification number for each vehicle you produce that generates or uses emission credits under the ABT program. You may identify these numbers as a range. If you change the FEL after the start of production, identify the date you started using each FEL and the range of vehicle identification numbers associated with each FEL. You must also identify the purchaser and destination for each vehicle you produce to the extent this information is available.

(e) We may require you to keep additional records or to send us relevant information not required by this section in accordance with the Clean Air Act.

§ 1037.740 What restrictions apply for using emission credits?

The following restrictions apply for using emission credits:

(a) *Averaging sets.* Emission credits may be exchanged only within an averaging set. There are eleven principal averaging sets for vehicles subject to this subpart.

(1) Vocational vehicles at or below 19,500 pounds GVWR.

(2) Vocational vehicles above 19,500 pounds GVWR but at or below 33,000 pounds GVWR.

(3) Vocational vehicles over 33,000 pounds GVWR.

(4) Low and mid roof day cab tractors at or above 26,000 pounds GVWR but below 33,000 pounds GVWR.

(5) High roof tractors at or above 26,000 pounds GVWR but below 33,000 pounds GVWR.

(6) Low roof day cab tractors at or above 33,000 pounds GVWR.

(7) Low roof sleeper cab tractors at or above 33,000 pounds GVWR.

(8) Mid roof day cab tractors at or above 33,000 pounds GVWR.

(9) Mid roof sleeper cab tractors at or above 33,000 pounds GVWR.

(10) High roof day cab tractors at or above 33,000 pounds GVWR.

(11) High roof sleeper cab tractors at or above 33,000 pounds GVWR.

(12) Note that other separate averaging sets also apply for emission credits not related to this subpart. For example, under § 1037.104, an additional averaging set comprises all vehicles subject to the standards of that section. Separate averaging sets also apply for engines under 40 CFR part 1036, including engines used in vehicles subject to this subpart.

(b) *Emission credits for later tiers of standards.* CO_2 credits generated relative to the standards of this part may not be used for later tiers of standards, except that credits generated before model year 2017 may be used for the tier of standards that begins in 2017.

(c) *Applying credits to prior year deficits.* Where your credit balance for the prior year is negative (*i.e.,* there was a credit deficit) you may apply only credits that are surplus after meeting your current year credit obligations.

(d) *Other restrictions.* Other sections of this part specify additional restrictions for using emission credits under certain special provisions.

§ 1037.745 End-of-year CO_2 credit deficits.

Except as allowed by this section, the certificate of any vehicle family certified to an FEL above the applicable standard for which you do not have sufficient credits for the model year when you submit your end-of-year report is void.

(a) Your certificate for a vehicle family for which you do not have sufficient CO_2 credits will be not be void if you remedy the deficit with surplus credits within three model years. For example, if you have a credit deficit of 500 Mg for a vehicle family at the end of model year 2015, you must generate (or otherwise obtain) a surplus of at least 500 Mg in that same averaging set by the end of model year 2018.

(b) You may apply only surplus credits to your deficit. You may not apply credits to a prior-year deficit if they were generated in a model year for which any of your vehicle families for that averaging set had an end-of-year credit deficit.

(c) If you do not remedy the deficit with surplus credits within three model years, your certificate is void for that vehicle family. Note that voiding a certificate applies *ab initio* (that is, retroactively). Where the net deficit is less than the total amount of negative credits originally generated by the family, we will void the certificate only with respect to the number of vehicles needed to reach the amount of the net deficit. For example, if the original vehicle family generated 500 Mg of negative credits, and the manufacturer's net deficit after three years was 250 Mg, we would void the certificate with respect to half of the vehicles in the family.

§ 1037.750 What can happen if I do not comply with the provisions of this subpart?

(a) For each vehicle family participating in the ABT program, the certificate of conformity is conditional upon full compliance with the provisions of this subpart during and after the model year. You are responsible to establish to our satisfaction that you fully comply with applicable requirements. We may void the certificate of conformity for a vehicle family if you fail to comply with any provisions of this subpart.

(b) You may certify your vehicle family or subfamily to an FEL above an applicable standard based on a projection that you will have enough emission credits to offset the deficit for the vehicle family. However, we may void the certificate of conformity if you cannot show in your final report that you have enough actual emission credits to offset a deficit for any pollutant in a vehicle family and the deficit is not allowed under § 1037.745.

(c) We may void the certificate of conformity for a vehicle family if you fail to keep records, send reports, or give us information we request.

(d) You may ask for a hearing if we void your certificate under this section (see § 1037.820).

§ 1037.755 Information provided to the Department of Transportation.

(a) We may require you to submit a pre-certification compliance report to us for the upcoming model year or the year after the upcoming model year.

(b) After receipt of each manufacturer's final report as specified in § 1037.730 and completion of any verification testing required to validate the manufacturer's submitted final data, we will issue a report to the Department of Transportation with CO_2 emission information and will verify the accuracy of manufacturers' equivalent fuel consumption data that is required to be reported by NHTSA in 49 CFR 535.8. We will send a report to DOT for each vehicle manufacturer based on each regulatory category and subcategory, including sufficient information for NHTSA to determine fuel consumption and associated credit values. *See* 49 CFR 535.8 to determine if NHTSA deems submission of this information to EPA to also be a submission to NHTSA.

Subpart I—Definitions and Other Reference Information

§ 1037.801 Definitions.

The following definitions apply to this part. The definitions apply to all subparts unless we note otherwise. All undefined terms have the meaning the Act gives to them. The definitions follow:

Act means the Clean Air Act, as amended, 42 U.S.C. 7401–7671q.

Adjustable parameter means any device, system, or element of design that someone can adjust (including those which are difficult to access) and that, if adjusted, may affect emissions or vehicle performance during emission testing or normal in-use operation. You may ask us to exclude a parameter that is difficult to access if it cannot be adjusted to affect emissions without significantly degrading vehicle performance, or if you otherwise show us that it will not be adjusted in a way that affects emissions during in-use operation.

Aftertreatment means relating to a catalytic converter, particulate filter, or any other system, component, or technology mounted downstream of the exhaust valve (or exhaust port) whose design function is to decrease emissions in the vehicle exhaust before it is exhausted to the environment. Exhaust-gas recirculation (EGR) and turbochargers are not aftertreatment.

Alcohol-fueled vehicle means a vehicle that is designed to run using an alcohol fuel. For purposes of this definition, alcohol fuels do not include fuels with a nominal alcohol content below 25 percent by volume.

Auxiliary emission control device means any element of design that senses temperature, motive speed, engine RPM, transmission gear, or any other parameter for the purpose of activating, modulating, delaying, or deactivating the operation of any part of the emission control system.

Averaging set has the meaning given in § 1037.701.

B-pillar means the first vertical structure to the rear of the windshield or rear-most part of the driver's seat, whichever is further to the rear. Note: The first vertical structure to the rear of the windshield is generally the structure

of the body into which the driver's door closes.

Cab-complete vehicle means a vehicle that is first sold as an incomplete vehicle that substantially includes its cab. Vehicles known commercially as chassis-cabs, cab-chassis, box-deletes, bed-deletes, cut-away vans are considered cab-complete vehicles. For purposes of this definition, a cab includes a steering column and passenger compartment. Note a vehicle lacking some components of the cab is a cab-complete vehicle if it substantially includes the cab.

Calibration means the set of specifications and tolerances specific to a particular design, version, or application of a component or assembly capable of functionally describing its operation over its working range.

Carbon-related exhaust emissions (CREE) has the meaning given in 40 CFR 600.002. Note that CREE represents the combined mass of carbon emitted as HC, CO, and CO_2, expressed as having a molecular weight equal to that of CO_2.

Carryover means relating to certification based on emission data generated from an earlier model year.

Certification means relating to the process of obtaining a certificate of conformity for a vehicle family that complies with the emission standards and requirements in this part.

Certified emission level means the highest deteriorated emission level in a vehicle family for a given pollutant from either transient or steady-state testing.

Class means relating to GVWR classes, as follows:

(1) *Class 2B* means heavy-duty motor vehicles at or below 10,000 pounds GVWR.

(2) *Class 3* means heavy-duty motor vehicles above 10,000 pounds GVWR but at or below 14,000 pounds GVWR.

(3) *Class 4* means heavy-duty motor vehicles above 14,000 pounds GVWR but at or below 16,000 pounds GVWR.

(4) *Class 5* means heavy-duty motor vehicles above 16,000 pounds GVWR but at or below 19,500 pounds GVWR.

(5) *Class 6* means heavy-duty motor vehicles above 19,500 pounds GVWR but at or below 26,000 pounds GVWR.

(6) *Class 7* means heavy-duty motor vehicles above 26,000 pounds GVWR but at or below 33,000 pounds GVWR.

(7) *Class 8* means heavy-duty motor vehicles above 33,000 pounds GVWR.

Complete vehicle has the meaning given in the definition of *vehicle* in this section.

Compression-ignition means relating to a type of reciprocating, internal-combustion engine that is not a spark-ignition engine.

Curb weight has the meaning given in 40 CFR 86.1803, consistent with the provisions of § 1037.140.

Day cab means a type of tractor cab that is not a sleeper cab.

Designated Compliance Officer means the Manager, Heavy-Duty and Nonroad Engine Group (6405–J), U.S. Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460.

Designated Enforcement Officer means the Director, Air Enforcement Division (2242A), U.S. Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460.

Deteriorated emission level means the emission level that results from applying the appropriate deterioration factor to the official emission result of the emission-data vehicle. Note that where no deterioration factor applies, references in this part to the *deteriorated emission level* mean the official emission result.

Deterioration factor means the relationship between emissions at the end of useful life and emissions at the low-hour test point, expressed in one of the following ways:

(1) For multiplicative deterioration factors, the ratio of emissions at the end of useful life to emissions at the low-hour test point.

(2) For additive deterioration factors, the difference between emissions at the end of useful life and emissions at the low-hour test point.

Electric vehicle means a vehicle that does not include an engine, and is powered solely by an external source of electricity and/or solar power. Note that this does not include hybrid-electric or fuel-cell vehicles that use a chemical fuel such as gasoline, diesel fuel, or hydrogen. Electric vehicles may also be referred to as all-electric vehicles to distinguish them from hybrid-electric vehicles.

Emission control system means any device, system, or element of design that controls or reduces the emissions of regulated pollutants from a vehicle.

Emission-data vehicle means a vehicle that is tested for certification. This includes a vehicle tested to establish deterioration factors.

Emission-related maintenance means maintenance that substantially affects emissions or is likely to substantially affect emission deterioration.

Excluded means relating to vehicles that are not subject to some or all of the requirements of this part as follows:

(1) A vehicle that has been determined to not be a motor vehicle is excluded from this part.

(2) Certain vehicles are excluded from the requirements of this part under § 1037.5.

(3) Specific regulatory provisions of this part may exclude a vehicle generally subject to this part from one or more specific standards or requirements of this part.

Exempted has the meaning given in 40 CFR 1068.30.

Family emission limit (FEL) means an emission level declared by the manufacturer to serve in place of an otherwise applicable emission standard under the ABT program in subpart H of this part. The family emission limit must be expressed to the same number of decimal places as the emission standard it replaces.

Fuel system means all components involved in transporting, metering, and mixing the fuel from the fuel tank to the combustion chamber(s), including the fuel tank, fuel pump, fuel filters, fuel lines, carburetor or fuel-injection components, and all fuel-system vents. It also includes components for controlling evaporative emissions, such as fuel caps, purge valves, and carbon canisters.

Fuel type means a general category of fuels such as diesel fuel or natural gas. There can be multiple grades within a single fuel type, such as high-sulfur or low-sulfur diesel fuel.

Good engineering judgment has the meaning given in 40 CFR 1068.30. *See* 40 CFR 1068.5 for the administrative process we use to evaluate good engineering judgment.

Gross vehicle weight rating (GVWR) means the value specified by the vehicle manufacturer as the maximum design loaded weight of a single vehicle, consistent with good engineering judgment.

Gross combined weight rating (GCWR) means the value specified by the vehicle manufacturer as the maximum weight of a loaded vehicle and trailer, consistent with good engineering judgment.

Heavy-duty engine means any engine used for (or for which the engine manufacturer could reasonably expect to be used for) motive power in a heavy-duty vehicle.

Heavy-duty vehicle means any motor vehicle above 8,500 pounds GVWR or that has a vehicle curb weight above 6,000 pounds or that has a basic vehicle frontal area greater than 45 square feet.

Hybrid engine or *hybrid powertrain* means an engine or powertrain that includes energy storage features other than a conventional battery system or conventional flywheel. Supplemental electrical batteries and hydraulic accumulators are examples of hybrid energy storage systems Note that certain

provisions in this part treat hybrid engines and powertrains intended for vehicles that include regenerative braking different than those intended for vehicles that do not include regenerative braking.

Hybrid vehicle means a vehicle that includes energy storage features (other than a conventional battery system or conventional flywheel) in addition to an internal combustion engine or other engine using consumable chemical fuel. Supplemental electrical batteries and hydraulic accumulators are examples of hybrid energy storage systems Note that certain provisions in this part treat hybrid vehicles that include regenerative braking different than those that do not include regenerative braking.

Hydrocarbon (HC) means the hydrocarbon group on which the emission standards are based for each fuel type. For alcohol-fueled vehicles, HC means nonmethane hydrocarbon equivalent (NMHCE) for exhaust emissions and total hydrocarbon equivalent (THCE) for evaporative emissions. For all other vehicles, HC means nonmethane hydrocarbon (NMHC) for exhaust emissions and total hydrocarbon (THC) for evaporative emissions.

Identification number means a unique specification (for example, a model number/serial number combination) that allows someone to distinguish a particular vehicle from other similar vehicles.

Incomplete vehicle has the meaning given in the definition of vehicle in this section.

Light-duty truck means any motor vehicle rated at or below 8,500 pounds GVWR with a curb weight at or below 6,000 pounds and basic vehicle frontal area at or below 45 square feet, which is:

(1) Designed primarily for purposes of transportation of property or is a derivation of such a vehicle; or

(2) Designed primarily for transportation of persons and has a capacity of more than 12 persons; or

(3) Available with special features enabling off-street or off-highway operation and use.

Light-duty vehicle means a passenger car or passenger car derivative capable of seating 12 or fewer passengers.

Low-mileage means relating to a vehicle with stabilized emissions and represents the undeteriorated emission level. This would generally involve approximately 4000 miles of operation.

Manufacture means the physical and engineering process of designing, constructing, and assembling a vehicle.

Manufacturer has the meaning given in section 216(1) of the Act. In general, this term includes any person who manufactures a vehicle or vehicle for sale in the United States or otherwise introduces a new motor vehicle into commerce in the United States. This includes importers who import vehicles or vehicles for resale.

Model year means the manufacturer's annual new model production period, except as restricted under this definition and 40 CFR part 85, subpart X. It must include January 1 of the calendar year for which the model year is named, may not begin before January 2 of the previous calendar year, and it must end by December 31 of the named calendar year. Use the date on which a vehicle is shipped from the factory in which you finish your assembly process as the date of manufacture for determining your model year. For example, where a certificate holder sells a cab-complete vehicle to a secondary vehicle manufacturer, the model year is based on the date the vehicle leaves the factory as a cab-complete vehicle.

Motor vehicle has the meaning given in 40 CFR 85.1703.

New motor vehicle means a motor vehicle meeting the criteria of either paragraph (1) or (2) of this definition. New motor vehicles may be complete or incomplete.

(1) A motor vehicle for which the ultimate purchaser has never received the equitable or legal title is a *new motor vehicle*. This kind of vehicle might commonly be thought of as "brand new" although a *new motor vehicle* may include previously used parts. Under this definition, the vehicle is new from the time it is produced until the ultimate purchaser receives the title or places it into service, whichever comes first.

(2) An imported heavy-duty motor vehicle originally produced after the 1969 model year is a *new motor vehicle.*

Noncompliant vehicle means a vehicle that was originally covered by a certificate of conformity, but is not in the certified configuration or otherwise does not comply with the conditions of the certificate.

Nonconforming vehicle means a vehicle not covered by a certificate of conformity that would otherwise be subject to emission standards.

Nonmethane hydrocarbons (NMHC) means the sum of all hydrocarbon species except methane, as measured according to 40 CFR part 1065.

Official emission result means the measured emission rate for an emission-data vehicle on a given duty cycle before the application of any required deterioration factor, but after the applicability of regeneration adjustment factors.

Owners manual means a document or collection of documents prepared by the vehicle manufacturer for the owners or operators to describe appropriate vehicle maintenance, applicable warranties, and any other information related to operating or keeping the vehicle. The owners manual is typically provided to the ultimate purchaser at the time of sale.

Oxides of nitrogen has the meaning given in 40 CFR 1065.1001.

Particulate trap means a filtering device that is designed to physically trap all particulate matter above a certain size.

Placed into service means put into initial use for its intended purpose.

Power take-off (PTO) means a secondary engine shaft or other system on a vehicle that provides substantial auxiliary power for purposes unrelated to vehicle propulsion or normal vehicle accessories such as air conditioning, power steering, and basic electrical accessories. A typical PTO uses a secondary shaft on the engine to transmit power to a hydraulic pump that powers auxiliary equipment such as a boom on a bucket truck.

Regulatory sub-category means one of following groups:

(1) Spark-ignition vehicles subject to the standards of § 1037.104. Note that this category includes most gasoline-fueled heavy-duty pickup trucks and vans.

(2) All other vehicles subject to the standards of § 1037.104. Note that this category includes most diesel-fueled heavy-duty pickup trucks and van.

(3) Vocational vehicles at or below 19,500 pounds GVWR.

(4) Vocational vehicles at or above 19,500 pounds GVWR but below 33,000 pounds GVWR.

(5) Vocational vehicles over 33,000 pounds GVWR.

(6) Low and mid roof day cab tractors at or above 26,000 pounds GVWR but below 33,000 pounds GVWR.

(7) High roof tractors at or above 26,000 pounds GVWR but below 33,000 pounds GVWR.

(8) Low roof day cab tractors at or above 33,000 pounds GVWR.

(9) Low roof sleeper cab tractors at or above 33,000 pounds GVWR.

(10) Mid roof day cab tractors at or above 33,000 pounds GVWR.

(11) Mid roof sleeper cab tractors at or above 33,000 pounds GVWR.

(12) High roof day cab tractors at or above 33,000 pounds GVWR.

(13) High roof sleeper cab tractors at or above 33,000 pounds GVWR.

Relating to as used in this section means relating to something in a specific, direct manner. This expression

is used in this section only to define terms as adjectives and not to broaden the meaning of the terms.

Revoke has the meaning given in 40 CFR 1068.30.

Roof height means the maximum height of a vehicle (rounded to the nearest inch), excluding narrow accessories such as exhaust pipes and antennas, but including any wide accessories such as roof fairings. Measure roof height of the vehicle configured to have its maximum height that will occur during actual use, with properly inflated tires and no driver, passengers, or cargo onboard. *Roof height* may also refer to the following categories:

(1) Low roof means relating to a vehicle with a roof height of 120 inches or less.

(2) Mid roof means relating to a vehicle with a roof height of 121 to 147 inches.

(3) High roof means relating to a vehicle with a roof height of 148 inches or more.

Round has the meaning given in 40 CFR 1065.1001.

Scheduled maintenance means adjusting, repairing, removing, disassembling, cleaning, or replacing components or systems periodically to keep a part or system from failing, malfunctioning, or wearing prematurely. It also may mean actions you expect are necessary to correct an overt indication of failure or malfunction for which periodic maintenance is not appropriate.

Sleeper cab means a type of tractor cab that has a compartment behind the driver's seat intended to be used by the driver for sleeping. This includes cabs accessible from the driver's compartment and those accessible from outside the vehicle.

Small manufacturer means a manufacturer meeting the criteria specified in 13 CFR 121.201. For manufacturers owned by a parent company, the production limit applies to the production of the parent company and all its subsidiaries and the employee limit applies to the total number of employees of the parent company and all its subsidiaries.

Spark-ignition means relating to a gasoline-fueled engine or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark-ignition engines usually use a throttle to regulate intake air flow to control power during normal operation.

Standard trailer has the meaning given in § 1037.501.

Suspend has the meaning given in 40 CFR 1068.30.

Test sample means the collection of vehicles selected from the population of a vehicle family for emission testing. This may include testing for certification, production-line testing, or in-use testing.

Test vehicle means a vehicle in a test sample.

Total hydrocarbon has the meaning given in 40 CFR 1065.1001. This generally means the combined mass of organic compounds measured by the specified procedure for measuring total hydrocarbon, expressed as a hydrocarbon with an atomic hydrogen-to-carbon ratio of 1.85:1.

Total hydrocarbon equivalent has the meaning given in 40 CFR 1065.1001. This generally means the sum of the carbon mass contributions of non-oxygenated hydrocarbons, alcohols and aldehydes, or other organic compounds that are measured separately as contained in a gas sample, expressed as exhaust hydrocarbon from petroleum-fueled vehicles. The atomic hydrogen-to-carbon ratio of the equivalent hydrocarbon is 1.85:1.

Tractor means a vehicle capable of pulling trailers that is not intended to carry significant cargo other than cargo in the trailer, or any other vehicle intended for the primary purpose of pulling a trailer. For purposes of this definition, the term "cargo" includes permanently attached equipment such as fire-fighting equipment.

(1) The following vehicles are tractors:

(i) Any vehicle sold to an ultimate purchaser with a fifth wheel coupling installed.

(ii) Any vehicle sold to an ultimate purchaser with the rear portion of the frame exposed where the length of the exposed portion is 5.0 meters or less. *See* § 1037.620 for special provisions related to vehicles sold to secondary vehicle manufacturers in this condition.

(2) The following vehicles are not tractors:

(i) Any vehicle sold to an ultimate purchaser with an installed cargo-carrying feature. For example, this would include dump trucks and cement trucks.

(ii) Any vehicle lacking a fifth wheel coupling sold to an ultimate purchaser with the rear portion of the frame exposed where the length of the exposed portion is more than 5.0 meters.

Ultimate purchaser means, with respect to any new vehicle, the first person who in good faith purchases such new vehicle for purposes other than resale.

United States has the meaning given in 40 CFR 1068.30.

Upcoming model year means for a vehicle family the model year after the one currently in production.

U.S.-directed production volume means the number of vehicle units, subject to the requirements of this part, produced by a manufacturer for which the manufacturer has a reasonable assurance that sale was or will be made to ultimate purchasers in the United States This does not include vehicles certified to State emission standards that are different than the emission standards in this part.

Useful life means the period during which a vehicle is required to comply with all applicable emission standards.

Vehicle means equipment intended for use on highways that meets the criteria of paragraph (1)(i) or (ii) of this definition, as follows:

(1) The following equipment are vehicles:

(i) A piece of equipment that is intended for self-propelled use on highways becomes a vehicle when it includes at least an engine, a transmission, and a frame. (Note: For purposes of this definition, any electrical, mechanical, and/or hydraulic devices attached to engines for the purpose of powering wheels are considered to be transmissions.)

(ii) A piece of equipment that is intended for self-propelled use on highways becomes a vehicle when it includes a passenger compartment attached to a frame with axles.

(2) Vehicles may be complete or incomplete vehicles as follows:

(i) A *complete vehicle* is a functioning vehicle that has the primary load carrying device or container (or equivalent equipment) attached or a fully functional vehicle that is designed to pull a trailer.

(ii) An *incomplete vehicle* is a vehicle that is not a complete vehicle when it is first sold as a vehicle. This includes sales to secondary vehicle manufacturers. Incomplete vehicles may also be cab-complete vehicles.

(3) Equipment such as trailers that are not self-propelled are not "vehicles" under this part 1037, but may be considered part of a "motor vehicle".

Vehicle configuration means a unique combination of vehicle hardware and calibration within a vehicle family. Vehicles within a vehicle configuration differ only with respect to normal production variability or factors unrelated to emissions.

Vehicle family has the meaning given in § 1037.230.

Vehicle subfamily or *subfamily* means a subset of a vehicle family including vehicles subject to the same FEL(s).

Vocational means relating to a vehicle subject to the standards of § 1037.105.

Void has the meaning given in 40 CFR 1068.30.

Volatile liquid fuel means any fuel other than diesel or biodiesel that is a liquid at atmospheric pressure and has a Reid Vapor Pressure higher than 2.0 pounds per square inch.

We (us, our) means the Administrator of the Environmental Protection Agency and any authorized representatives.

§ 1037.805 Symbols, acronyms, and abbreviations.

The following symbols, acronyms, and abbreviations apply to this part:

AECD auxiliary emission control device
CFR Code of Federal Regulations
CH_4 methane
CO carbon monoxide
CO_2 carbon dioxide
CREE carbon-related exhaust emissions
DF deterioration factor
DOT Department of Transportation
EPA Environmental Protection Agency
FEL Family Emission Limit
G grams
HC hydrocarbon
ISO International Organization for Standardization
Kg kilograms
M meter
mph miles per hour
N_2O nitrous oxide
NARA National Archives and Records Administration
NHTSA National Highway Transportation Safety Administration
NIST National Institute of Standards and Technology
NMHC nonmethane hydrocarbons
NMHCE nonmethane hydrocarbon equivalent
NO_X oxides of nitrogen (NO and NO_2)
NTE not-to-exceed
PM particulate matter
RBM resisting bending moment
RGWP relative global-warming potential
Rpm revolutions per minute
SAE Society of Automotive Engineers
SEA Selective enforcement audit
THC total hydrocarbon
THCE total hydrocarbon equivalent
TRU transportation refrigeration unit
U.S.C. United States Code
VIN vehicle identification number
WF work factor

§ 1037.810 Incorporation by reference.

(a) The documents referenced in this section have been incorporated by reference in this part. The incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be inspected at the U.S. Environmental Protection Agency, Office of Air and Radiation, 1200 Pennsylvania Ave., NW., Washington, DC 20460, phone (202) 272–0167, or 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/code_of_federal_regulations/ibr_locations.html* and is available from the sources listed below:

(b) *ISO Material.* This paragraph (b) lists material from the International Organization for Standardization that we have incorporated by reference. Anyone may purchase copies of these materials from the International Organization for Standardization, Case Postale 56, CH–1211 Geneva 20, Switzerland or *http://www.iso.org*.

(1) ISO/DIS–28580:2009 "INSERT TRR TITLE"; IBR approved for § 1037.520.

(2) [Reserved]

(c) *GEM Model.* EPA has published the GEM computer model. The computer code for this model is available as noted in paragraph (a) of this section. A working version of this software is also available for download at www.epa.gov. This IBR is approved for § 1037.520.

§ 1037.815 What provisions apply to confidential information?

The provisions of 40 CFR 1068.10 apply for information you consider confidential.

§ 1037.820 Requesting a hearing.

(a) You may request a hearing under certain circumstances, as described elsewhere in this part. To do this, you must file a written request, including a description of your objection and any supporting data, within 30 days after we make a decision.

(b) For a hearing you request under the provisions of this part, we will approve your request if we find that your request raises a substantial factual issue.

(c) If we agree to hold a hearing, we will use the procedures specified in 40 CFR part 1068, subpart G.

§ 1037.825 Reporting and recordkeeping requirements.

(a) This part includes various requirements to submit and record data or other information. Unless we specify otherwise, store required records in any format and on any media and keep them readily available for eight years after you send an associated application for certification, or eight years after you generate the data if they do not support an application for certification. You may not rely on anyone else to meet recordkeeping requirements on your behalf unless we specifically authorize it. We may review these records at any time. You must promptly send us organized, written records in English if we ask for them. We may require you to submit written records in an electronic format.

(b) The regulations in § 1037.255, 40 CFR 1068.25, and 40 CFR 1068.101 describe your obligation to report truthful and complete information. This includes information not related to certification. Failing to properly report information and keep the records we specify violates 40 CFR 1068.101(a)(2), which may involve civil or criminal penalties.

(c) Send all reports and requests for approval to the Designated Compliance Officer (*see* § 1037.801).

(d) Any written information we require you to send to or receive from another company is deemed to be a required record under this section. Such records are also deemed to be submissions to EPA. Keep these records for eight years unless the regulations specify a different period. We may require you to send us these records whether or not you are a certificate holder.

(e) Under the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*), the Office of Management and Budget approves the reporting and recordkeeping specified in the applicable regulations. The following items illustrate the kind of reporting and recordkeeping we require for vehicles regulated under this part:

(1) We specify the following requirements related to vehicle certification in this part 1037:

(i) In subpart C of this part we identify a wide range of information required to certify vehicles.

(ii) In subpart G of this part we identify several reporting and recordkeeping items for making demonstrations and getting approval related to various special compliance provisions. For example, equipment manufacturers must submit reports and keep records related to the flexibility provisions in § 1037.625.

(iii) In § 1037.725, 1037.730, and 1037.735 we specify certain records related to averaging, banking, and trading.

(2) We specify the following requirements related to testing in 40 CFR part 1066:

(i) In 40 CFR 1065.2 we give an overview of principles for reporting information.

(ii) In 40 CFR 1065.10 and 1065.12 we specify information needs for establishing various changes to published test procedures.

(iii) In 40 CFR 1065.25 we establish basic guidelines for storing test information.

(iv) In 40 CFR 1065.695 we identify data that may be appropriate for collecting during testing of in-use vehicles using portable analyzers.

Appendix I to Part 1037—Heavy-Duty Transient Chassis Test Cycle

BILLING CODE 6560–50–P

Time	Speed	Speed
sec.	mph	m/s
1	0.00	0.00
2	0.00	0.00
3	0.00	0.00
4	0.00	0.00
5	0.00	0.00
6	0.00	0.00
7	0.41	0.18
8	1.18	0.53
9	2.26	1.01
10	3.19	1.43
11	3.97	1.77
12	4.66	2.08
13	5.32	2.38
14	5.94	2.66
15	6.48	2.90
16	6.91	3.09
17	7.28	3.25
18	7.64	3.42
19	8.02	3.59
20	8.36	3.74
21	8.60	3.84
22	8.74	3.91
23	8.82	3.94
24	8.82	3.94
25	8.76	3.92
26	8.66	3.87
27	8.58	3.84
28	8.52	3.81
29	8.46	3.78
30	8.38	3.75
31	8.31	3.71
32	8.21	3.67
33	8.11	3.63
34	8.00	3.58
35	7.94	3.55
36	7.94	3.55
37	7.80	3.49
38	7.43	3.32
39	6.79	3.04
40	5.81	2.60
41	4.65	2.08
42	3.03	1.35
43	1.88	0.84
44	1.15	0.51
45	1.14	0.51
46	1.12	0.50

Time	Speed	Speed
47	1.11	0.50
48	1.19	0.53
49	1.57	0.70
50	2.31	1.03
51	3.37	1.51
52	4.51	2.02
53	5.56	2.49
54	6.41	2.87
55	7.09	3.17
56	7.59	3.39
57	7.99	3.57
58	8.32	3.72
59	8.64	3.86
60	8.91	3.98
61	9.13	4.08
62	9.29	4.15
63	9.40	4.20
64	9.39	4.20
65	9.20	4.11
66	8.84	3.95
67	8.35	3.73
68	7.81	3.49
69	7.22	3.23
70	6.65	2.97
71	6.13	2.74
72	5.75	2.57
73	5.61	2.51
74	5.65	2.53
75	5.80	2.59
76	5.95	2.66
77	6.09	2.72
78	6.21	2.78
79	6.31	2.82
80	6.34	2.83
81	6.47	2.89
82	6.65	2.97
83	6.88	3.08
84	7.04	3.15
85	7.05	3.15
86	7.01	3.13
87	6.90	3.08
88	6.88	3.08
89	6.89	3.08
90	6.96	3.11
91	7.04	3.15
92	7.17	3.21
93	7.29	3.26

Time	Speed	Speed
94	7.39	3.30
95	7.48	3.34
96	7.57	3.38
97	7.61	3.40
98	7.59	3.39
99	7.53	3.37
100	7.46	3.33
101	7.40	3.31
102	7.39	3.30
103	7.38	3.30
104	7.37	3.29
105	7.37	3.29
106	7.39	3.30
107	7.42	3.32
108	7.43	3.32
109	7.40	3.31
110	7.39	3.30
111	7.42	3.32
112	7.50	3.35
113	7.57	3.38
114	7.60	3.40
115	7.60	3.40
116	7.61	3.40
117	7.64	3.42
118	7.68	3.43
119	7.74	3.46
120	7.82	3.50
121	7.90	3.53
122	7.96	3.56
123	7.99	3.57
124	8.02	3.59
125	8.01	3.58
126	7.87	3.52
127	7.59	3.39
128	7.20	3.22
129	6.52	2.91
130	5.53	2.47
131	4.36	1.95
132	3.30	1.48
133	2.50	1.12
134	1.94	0.87
135	1.56	0.70
136	0.95	0.42
137	0.42	0.19
138	0.00	0.00
139	0.00	0.00

Time	Speed	Speed
140	0.00	0.00
141	0.00	0.00
142	0.00	0.00
143	0.00	0.00
144	0.00	0.00
145	0.00	0.00
146	0.00	0.00
147	0.00	0.00
148	0.00	0.00
149	0.00	0.00
150	0.00	0.00
151	0.00	0.00
152	0.00	0.00
153	0.00	0.00
154	0.00	0.00
155	0.00	0.00
156	0.00	0.00
157	0.00	0.00
158	0.00	0.00
159	0.00	0.00
160	0.00	0.00
161	0.00	0.00
162	0.00	0.00
163	0.00	0.00
164	0.00	0.00
165	0.00	0.00
166	0.00	0.00
167	0.00	0.00
168	0.00	0.00
169	0.00	0.00
170	0.00	0.00
171	0.00	0.00
172	1.11	0.50
173	2.65	1.18
174	4.45	1.99
175	5.68	2.54
176	6.75	3.02
177	7.59	3.39
178	7.75	3.46
179	7.63	3.41
180	7.67	3.43
181	8.70	3.89
182	10.20	4.56
183	11.92	5.33
184	12.84	5.74
185	13.27	5.93

Time	Speed	Speed
186	13.38	5.98
187	13.61	6.08
188	14.15	6.33
189	14.84	6.63
190	16.49	7.37
191	18.33	8.19
192	20.36	9.10
193	21.47	9.60
194	22.35	9.99
195	22.96	10.26
196	23.46	10.49
197	23.92	10.69
198	24.42	10.92
199	24.99	11.17
200	25.91	11.58
201	26.26	11.74
202	26.38	11.79
203	26.26	11.74
204	26.49	11.84
205	26.76	11.96
206	27.07	12.10
207	26.64	11.91
208	25.99	11.62
209	24.77	11.07
210	24.04	10.75
211	23.39	10.46
212	22.73	10.16
213	22.16	9.91
214	21.66	9.68
215	21.39	9.56
216	21.43	9.58
217	20.67	9.24
218	17.98	8.04
219	13.15	5.88
220	7.71	3.45
221	3.30	1.48
222	0.88	0.39
223	0.00	0.00
224	0.00	0.00
225	0.00	0.00
226	0.00	0.00
227	0.00	0.00
228	0.00	0.00
229	0.00	0.00
230	0.00	0.00
231	0.00	0.00
232	0.00	0.00

Time	Speed	Speed
233	0.00	0.00
234	0.00	0.00
235	0.00	0.00
236	0.00	0.00
237	0.00	0.00
238	0.00	0.00
239	0.00	0.00
240	0.00	0.00
241	0.00	0.00
242	0.00	0.00
243	0.00	0.00
244	0.00	0.00
245	0.00	0.00
246	0.00	0.00
247	0.00	0.00
248	0.00	0.00
249	0.00	0.00
250	0.00	0.00
251	0.00	0.00
252	0.00	0.00
253	0.00	0.00
254	0.00	0.00
255	0.00	0.00
256	0.00	0.00
257	0.00	0.00
258	0.00	0.00
259	0.50	0.22
260	1.57	0.70
261	3.07	1.37
262	4.57	2.04
263	5.65	2.53
264	6.95	3.11
265	8.05	3.60
266	9.13	4.08
267	10.05	4.49
268	11.62	5.19
269	12.92	5.78
270	13.84	6.19
271	14.38	6.43
272	15.64	6.99
273	17.14	7.66
274	18.21	8.14
275	18.90	8.45
276	19.44	8.69
277	20.09	8.98
278	21.89	9.79
279	24.15	10.80

Time	Speed	Speed
280	26.26	11.74
281	26.95	12.05
282	27.03	12.08
283	27.30	12.20
284	28.10	12.56
285	29.44	13.16
286	30.78	13.76
287	32.09	14.35
288	33.24	14.86
289	34.46	15.40
290	35.42	15.83
291	35.88	16.04
292	36.03	16.11
293	35.84	16.02
294	35.65	15.94
295	35.31	15.78
296	35.19	15.73
297	35.12	15.70
298	35.12	15.70
299	35.04	15.66
300	35.08	15.68
301	35.04	15.66
302	35.34	15.80
303	35.50	15.87
304	35.77	15.99
305	35.81	16.01
306	35.92	16.06
307	36.23	16.20
308	36.42	16.28
309	36.65	16.38
310	36.26	16.21
311	36.07	16.12
312	35.84	16.02
313	35.96	16.08
314	36.00	16.09
315	35.57	15.90
316	35.00	15.65
317	34.08	15.24
318	33.39	14.93
319	32.20	14.39
320	30.32	13.55
321	28.48	12.73
322	26.95	12.05
323	26.18	11.70
324	25.38	11.35
325	24.77	11.07

Time	Speed	Speed
326	23.46	10.49
327	22.39	10.01
328	20.97	9.37
329	20.09	8.98
330	18.90	8.45
331	18.17	8.12
332	16.48	7.37
333	15.07	6.74
334	12.23	5.47
335	10.08	4.51
336	7.71	3.45
337	7.32	3.27
338	8.63	3.86
339	10.77	4.81
340	12.65	5.66
341	13.88	6.20
342	15.03	6.72
343	15.64	6.99
344	16.99	7.60
345	17.98	8.04
346	19.13	8.55
347	18.67	8.35
348	18.25	8.16
349	18.17	8.12
350	18.40	8.23
351	19.63	8.78
352	20.32	9.08
353	21.43	9.58
354	21.47	9.60
355	21.97	9.82
356	22.27	9.96
357	22.69	10.14
358	23.15	10.35
359	23.69	10.59
360	23.96	10.71
361	24.27	10.85
362	24.34	10.88
363	24.50	10.95
364	24.42	10.92
365	24.38	10.90
366	24.31	10.87
367	24.23	10.83
368	24.69	11.04
369	25.11	11.23
370	25.53	11.41
371	25.38	11.35

Time	Speed	Speed
372	24.58	10.99
373	23.77	10.63
374	23.54	10.52
375	23.50	10.51
376	24.15	10.80
377	24.30	10.86
378	24.15	10.80
379	23.19	10.37
380	22.50	10.06
381	21.93	9.80
382	21.85	9.77
383	21.55	9.63
384	21.89	9.79
385	21.97	9.82
386	21.97	9.82
387	22.01	9.84
388	21.85	9.77
389	21.62	9.67
390	21.62	9.67
391	22.01	9.84
392	22.81	10.20
393	23.54	10.52
394	24.38	10.90
395	24.80	11.09
396	24.61	11.00
397	23.12	10.34
398	21.62	9.67
399	19.90	8.90
400	18.86	8.43
401	17.79	7.95
402	17.25	7.71
403	16.91	7.56
404	16.75	7.49
405	16.75	7.49
406	16.87	7.54
407	16.37	7.32
408	16.37	7.32
409	16.49	7.37
410	17.21	7.69
411	17.41	7.78
412	17.37	7.77
413	16.87	7.54
414	16.72	7.47
415	16.22	7.25
416	15.76	7.05
417	14.72	6.58
418	13.69	6.12

Time	Speed	Speed
419	12.00	5.36
420	10.43	4.66
421	8.71	3.89
422	7.44	3.33
423	5.71	2.55
424	4.22	1.89
425	2.30	1.03
426	1.00	0.45
427	0.00	0.00
428	0.61	0.27
429	1.19	0.53
430	1.61	0.72
431	1.53	0.68
432	2.34	1.05
433	4.29	1.92
434	7.25	3.24
435	10.20	4.56
436	12.46	5.57
437	14.53	6.50
438	16.22	7.25
439	17.87	7.99
440	19.74	8.82
441	21.01	9.39
442	22.23	9.94
443	22.62	10.11
444	23.61	10.55
445	24.88	11.12
446	26.15	11.69
447	26.99	12.07
448	27.56	12.32
449	28.18	12.60
450	28.94	12.94
451	29.83	13.34
452	30.78	13.76
453	31.82	14.22
454	32.78	14.65
455	33.24	14.86
456	33.47	14.96
457	33.31	14.89
458	33.08	14.79
459	32.78	14.65
460	32.39	14.48
461	32.13	14.36
462	31.82	14.22
463	31.55	14.10
464	31.25	13.97
465	30.94	13.83

Time	Speed	Speed
466	30.71	13.73
467	30.56	13.66
468	30.79	13.76
469	31.13	13.92
470	31.55	14.10
471	31.51	14.09
472	31.47	14.07
473	31.44	14.05
474	31.51	14.09
475	31.59	14.12
476	31.67	14.16
477	32.01	14.31
478	32.63	14.59
479	33.39	14.93
480	34.31	15.34
481	34.81	15.56
482	34.20	15.29
483	32.39	14.48
484	30.29	13.54
485	28.56	12.77
486	26.45	11.82
487	24.79	11.08
488	23.12	10.34
489	20.73	9.27
490	18.33	8.19
491	15.72	7.03
492	13.11	5.86
493	10.47	4.68
494	7.82	3.50
495	5.70	2.55
496	3.57	1.60
497	0.92	0.41
498	0.00	0.00
499	0.00	0.00
500	0.00	0.00
501	0.00	0.00
502	0.00	0.00
503	0.00	0.00
504	0.00	0.00
505	0.00	0.00
506	0.00	0.00
507	0.00	0.00
508	0.00	0.00
509	0.00	0.00
510	0.00	0.00
511	0.00	0.00

Time	Speed	Speed
512	0.00	0.00
513	0.00	0.00
514	0.00	0.00
515	0.00	0.00
516	0.00	0.00
517	0.00	0.00
518	0.00	0.00
519	0.00	0.00
520	0.00	0.00
521	0.00	0.00
522	0.50	0.22
523	1.50	0.67
524	3.00	1.34
525	4.50	2.01
526	5.80	2.59
527	6.52	2.91
528	6.75	3.02
529	6.44	2.88
530	6.17	2.76
531	6.33	2.83
532	6.71	3.00
533	7.40	3.31
534	7.67	3.43
535	7.33	3.28
536	6.71	3.00
537	6.41	2.87
538	6.60	2.95
539	6.56	2.93
540	5.94	2.66
541	5.45	2.44
542	5.87	2.62
543	6.71	3.00
544	7.56	3.38
545	7.59	3.39
546	7.63	3.41
547	7.67	3.43
548	7.67	3.43
549	7.48	3.34
550	7.29	3.26
551	7.29	3.26
552	7.40	3.31
553	7.48	3.34
554	7.52	3.36
555	7.52	3.36
556	7.48	3.34
557	7.44	3.33

Time	Speed	Speed
558	7.28	3.25
559	7.21	3.22
560	7.09	3.17
561	7.06	3.16
562	7.29	3.26
563	7.75	3.46
564	8.55	3.82
565	9.09	4.06
566	10.04	4.49
567	11.12	4.97
568	12.46	5.57
569	13.00	5.81
570	14.26	6.37
571	15.37	6.87
572	17.02	7.61
573	18.17	8.12
574	19.21	8.59
575	20.17	9.02
576	20.66	9.24
577	21.12	9.44
578	21.43	9.58
579	22.66	10.13
580	23.92	10.69
581	25.42	11.36
582	25.53	11.41
583	26.68	11.93
584	28.14	12.58
585	30.06	13.44
586	30.94	13.83
587	31.63	14.14
588	32.36	14.47
589	33.24	14.86
590	33.66	15.05
591	34.12	15.25
592	35.92	16.06
593	37.72	16.86
594	39.26	17.55
595	39.45	17.64
596	39.83	17.81
597	40.18	17.96
598	40.48	18.10
599	40.75	18.22
600	41.02	18.34
601	41.36	18.49
602	41.79	18.68
603	42.40	18.95
604	42.82	19.14

Time	Speed	Speed
605	43.05	19.25
606	43.09	19.26
607	43.24	19.33
608	43.59	19.49
609	44.01	19.67
610	44.35	19.83
611	44.55	19.92
612	44.82	20.04
613	45.05	20.14
614	45.31	20.26
615	45.58	20.38
616	46.00	20.56
617	46.31	20.70
618	46.54	20.81
619	46.61	20.84
620	46.92	20.98
621	47.19	21.10
622	47.46	21.22
623	47.54	21.25
624	47.54	21.25
625	47.54	21.25
626	47.50	21.23
627	47.50	21.23
628	47.50	21.23
629	47.31	21.15
630	47.04	21.03
631	46.77	20.91
632	45.54	20.36
633	43.24	19.33
634	41.52	18.56
635	39.79	17.79
636	38.07	17.02
637	36.34	16.25
638	34.04	15.22
639	32.45	14.51
640	30.86	13.80
641	28.83	12.89
642	26.45	11.82
643	24.27	10.85
644	22.04	9.85
645	19.82	8.86
646	17.04	7.62
647	14.26	6.37
648	11.52	5.15
649	8.78	3.93
650	7.17	3.21
651	5.56	2.49

Time	Speed	Speed
652	3.72	1.66
653	3.38	1.51
654	3.11	1.39
655	2.58	1.15
656	1.66	0.74
657	0.67	0.30
658	0.00	0.00
659	0.00	0.00
660	0.00	0.00

Time	Speed	Speed
661	0.00	0.00
662	0.00	0.00
663	0.00	0.00
664	0.00	0.00
665	0.00	0.00
666	0.00	0.00
667	0.00	0.00
668	0.00	0.00

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Appendix II to Part 1037—Power Take-Off Test Cycle

Cycle Simulation	Mode	Time	Normalized Pressure, Circuit 1 (%)	Normalized Pressure, Circuit 2 (%)
Utility	0	0	0.0	0.0
Utility	1	33	80.5	0.0
Utility	2	40	0.0	0.0
Utility	3	145	83.5	0.0
Utility	4	289	0.0	0.0
Refuse	5	361	0.0	13.0
Refuse	6	363	0.0	38.0
Refuse	7	373	0.0	53.0
Refuse	8	384	0.0	73.0
Refuse	9	388	0.0	0.0
Refuse	10	401	0.0	13.0
Refuse	11	403	0.0	38.0
Refuse	12	413	0.0	53.0
Refuse	13	424	0.0	73.0
Refuse	14	442	11.2	0.0
Refuse	15	468	29.3	0.0
Refuse	16	473	0.0	0.0
Refuse	17	486	11.2	0.0
Refuse	18	512	29.3	0.0
Refuse	19	517	0.0	0.0
Refuse	20	530	12.8	11.1
Refuse	21	532	12.8	38.2
Refuse	22	541	12.8	53.4
Refuse	23	550	12.8	73.5
Refuse	24	553	0.0	0.0
Refuse	25	566	12.8	11.1
Refuse	26	568	12.8	38.2
Refuse	27	577	12.8	53.4
Refuse	28	586	12.8	73.5
Refuse	29	589	0.0	0.0
Refuse	30	600	0.0	0.0

PART 1065—ENGINE-TESTING PROCEDURES

11. The authority citation for part 1065 continues to read as follows:

Authority: 42 U.S.C. 7401–7671q.

Subpart A—[Amended]

12. Section 1065.1 is amended by adding paragraph (h) to read as follows:

§ 1065.1 Applicability.

* * * * *

(h) 40 CFR part 1066 describes how to measure emissions vehicles that are subject to standards in g/mile or g/kilometer. Those vehicle testing provisions extensively reference portions of this part 1065. See 40 CFR part 1066 and the standard-setting part for additional information.

Subpart K—[Amended]

13. Section 1065.1005 is amended by revising paragraph (f)(2) to read as follows:

§ 1065.1005 Symbols, abbreviations, acronyms, and units of measure.

* * * * *

(f) * * *

(2) This part uses the following molar masses or effective molar masses of chemical species:

Symbol	Quantity	g/mol (10^{-3}·kg·mol^{-1})
M_{air}	molar mass of dry air 1	28.96559
M_{Ar}	molar mass of argon	39.948
M_{C}	molar mass of carbon	16.0425
M_{C3H8}	molar mass of propane	44.09562
M_{CH4}	molar mass of methane	16.043
M_{CO}	molar mass of carbon monoxide	28.0101
M_{CO2}	molar mass of carbon dioxide	44.0095
M_{H}	molar mass of atomic hydrogen	1.00794
M_{H2}	molar mass of molecular hydrogen	2.01588
M_{H2O}	molar mass of water	18.01528
M_{He}	molar mass of helium	4.002602
M_{N}	molar mass of atomic nitrogen	14.0067
M_{N2}	molar mass of molecular nitrogen	28.0134
M_{NMHC}	effective molar mass of nonmethane hydrocarbon[2]	13.875389
M_{NMHCE}	effective molar mass of nonmethane equivalent hydrocarbon[2]	13.875389
M_{NOx}	effective molar mass of oxides of nitrogen[3]	46.0055
M_{N2O}	effective molar mass of nitrous oxide	44.0128
M_{O}	molar mass of atomic oxygen	15.9994
M_{O2}	molar mass of molecular oxygen	31.9988
M_{S}	molar mass of sulfur	32.065
M_{THC}	effective molar mass of total hydrocarbon[2]	13.875389
M_{THCE}	effective molar mass of total hydrocarbon equivalent[2]	13.875389

[1] See paragraph (f)(1) of this section for the composition of dry air.

[2] The effective molar masses of THC, THCE, NMHC, and NMHCE are defined by an atomic hydrogen-to-carbon ratio, α, of 1.85.

[3] The effective molar mass of NOx is defined by the molar mass of nitrogen dioxide, NO_2.

* * * * *

14. A new part 1066 is added to subchapter U to read as follows:

PART 1066—VEHICLE-TESTING PROCEDURES

Subpart A—Applicability and General Provisions

Sec.
1066.1 Applicability.
1066.2 Submitting information to EPA under this part.
1066.5 Overview of this part 1066 and its relationship to the standard-setting part.
1066.10 Other procedures.
1066.15 Overview of test procedures.
1066.20 Units of measure and overview of calculations.
1066.25 Recordkeeping.

Subpart B—Equipment, Fuel, and Gas Specifications

1066.101 Overview.
1066.110 Dynamometers.
1066.115 Summary of verification and calibration procedures for chassis dynamometers.
1066.120 Linearity verification.
1066.125 Roll runout and diameter verification procedure.
1066.130 Time verification procedure.
1066.135 Speed verification procedure.
1066.140 Torque transducer verification and calibration.
1066.145 Response time verification.
1066.150 Base inertia verification.
1066.155 Parasitic loss verification.
1066.160 Parasitic friction compensation evaluation.
1066.165 Acceleration and deceleration verification.
1066.170 Unloaded coastdown verification.
1066.180 Driver's aid.

Subpart C—Coastdown

1066.201 Overview of coastdown procedures.
1066.210 Coastdown procedures for heavy-duty vehicles.

Subpart D—Vehicle Preparation and Running a Test

1066.301 Overview.
1066.304 Road load power and test weight determination.
1066.307 Vehicle preparation and preconditioning.
1066.310 Dynamometer test procedure.
1066.320 Pre-test verification procedures and pre-test data collection.
1066.325 Engine starting and restarting.
1066.330 Performing emission tests.

Subpart E—Hybrids

1066.401 Overview.

Subpart F—[Reserved]

Subpart G—Calculations

1066.601 Overview.
1066.610 Mass-based and molar-based exhaust emission calculations.

Subpart H—Definitions and Other Reference Material

1066.701 Definitions.
1066.705 Symbols, abbreviations, acronyms, and units of measure.
1066.710 Reference materials.

Authority: 42 U.S.C. 7401–7671q.

Subpart A—Applicability and General Provisions

§ 1066.1 Applicability.

(a) This part describes the procedures that apply to testing we require for the following vehicles:

(1) Model year 2014 and later heavy-duty highway vehicles we regulate under 40 CFR part 1037.

(2) [Reserved]

(b) The procedures of this part may apply to other types of vehicles, as

described in this part and in the standard-setting part.

(c) The term "you" means anyone performing testing under this part other than EPA.

(1) This part is addressed primarily to manufacturers of vehicles, but it applies equally to anyone who does testing under this part for such manufacturers.

(2) This part applies to any manufacturer or supplier of test equipment, instruments, supplies, or any other goods or services related to the procedures, requirements, recommendations, or options in this part.

(d) Paragraph (a) of this section identifies the parts of the CFR that define emission standards and other requirements for particular types of vehicles. In this part, we refer to each of these other parts generically as the "standard-setting part." For example, 40 CFR part 1037 is the standard-setting part for heavy-duty highway vehicles.

(e) Unless we specify otherwise, the terms "procedures" and "test procedures" in this part include all aspects of vehicle testing, including the equipment specifications, calibrations, calculations, and other protocols and procedural specifications needed to measure emissions.

(f) For additional information regarding these test procedures, visit our Web site at *http://www.epa.gov,* and in particular *http://www.epa.gov/nvfel/testing/regulations.htm.*

§ 1066.2 Submitting information to EPA under this part.

(a) You are responsible for statements and information in your applications for certification, requests for approved procedures, selective enforcement audits, laboratory audits, production-line test reports, field test reports, or any other statements you make to us related to this part 1066. If you provide statements or information to someone for submission to EPA, you are responsible for these statements and information as if you had submitted them to EPA yourself.

(b) In the standard-setting part and in 40 CFR 1068.101, we describe your obligation to report truthful and complete information and the consequences of failing to meet this obligation. *See also* 18 U.S.C. 1001 and 42 U.S.C. 7413(c)(2). This obligation applies whether you submit this information directly to EPA or through someone else.

(c) We may void any certificates or approvals associated with a submission of information if we find that you intentionally submitted false, incomplete, or misleading information. For example, if we find that you intentionally submitted incomplete information to mislead EPA when requesting approval to use alternate test procedures, we may void the certificates for all engine families certified based on emission data collected using the alternate procedures. This would also apply if you ignore data from incomplete tests or from repeat tests with higher emission results.

(d) We may require an authorized representative of your company to approve and sign the submission, and to certify that all of the information submitted is accurate and complete. This includes everyone who submits information, including manufacturers and others.

(e) *See* 40 CFR 1068.10 for provisions related to confidential information. Note however that under 40 CFR 2.301, emission data is generally not eligible for confidential treatment.

(f) Nothing in this part should be interpreted to limit our ability under Clean Air Act section 208 (42 U.S.C. 7542) to verify that vehicles conform to the regulations.

§ 1066.5 Overview of this part 1066 and its relationship to the standard-setting part.

(a) This part specifies procedures that can apply generally to testing various categories of vehicles. *See* the standard-setting part for directions in applying specific provisions in this part for a particular type of vehicle. Before using this part's procedures, read the standard-setting part to answer at least the following questions:

(1) What drive schedules must I use for testing?

(2) Should I warm up the test vehicle before measuring emissions, or do I need to measure cold-start emissions during a warm-up segment of the duty cycle?

(3) Which exhaust constituents do I need to measure? Measure all exhaust constituents that are subject to emission standards, any other exhaust constituents needed for calculating emission rates, and any additional exhaust constituents as specified in the standard-setting part. We may approve your request to omit measurement of N_2O and CH_4 for a vehicle, provided it is not subject to an N_2O or CH_4 emission standard and we determine that other information is available to give us a reasonable basis for estimating or approximating the vehicle's emission rates.

(4) Do any unique specifications apply for test fuels?

(5) What maintenance steps may I take before or between tests on an emission-data vehicle?

(6) Do any unique requirements apply to stabilizing emission levels on a new vehicle?

(7) Do any unique requirements apply to test limits, such as ambient temperatures or pressures?

(8) Is field testing required or allowed, and are there different emission standards or procedures that apply to field testing?

(9) Are there any emission standards specified at particular operating conditions or ambient conditions?

(10) Do any unique requirements apply for durability testing?

(b) The testing specifications in the standard-setting part may differ from the specifications in this part. In cases where it is not possible to comply with both the standard-setting part and this part, you must comply with the specifications in the standard-setting part. The standard-setting part may also allow you to deviate from the procedures of this part for other reasons.

(c) The following table shows how this part divides testing specifications into subparts:

Table 1 of § 1066.5—Description of Part 1066 subparts.

This subpart	Describes these specifications or procedures
Subpart A	Applicability and general provisions.
Subpart B	Equipment for testing.
Subpart C	Coastdowns for testing.
Subpart D	How to prepare your vehicle and run an emissions test over a predetermined duty cycle.
Subpart E	How to test with hybrid vehicles.
Subpart F	Reserved.
Subpart G	Test procedure calculations.
Subpart H	Definitions and reference material.

§ 1066.10 Other procedures.

(a) *Your testing.* The procedures in this part apply for all testing you do to show compliance with emission standards, with certain exceptions listed in this section. In some other sections in this part, we allow you to use other procedures (such as less precise or less accurate procedures) if they do not affect your ability to show that your vehicles comply with the applicable emission standards. This generally requires emission levels to be far enough below the applicable emission standards so that any errors caused by greater imprecision or inaccuracy do not affect your ability to state unconditionally that the engines meet all applicable emission standards.

(b) *Our testing.* These procedures generally apply for testing that we do to determine if your vehicles comply with applicable emission standards. We may perform other testing as allowed by the Act.

(c) *Exceptions.* We may allow or require you to use procedures other than those specified in this part in the following cases, which may apply to laboratory testing, field testing, or both. We intend to publicly announce when we allow or require such exceptions. The provisions of 40 CFR 1065.10(c) apply for testing under this part. All of the test procedures noted there as exceptions to the specified procedures are considered generically as "other procedures." Note that the terms "special procedures" and "alternate procedures" have specific meanings; "special procedures" are those allowed by 40 CFR 1065.10(c)(2) and "alternate procedures" are those allowed by 40 CFR 1065.10(c)(7). If we require you to request approval to use other procedures under this paragraph (c), you may not use them until we approve your request.

§ 1066.15 Overview of test procedures.

This section outlines the procedures to test vehicles that are subject to emission standards.

(a) In the standard-setting part, we set emission standards in g/mile (or g/km), for the following constituents:

(1) Total oxides of nitrogen, NO_X.

(2) Hydrocarbons (HC), which may be expressed in the following ways:

(i) Total hydrocarbons, THC.

(ii) Nonmethane hydrocarbons, NMHC, which results from subtracting methane (CH_4) from THC.

(iii) Total hydrocarbon-equivalent, THCE, which results from adjusting THC mathematically to be equivalent on a carbon-mass basis.

(iv) Nonmethane hydrocarbon-equivalent, NMHCE, which results from adjusting NMHC mathematically to be equivalent on a carbon-mass basis.

(3) Particulate mass, PM.

(4) Carbon monoxide, CO.

(b) Note that some vehicles may not be subject to standards for all the emission constituents identified in paragraph (a) of this section.

(c) We generally set emission standards over test intervals and/or drive schedules, as follows:

(1) *Vehicle operation.* Testing may involve measuring emissions and miles travelled in a laboratory-type environment or in the field. The standard-setting part specifies how test intervals are defined for field testing. Refer to the definitions of "duty cycle" and "test interval" in § 1066.701. Note that a single drive schedule may have multiple test intervals and require weighting of results from multiple test phases to calculate a composite distance-based emission value to compare to the standard.

(2) *Constituent determination.* Determine the total mass of each constituent over a test interval by selecting from the following methods:

(i) *Continuous sampling.* In continuous sampling, measure the constituent's concentration continuously from raw or dilute exhaust. Multiply this concentration by the continuous (raw or dilute) flow rate at the emission sampling location to determine the constituent's flow rate. Sum the constituent's flow rate continuously over the test interval. This sum is the total mass of the emitted constituent.

(ii) *Batch sampling.* In batch sampling, continuously extract and store a sample of raw or dilute exhaust for later measurement. Extract a sample proportional to the raw or dilute exhaust flow rate, as applicable. You may extract and store a proportional sample of exhaust in an appropriate container, such as a bag, and then measure HC, CO, and NO_X concentrations in the container after the test phase. You may deposit PM from proportionally extracted exhaust onto an appropriate substrate, such as a filter. In this case, divide the PM by the amount of filtered exhaust to calculate the PM concentration. Multiply batch sampled concentrations by the total (raw or dilute) flow from which it was extracted during the test interval. This product is the total mass of the emitted constituent.

(iii) *Combined sampling.* You may use continuous and batch sampling simultaneously during a test interval, as follows:

(A) You may use continuous sampling for some constituents and batch sampling for others.

(B) You may use continuous and batch sampling for a single constituent, with one being a redundant measurement, subject to the provisions of 40 CFR 1065.201.

(d) Refer to the standard-setting part for calculations to determine g/mile emission rates.

(e) The regulation highlights several specific cases where good engineering judgment is especially relevant. You must use good engineering judgment for

all aspects of testing under this part, not only for those provisions where we specifically re-state this requirement.

§ 1066.20 Units of measure and overview of calculations.

(a) *System of units.* The procedures in this part follows both conventional English Units and the International System of Units (SI), as detailed in NIST Special Publication 811, 1995 Edition, "Guide for the Use of the International System of Units (SI)," which we incorporate by reference in § 1066.710. This document is available on the Internet at *http://www.nist.gov/physlab/pubs/sp811.*

(b) *Units conversion.* Use good engineering judgment to convert units between measurement systems as needed. The following conventions are used throughout this document and should be used to convert units as applicable:

(1) 1 hp = 33,000 ft·lbf/min = 550 ft·lbf/s = 0.7457 kW.

(2) 1 lbf = 32.174 ft·lbm/s2 = 4.4482 N.

(3) 1 inch = 25.4 mm.

(c) *Rounding.* Unless the standard-setting part specifies otherwise, round only final values, not intermediate values. Round values to the number of significant digits necessary to match the number of decimal places of the applicable standard or specification. For information not related to standards or specifications, use good engineering judgment to record the appropriate number of significant digits.

(d) *Interpretation of ranges.* Interpret a range as a tolerance unless we explicitly identify it as an accuracy, repeatability, linearity, or noise specification. *See* 40 CFR 1065.1001 for the definition of tolerance. In this part, we specify two types of ranges:

(1) Whenever we specify a range by a single value and corresponding limit values above and below that value, target any associated control point to that single value. Examples of this type of range include "±10% of maximum pressure", or "(30 ± 10) kPa".

(2) Whenever we specify a range by the interval between two values, you may target any associated control point to any value within that range. An example of this type of range is "(40 to 50) kPa".

(e) *Scaling of specifications with respect to an applicable standard.* Because this part 1066 is applicable to a wide range of vehicles and emission standards, some of the specifications in this part are scaled with respect to a vehicle's applicable standard or weight. This ensures that the specification will be adequate to determine compliance, but not overly burdensome by requiring unnecessarily high-precision equipment. Many of these specifications are given with respect to a "flow-weighted mean" that is expected at the standard or during testing. Flow-weighted mean is the mean of a quantity after it is weighted proportional to a corresponding flow rate. For example, if a gas concentration is measured continuously from the raw exhaust of an engine, its flow-weighted mean concentration is the sum of the products of each recorded concentration times its respective exhaust flow rate, divided by the sum of the recorded flow rates. As another example, the bag concentration from a CVS system is the same as the flow-weighted mean concentration, because the CVS system itself flow-weights the bag concentration. Refer to 40 CFR 1065.602 for information needed to estimate and calculate flow-weighted means.

§ 1066.25 Recordkeeping.

The procedures in this part include various requirements to record data or other information. Refer to the standard-setting part regarding recordkeeping requirements. If the standard-setting part does not specify recordkeeping requirements, store these records in any format and on any media and keep them readily available for one year after you send an associated application for certification, or one year after you generate the data if they do not support an application for certification. You must promptly send us organized, written records in English if we ask for them. We may review them at any time.

Subpart B—Equipment, Fuel, and Gas Specifications

§ 1066.101 Overview.

(a) This subpart addresses equipment related to emission testing, as well as test fuels and analytical gases. This section addresses emission sampling and analytical equipment, test fuels, and analytical gases. The remainder of this subpart addresses chassis dynamometers and related equipment.

(b) The provisions of 40 CFR part 1065 specify engine-based procedures for measuring emissions. Except as specified otherwise in this part, the provisions of 40 CFR part 1065 apply for testing required by this part as follows:

(1) The provisions of 40 CFR 1065.140 through 1065.195 specify equipment for exhaust dilution and sampling systems.

(2) The provisions of 40 CFR part 1065, subparts C and D, specify measurement instruments and their calibrations.

(3) The provisions of 40 CFR part 1065, subpart H, specify fuels, engine fluids, and analytical gases.

(4) The provisions of 40 CFR part 1065, subpart J, describe how to measure emissions from vehicles operating outside of a laboratory, except that provisions related to measuring engine work do not apply.

(c) The provisions of this subpart are intended to specify systems that can very accurately and precisely measure emissions from motor vehicles. We may waive or modify the specifications and requirements of this part for testing highway motorcycles or nonroad vehicles, consistent with good engineering judgment. For example, it may be appropriate to allow the use of a hydrokinetic dynamometer that is not able to meet all the performance specifications described in this subpart.

§ 1066.110 Dynamometers.

(a) *General requirements.* A chassis dynamometer typically uses electrically generated load forces combined with the rotational inertia of the dynamometer to recreate the mechanical inertia and frictional forces that a vehicle exerts on road surfaces (known as "road load"). Load forces are calculated using vehicle-specific coefficients and response characteristics. The load forces are applied to the vehicle tires by rolls connected to intermediate motor/absorbers. The dynamometer uses a load cell to measure the forces the dynamometer rolls apply to the vehicle's tires.

(b) *Accuracy and precision.* The dynamometer's output values for road load must be NIST-traceable. We may determine traceability to a specific international standards organization to be sufficient to demonstrate NIST-traceability. The force-measurement system must be capable of indicating force readings to a resolution of 0.1% of the maximum forces simulated by the dynamometer during a test.

(c) *Test cycles.* The dynamometer must be capable of fully simulating applicable test cycles for the vehicles being tested as referenced in the corresponding standard-setting part.

(1) For light-duty vehicles and for heavy-duty vehicles with a gross vehicle weight rating (GVWR) at or below 14,000 lbs, the dynamometer must be able to fully simulate a driving schedule with a maximum speed of 80.3 mph and a maximum acceleration rate of 8.0 mph/s in two-wheel drive and four-wheel drive configurations.

(2) For heavy-duty vehicles with GVWR above 14,000 lbs, the dynamometer must be able to fully simulate a driving schedule with a

maximum speed of 65.0 mph and a maximum acceleration rate of 3.0 mph/s in either two-wheel drive or four-wheel drive configurations.

(d) *Component requirements.* The dynamometer must have an independent drive roll for each axle being driven by the vehicle.

(1) For light-duty vehicles and for heavy-duty vehicles with GVWR at or below 14,000 lbs, the nominal roll diameter must be 1.20 to 1.25 meters (this is commonly referred to as a 48-inch roll dynamometer).

(2) For heavy-duty vehicles with GVWR above 14,000 lbs, the nominal roll diameter must be at least 1.20 meters and no great than 1.85 meters. Use good engineering judgment to ensure that the dynamometer roll diameter is large enough to provide sufficient tire-roll contact area for avoiding tire overheating and power losses from tire-roll slippage.

(3) If you measure force and speed at 10 Hz or faster, you may use good engineering judgment to convert those measurements to 1-Hz, 2-Hz, or 5-Hz values.

(4) The load applied by the dynamometer simulates forces acting on the vehicle during normal driving according to the following equation:

$$FR_i = A + B \cdot S_i + C \cdot S_i^2 + M \cdot \frac{S_i - S_{i-1}}{t_i - t_{i-1}}$$

Where:

FR = total road load force to be applied at the surface of the roll. The total force is the sum of the individual tractive forces applied at each roll surface.

i = a counter to indicate a point in time over the driving schedule. For a dynamometer operating at 10-Hz intervals over a 600-second driving schedule, the maximum value of *i* is 6,000.

A = constant value representing the vehicle's frictional load in lbf or newtons. *See* subpart C of this part.

B = coefficient representing load from drag and rolling resistance, which are a function of vehicle speed, in lbf/mph or newtons/kph. *See* subpart C of this part.

S = linear speed at the roll surfaces as measured by the dynamometer, in mph or kph. Let $S_{i-1} = 0$.

C = coefficient representing aerodynamic effects, which are a function of vehicle speed squared, in lbf/mph^2 or newton/kph^2. *See* subpart C of this part.

M = mass of vehicle in lbm or kg. Determine the vehicle's mass based on the test weight, taking into account the effect of rotating axles, as specified in § 1066.304 dividing the weight by the acceleration due to gravity as specified in 40 CFR 1065.630.

t = elapsed time in the driving schedule as measured by the dynamometer, in seconds. Let $t_{i-1} = 0$.

(5) Measured values of road load force may not differ from the corresponding calculated values at any operating conditions by more than ± 1% or ± 2.2 lbf, whichever is greater.

(e) *Dynamometer manufacturer instructions.* This part specifies that you follow the dynamometer manufacturer's recommended procedures for things such as calibrations and general operation. If you perform testing with a dynamometer that you manufactured or if you otherwise do not have these recommended procedures, use good engineering judgment to establish the additional procedures and specifications we specify in this part, unless we specify otherwise. Keep records to describe these recommended procedures and how they are consistent with good engineering judgment.

§ 1066.115 Summary of verification and calibration procedures for chassis dynamometers.

(a) *Overview.* This section describes the overall process for verifying and calibrating the performance of chassis dynamometers.

(b) *Scope and frequency.* The following table summarizes the required and recommended calibrations and verifications described in this subpart and indicates when these have to be performed:

Table 1 of § 1066.115–Summary of required dynamometer calibrations and verifications.

Type of calibration or verification	Minimum frequency[a]
§ 1066.120: Linearity verification	Speed: Upon initial installation, within 370 days before testing, and after major maintenance. Torque (load): Upon initial installation, within 370 days before testing, and after major maintenance.
§ 1066.125: Roll runout and diameter	Upon initial installation and after major maintenance.
§ 1066.130: Time	Upon initial installation and after major maintenance.
§ 1066.135: Speed measurement	Upon initial installation, within 35 days before testing, and after major maintenance.
§ 1066.140: Torque (load) transducer	Upon initial installation, within 370 days before testing, and after major maintenance.
§ 1066.145: Response time	Upon initial installation and after major maintenance.
§ 1066.150: Base inertia	Upon initial installation and after major maintenance.
§ 1066.155: Parasitic loss	Upon initial installation, within 7 days before testing, and after major maintenance.
§ 1066.160: Parasitic friction compensation evaluation	Upon initial installation, within 7 days before testing, and after major maintenance.
§ 1066.165: Acceleration and deceleration	Upon initial installation and after major maintenance.
§ 1066.170: Unloaded coastdown	Upon initial installation, within 7 days before testing, and after major maintenance.

[a]Perform calibrations and verifications more frequently, according to measurement system manufacturer instructions and good engineering judgment.

(c) *Automated dynamometer verifications and calibrations.* In some cases, dynamometers are designed with internal diagnostic and control features to accomplish the verifications and calibrations specified in this subpart. You may use these automated functions instead of following the procedures we specify in this subpart to demonstrate compliance with applicable requirements, consistent with good engineering judgment.

(d) *Sequence of verifications and calibrations.* Upon initial installation and after major maintenance, perform the verifications and calibrations in the same sequence as noted in Table 1 of this section. At other times, you may need to perform specific verifications or calibration in a certain sequence, as noted in this subpart.

(e) *Corrections.* Unless the regulations direct otherwise, if the dynamometer fails to meet any specified calibration or verification, make any necessary adjustments or repairs such that the dynamometer meets the specification before running a test. Repairs required to meet specifications are generally considered major maintenance under this part.

§ 1066.120 Linearity verification.

(a) *Scope and frequency.* Perform linearity verifications as specified in Table 1 of this section at least as frequently as indicated in the table, consistent with the dynamometer manufacturer's recommendations and good engineering judgment. Note that these linearity verifications may replace requirements we previously referred to as calibrations. The intent of linearity verification is to determine that a measurement system responds accurately and proportionally over the measurement range of interest. Linearity verification generally consists of introducing a series of at least 10 reference values (or the manufacturer's recommend number of reference values) to a measurement system. The measurement system quantifies each reference value. The measured values are then collectively compared to the reference values by using a least-squares linear regression and the linearity criteria specified in Table 1 of this section.

(b) *Performance requirements.* If a measurement system does not meet the applicable linearity criteria in Table 1 of this section, correct the deficiency by re-calibrating, servicing, or replacing components as needed. Repeat the linearity verification after correcting the deficiency to ensure that the measurement system meets the linearity criteria. Before you may use a measurement system that does not meet linearity criteria, you must demonstrate to us that the deficiency does not adversely affect your ability to demonstrate compliance with the applicable standards.

(c) *Procedure.* Use the following linearity verification protocol, or use good engineering judgment to develop a different protocol that satisfies the intent of this section, as described in paragraph (a) of this section:

(1) In this paragraph (c), the letter "y" denotes a generic measured quantity, the superscript over-bar denotes an arithmetic mean (such as $\bar{y}$), and the subscript "$_{ref}$" denotes the known or reference quantity being measured.

(2) Operate a dynamometer system at the specified temperatures and pressures. This may include any specified adjustment or periodic calibration of the dynamometer system.

(3) Set dynamometer speed and torque to zero and apply the dynamometer brake to ensure a zero-speed condition.

(4) Span the dynamometer speed or torque signal.

(5) After spanning, check for zero speed and torque. Use good engineering judgment to determine whether or not to rezero or re-span before continuing.

(6) For both speed and torque, use the dynamometer manufacturer's recommendations and good engineering judgment to select reference values, y_{refi}, that cover a range of values that you expect would prevent extrapolation

beyond these values during emission testing. We recommend selecting zero speed and zero torque as reference values for the linearity verification.

(7) Use the dynamometer manufacturer's recommendations and good engineering judgment to select the order in which you will introduce the series of reference values. For example, you may select the reference values randomly to avoid correlation with previous measurements or the influence of hysteresis; you may select reference values in ascending or descending order to avoid long settling times of reference signals; or you may select values to ascend and then descend to incorporate the effects of any instrument hysteresis into the linearity verification.

(8) Set the dynamometer to operate at a reference condition.

(9) Allow time for the dynamometer to stabilize while it measures the reference values.

(10) At a recording frequency of at least 1 Hz, measure speed and torque values for 30 seconds and record the arithmetic mean of the recorded values, $\bar{y}_i$. Refer to 40 CFR 1065.602 for an example of calculating an arithmetic mean.

(11) Repeat the steps in paragraphs (c)(8) though (10) of this section until you measure speeds and torques at each of the reference conditions.

(12) Use the arithmetic means, $\bar{y}_i$, and reference values, y_{refi}, to calculate least-squares linear regression parameters and statistical values to compare to the minimum performance criteria specified in Table 1 of this section. Use the calculations described in 40 CFR 1065.602. Using good engineering judgment, you may weight the results of individual data pairs (*i.e.*, $(y_{refi},\bar{y}_i)$, in the linear regression calculations.

Table 1 of § 1066.120–
Dynamometer measurement systems that require linearity verifications

Measurement system	Quantity	Linearity criteria			
		$\lvert x_{min}(a_1\text{-}1)+a_0 \rvert$	a_1	*SEE*	r^2
Speed	*S*	≤0.05 % · S_{max}	0.98-1.02	≤2 % · S_{max}	≥0.990
Torque (load)	*T*	≤1 % · T_{max}	0.98-1.02	≤2 % · T_{max}	≥0.990

§ 1066.125 Roll runout and diameter verification procedure.

(a) *Overview.* This section describes the verification procedure for roll runout and roll diameter. Roll runout is a measure of the variation in roll radius around the circumference of the roll.

(b) *Scope and frequency.* Perform these verifications upon initial installation and after major maintenance.

(c) *Roll runout procedure.* Verify roll runout as follows:

(1) Perform this verification with laboratory and dynamometer temperatures stable and at equilibrium. Release the roll brake and shut off power to the dynamometer. Remove any dirt, rubber, rust, and debris from the roll surface. Mark measurement locations on the roll surface using a permanent marker. Mark the roll at a minimum of four equally spaced locations across the roll width; we recommend taking measurements every 150 mm across the roll. Secure the marker to the deck plate adjacent to the roll surface and slowly rotate the roll to mark a clear line around the roll circumference. Repeat this process for all measurement locations.

(2) Measure roll runout using a dial indicator with a probe that allows for measuring the position of the roll surface relative to the roll centerline as it turns through a complete revolution. The dial indicator must have a magnetic base assembly or other means of being securely mounted adjacent to the roll. The dial indicator must have sufficient range to measure roll runout at all points, with a minimum accuracy and precision of ± 0.025 mm. Calibrate the dial indicator according to the instrument manufacturer's instructions.

(3) Position the dial indicator adjacent to the roll surface at the desired measurement location. Position the shaft of the dial indicator perpendicular to the roll such that the point of the dial indicator is slightly touching the surface of the roll and can move freely through a full rotation of the roll. Zero the dial indicator according to the instrument manufacturer's instructions. Avoid distortion of the runout measurement from the weight of a person standing on or near the mounted dial indicator.

(4) Slowly turn the roll through a complete rotation and record the maximum and minimum values from the dial indicator. Calculate runout from the difference between these maximum and minimum values.

(5) Repeat the steps in paragraphs (c)(3) and (4) of this section for all measurement locations.

(6) The roll runout must be less than 0.25 mm at all measurement locations.

(d) *Diameter procedure.* Verify roll diameter based on the following procedure, or an equivalent procedure based on good engineering judgment:

(1) Prepare the laboratory and the dynamometer as specified in paragraph (c)(1) of this section.

(2) Measure roll diameter using a Pi Tape®. Orient the Pi Tape® to the marker line at the desired measurement location with the Pi Tape® hook pointed outward. Temporarily secure the Pi Tape® to the roll near the hook end with adhesive tape. Slowly turn the roll, wrapping the Pi Tape® around the roll surface. Ensure that the Pi Tape® is flat and adjacent to the marker line around the full circumference of the roll. Attach a 2-kg weight to the hook of the Pi Tape® and position the roll so that the weight dangles freely. Remove the adhesive tape without disturbing the orientation or alignment of the Pi Tape®.

(3) Overlap the gage member and the vernier scale ends of the Pi Tape® to read the diameter measurement to the nearest 0.01 mm. Follow the manufacturer's recommendation to correct the measurement to 25 °C, if applicable.

(4) Repeat the steps in paragraphs (d)(2) and (3) of this section for all measurement locations.

(5) The measured roll diameter must be within ± 0.25 mm of the specified nominal value at all measurement locations. You may revise the nominal value to meet this specification, as long as you use the corrected nominal value for all calculations in this subpart.

§ 1066.130 Time verification procedure.

(a) *Overview.* This section describes how to verify the accuracy of the dynamometer's timing device.

(b) *Scope and frequency.* Perform this verification upon initial installation and after major maintenance.

(c) *Procedure.* Perform this verification using one of the following procedures:

(1) *WWV method.* You may use the time and frequency signal broadcast by NIST from radio station WWV as the time standard if the trigger for the dynamometer timing circuit has a frequency decoder circuit, as follows:

(i) Dial station WWV at (303) 499–7111 and listen for the time announcement. Verify that the trigger started the dynamometer timer. Use good engineering judgment to minimize error in receiving the time and frequency signal.

(ii) After at least 1,000 seconds, re-dial station WWV and listen for the time announcement. Verify that the trigger stopped the dynamometer timer.

(iii) Compare the measured elapsed time, y_{act}, to the corresponding time standard, y_{ref}, to determine the time error, y_{error}, using the following equation:

$$y_{error} = \frac{y_{act} - y_{ref}}{y_{ref}} \cdot 100\ \% \qquad \text{Eq. 1066.130-1}$$

(2) *Ramping method.* You may set up an operator-defined ramp function in the signal generator to serve as the time standard as follows:

(i) Set up the signal generator to output a marker voltage at the peak of each ramp to trigger the dynamometer timing circuit. Output the designated marker voltage to start the verification period.

(ii) After at least 1,000 seconds, output the designated marker voltage to end the verification period.

(iii) Compare the measured elapsed time between marker signals, y_{act}, to the corresponding time standard, y_{ref}, to determine the time error, y_{error}, using Equation 1066.130–1.

(3) *Dynamometer coastdown method.* You may use a signal generator to output a known speed ramp signal to the dynamometer controller to serve as the time standard as follows:

(i) Generate upper and lower speed values to trigger the start and stop functions of the coastdown timer circuit. Use the signal generator to start the verification period.

(ii) After at least 1,000 seconds, use the signal generator to end the verification period.

(iii) Compare the measured elapsed time between trigger signals, y_{act}, to the corresponding time standard, y_{ref}, to determine the time error, y_{error}, using Equation 1066.130–1.

(d) *Performance evaluation.* The time error determined in paragraph (c) of this section may not exceed ±0.001%.

§ 1066.135 Speed verification procedure.

(a) *Overview.* This section describes how to verify the accuracy and resolution of the dynamometer speed determination.

(b) *Scope and frequency.* Perform this verification upon initial installation, within 35 days before testing, and after major maintenance.

(c) *Procedure.* Use one of the following procedures to verify the accuracy and resolution of the dynamometer speed simulation:

(1) *Pulse method.* Connect a universal frequency counter to the output of the dynamometer's speed-sensing device in parallel with the signal to the dynamometer controller. The universal frequency counter must be calibrated according to the instrument manufacturer's instructions and be capable of measuring with enough accuracy to perform the procedure as specified in this paragraph (c)(1). Make sure the instrumentation does not affect the signal to the dynamometer control circuits. Determine the speed error as follows:

(i) Set the dynamometer to speed control mode. Set the dynamometer speed to a value between 15 kph and the maximum speed expected during testing; record the output of the frequency counter after 10 seconds. Determine the roll speed, S_{act}, using the following equation:

$$S_{act} = \frac{f \cdot d_{roll} \cdot \pi}{n} \qquad \text{Eq. 1066.135-1}$$

Where:

f = frequency of the dynamometer speed sensing device, in hr^{-1}, accurate to at least four significant figures.

d_{roll} = nominal roll diameter, in km, accurate to the nearest 0.01 mm, consistent with § 1066.125(d).

n = the number of pulses per revolution from the dynamometer roll speed sensor.

Where:

f = 2.9318 Hz = 2.9318 s^{-1} = 10,554 hr^{-1}

d_{roll} = 914.40 mm = 914.40 · 10^{-6} km

n = 1 pulse/rev

$$S_{act} = \frac{10554 \cdot 904.40 \cdot 10^{-6} \cdot \pi}{1}$$

S_{act} = 29.986 kph

(ii) Compare the calculated roll speed, S_{act}, to the corresponding speed set point, S_{ref}, to determine a value for speed error, S_{error}, using the following equation:

$$S_{error} = S_{act} - S_{ref} \qquad \text{Eq. 1066.135-2}$$

Where:

S_{act} = 29.986 kph

S_{ref} = 30.000 kph

S_{error} = 29.986 − 30.000 = −0.014 kph

(2) *Frequency method.* Use the method described in this paragraph (c)(2) only if the dynamometer does not have a readily available output signal for speed sensing. Install a single piece of tape in the shape of an arrowhead on the surface of the dynamometer roll near the outer edge. Put a reference mark on the deck plate in line with the arrow. Install a stroboscope or photo tachometer on the deck plate and direct the flash toward the tape on the roll. The stroboscope or photo tachometer must be calibrated according to the instrument manufacturer's instructions and be capable of measuring with enough accuracy to perform the procedure as specified in this paragraph (c)(2). Determine the speed error as follows:

(i) Set the dynamometer to speed control mode. Set the dynamometer speed to a value between 15 kph and the maximum speed expected during testing. Tune the stroboscope or photo tachometer until the signal matches the dynamometer roll speed. Record the

frequency. Determine the roll speed, y_{act}, using Equation 1066.135–1, using the stroboscope or photo tachometer's frequency for *f*.

(ii) Compare the calculated roll speed, y_{act}, to the corresponding speed set point, y_{ref}, to determine a value for speed error, y_{error}, using Equation 1066.135–2.

(d) *Performance evaluation*. The speed error determined in paragraph (c) of this section may not exceed ±0.050 mph or ±0.080 kph.

§ 1066.140 Torque transducer verification and calibration.

Calibrate torque-measurement systems as described in 40 CFR 1065.310.

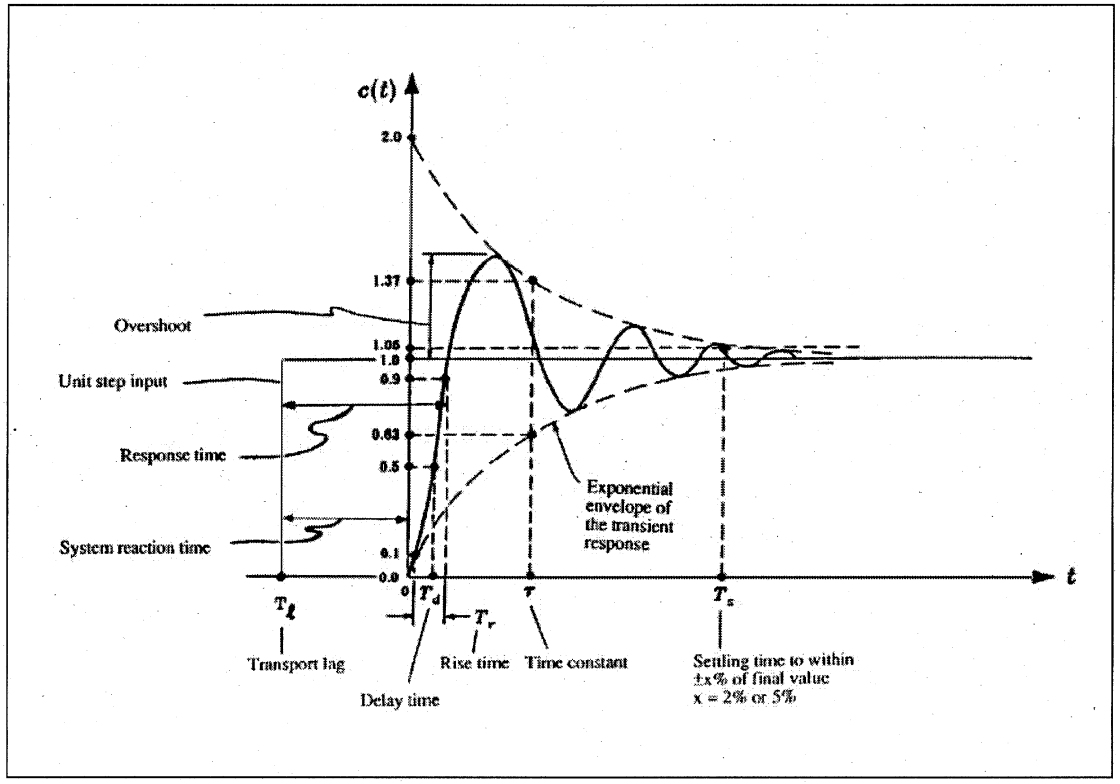
§ 1066.145 Response time verification.

(a) *Overview*. This section describes how to verify the dynamometer's response time.

(b) *Scope and frequency*. Perform this verification upon initial installation and after major maintenance.

(c) *Procedure*. Use the dynamometer's automated process to verify response time. Perform this test at two different inertia settings corresponding approximately to the minimum and maximum vehicle weights you expect to test. Use good engineering judgment to select road load coefficients representing vehicles of the appropriate weight. Determine the dynamometer's settling response time based on the point at which there are no measured results more than 10% above or below the final equilibrium value, as illustrated in Figure 1 of this section. The observed settling response time must be less than 100 milliseconds for each inertia setting.

Figure 1 of § 1066.145—Example of a settling response time diagram.



§ 1066.150 Base inertia verification.

(a) *Overview*. This section describes how to verify the dynamometer's base inertia.

(b) *Scope and frequency*. Perform this verification upon initial installation and after major maintenance.

(c) *Procedure*. Verify the base inertia using the following procedure:

(1) Warm up the dynamometer according to the dynamometer manufacturer's instructions. Set the dynamometer's road load inertia to zero and motor the rolls to 5 mph. Apply a constant force to accelerate the roll at a nominal rate of 1 mph/s. Measure the elapsed time to accelerate from 10 to 40 mph, noting the corresponding speed and time points to the nearest 0.01 mph and 0.01 s. Also determine average force over the measurement interval.

(2) Starting from a steady roll speed of 45 mph, apply a constant force to the roll to decelerate the roll at a nominal rate of 1 mph/s. Measure the elapsed time to decelerate from 40 to 10 mph, noting the corresponding speed and time points to the nearest 0.01 mph and 0.01 s. Also determine average force over the measurement interval.

(3) Repeat the steps in paragraphs (c)(1) and (2) of this section for a total of five sets of results at the nominal acceleration rate and the nominal deceleration rate.

(4) Use good engineering judgment to select two additional acceleration and deceleration rates that cover the middle and upper rates expected during testing. Repeat the steps in paragraphs (c)(1) through (3) of this section at each of these additional acceleration and deceleration rates.

(5) Determine the base inertia, I_b, for each measurement interval using the following equation:

$$I_b = \frac{F}{\left|\frac{S_{final} - S_{initial}}{\Delta t}\right|} \qquad \text{Eq. 1066.150-1}$$

Where:

F = average dynamometer force over the measurement interval as measured by the dynamometer, in ft·lbm/s².

S_{final} = roll surface speed at the end of the measurement interval to the nearest 0.01 mph.

$S_{initial}$ = roll surface speed at the start of the measurement interval to the nearest 0.01 mph.

Δt = elapsed time during the measurement interval to the nearest 0.01 s.

Where:

F = 1.500 lbf = 48.26 ft·lbm/s²

S_{final} = 40.00 mph = 58.67 ft/s

$S_{initial}$ = 10.00 mph = 14.67 ft/s

Δt = 30.00 s

$$I_b = \frac{48.26}{\left|\frac{58.67 - 14.67}{30.00}\right|}$$

I_b = 32.90 lbm

(6) Determine the arithmetic mean value of base inertia from the five measurements at each acceleration and deceleration rate. Calculate these six mean values as described in 40 CFR 1065.602(b).

(7) Calculate the base inertia error, I_{berror}, for each measured base inertia, I_b, by comparing it to the manufacturer's stated base inertia, I_{bref}, using the following equation:

$$I_{berror} = \frac{I_{bref} - I_{bact}}{I_{bref}} \cdot 100\ \% \qquad \text{Eq. 1066.150-2}$$

Where:

I_{bref} = 32.96 lbm

I_{bact} = 33.01 lbm

$$I_{berror} = \frac{32.96 - 33.01}{32.96} \cdot 100\ \%$$

I_{berror} = −0.15%

(8) Calculate the inertia error for each mean value of base inertia from paragraph (c)(6) of this section. Use Equation 1066.165–2, substituting the mean base inertias associated with each acceleration and deceleration rate for the individual base inertias.

(d) *Performance evaluation.* The dynamometer must meet the following specifications to be used for testing under this part:

(1) The base inertia error determined under paragraph (c)(7) of this section may not exceed ±0.50% relative to any individual value.

(2) The base inertia error determined under paragraph (c)(8) of this section may not exceed ±0.20% relative to any mean value.

§ 1066.155 Parasitic loss verification.

(a) *Overview.* Verify and correct the dynamometer's parasitic loss. This procedure determines the dynamometer's internal losses that it must overcome to simulate road load. These losses are characterized in a parasitic loss curve that the dynamometer uses to apply compensating forces to maintain the desired road load force at the roll surface.

(b) *Scope and frequency.* Perform this verification upon initial installation, within 7 days of testing, and after major maintenance.

(c) *Procedure.* Perform this verification by following the dynamometer manufacturer's specifications to establish a parasitic loss curve, taking data at fixed speed intervals to cover the range of vehicle speeds that will occur during testing. You may zero the load cell at the selected speed if that improves your ability to determine the parasitic loss. Parasitic loss forces may never be negative. Note that the torque transducers must be zeroed and spanned prior to performing this procedure.

(d) *Performance evaluation.* In some cases, the dynamometer automatically updates the parasitic loss curve for further testing. If this is not the case, compare the new parasitic loss curve to the original parasitic loss curve from the dynamometer manufacturer or the most recent parasitic loss curve you programmed into the dynamometer. You may reprogram the dynamometer to accept the new curve in all cases, and you must reprogram the dynamometer if any point on the new curve departs from the earlier curve by more than ±0.5 lbf.

§ 1066.160 Parasitic friction compensation evaluation.

(a) *Overview.* This section describes how to verify the accuracy of the dynamometer's friction compensation.

(b) *Scope and frequency.* Perform this verification upon initial installation, within 7 days before testing, and after major maintenance. Note that this procedure relies on proper verification or calibration of speed and torque, as described in §§ 1066.135 and 1066.140. You must also first verify the dynamometer's parasitic loss curve as specified in § 1066.155.

(c) *Procedure.* Use the following procedure to verify the accuracy of the dynamometer's friction compensation:

(1) Warm up the dynamometer as specified by the dynamometer manufacturer.

(2) Perform a torque verification as specified by the dynamometer manufacturer. For torque verifications relying on shunt procedures, if the results do not conform to specifications, recalibrate the dynamometer using NIST-traceable standards as appropriate until the dynamometer passes the torque verification. Do not change the dynamometer's base inertia to pass the torque verification.

(3) Set the dynamometer inertia to the base inertia with the road load coefficients A, B, and C set to 0. Set the dynamometer to speed-control mode

with a target speed of 10 mph or a higher speed recommended by the dynamometer manufacturer. Once the speed stabilizes at the target speed, switch the dynamometer from speed control to torque control and allow the roll to coast for 60 seconds. Record the initial and final speeds and the corresponding start and stop times. If friction compensation is executed perfectly, there will be no change in speed during the measurement interval.

(4) Calculate the friction compensation error, FC_{error}, using the following equation:

$$FC_{error} = \frac{I}{2 \cdot t} \cdot \left(S_{final}^2 - S_{init}^2 \right) \qquad \text{Eq. 1066.160-5}$$

Where:

I = dynamometer inertia setting, in lbf·s²/ft.
t = duration of the measurement interval, accurate to at least 0.01 s.
S_{final} = the roll speed corresponding to the end of the measurement interval, accurate to at least 0.1 mph.
S_{init} = the roll speed corresponding to the start of the measurement interval, accurate to at least 0.1 mph.

Where:

I = 2000 lbm = 62.16 lbf· s²/ft
t = 60.0 s
S_{final} = 9.2 mph = 13.5 ft/s
S_{init} = 10.0 mph = 14.7 ft/s

$$FC_{error} = \frac{62.16}{2 \cdot 60.00} \cdot \left(13.5^2 - 14.7^2 \right)$$

FC_{error} = -16.5 ft·lbf/s = -0.031 hp

(5) The friction compensation error may not exceed ±0.10 hp.

§ 1066.165 Acceleration and deceleration verification.

(a) *Overview.* This section describes how to verify the dynamometer's ability to achieve targeted acceleration and deceleration rates. Paragraph (c) of this section describes how this verification applies when the dynamometer is programmed directly for a specific acceleration or deceleration rate. Paragraph (d) of this section describes how this verification applies when the dynamometer is programmed with a calculated force to achieve a targeted acceleration or deceleration rate.

(b) *Scope and frequency.* Perform this verification upon initial installation and after major maintenance. Perform this verification upon initial installation and after major maintenance.

(c) *Verification of acceleration and deceleration rates.* Activate the dynamometer's function generator for measuring roll revolution frequency. If the dynamometer has no such function generator, set up a properly calibrated external function generator consistent with the verification described in this paragraph (c). Use the function generator to determine actual acceleration and deceleration rates as the dynamometer traverses speeds between 10 and 40 mph at various nominal acceleration and deceleration rates. Verify the dynamometer's acceleration and deceleration rates as follows:

(1) Set up start and stop frequencies specific to your dynamometer by identifying the roll-revolution frequency, f, in revolutions pre second (or Hz) corresponding to 10 mph and 40 mph vehicle speeds, accurate to at least four significant figures, using the following equation:

$$f = \frac{S \cdot n}{d_{roll} \cdot \pi} \qquad \text{Eq. 1066.165-1}$$

Where:

S = the target roll speed, in inches per second (corresponding to drive speeds of 10 mph or 40 mph).
n = the number of pulses from the dynamometer's roll-speed sensor per roll revolution.
d_{roll} = roll diameter, in inches.

(2) Program the dynamometer to accelerate the roll at a nominal rate of 1 mph/s from 10 mph to 40 mph. Measure the elapsed time to reach the target speed, to the nearest 0.01 s. Repeat this measurement for a total of five runs. Determine the actual acceleration rate for each run, aact, using the following equation:

$$a_{act} = \frac{S_{final} - S_{init}}{t} \qquad \text{Eq. 1066.165-2}$$

Where:

a_{act} = acceleration rate (decelerations have negative values).
S_{final} = the target value for the final roll speed.
S_{init} = the setpoint value for the initial roll speed.
t = time to accelerate from S_{init} to S_{final}.

Where:

S_{inal} = 40 mph
S_{init} = 10 mph
t = 30.003 s

$$a_{act} = \frac{40.00 - 10.00}{30.03}$$

a_{act} = 0.999 mph/s

(3) Program the dynamometer to decelerate the roll at a nominal rate of 1 mph/s from 40 mph to 10 mph. Measure the elapsed time to reach the target speed, to the nearest 0.01 s. Repeat this measurement for a total of five runs. Determine the actual acceleration rate, a_{act}, using Equation 1066.165–2

(4) Repeat the steps in paragraphs (c)(2) and (3) of this section for additional acceleration and deceleration rates in 1 mph/s increments up to and including one increment above the maximum acceleration rate expected during testing. Average the five repeat runs to calculate a mean acceleration rate, $a\bar{a}_{act}$, each setting.

(5) Compare each mean acceleration rate, $a\bar{a}_{act}$, to the corresponding nominal acceleration rate, aref, to determine values for acceleration error, aerror, using the following equation:

$$a_{error} = \frac{\overline{a}_{act} - a_{ref}}{a_{ref}} \cdot 100\ \% \qquad \text{Eq. 1066.165-4}$$

Where:

$\bar{a}_{act}$ =0.999 mph/s
a_{ref} = 1 mph/s
a_{error} = -0.100%

(d) V*erification of forces for controlling acceleration and deceleration.* Program the dynamometer with a calculated force value and determine actual acceleration and deceleration rates as the dynamometer traverses speeds between 10 and 40 mph at various nominal acceleration and deceleration rates. Verify the dynamometer's ability to achieve certain acceleration and deceleration rates with a given force as follows:

(1) Calculate the force setting, F, using the following equation:

$$F = I_b \cdot |a| \qquad \text{Eq. 1066.165-5}$$

Where:

I_b = the dynamometer manufacturer's stated base inertia, in lbf·s²/ft.
a = nominal acceleration rate, in ft/s².

Where:

I_b = 2967 lbm = 92.217 lbf· s2/ft
a = 1 mph/s = 1.4667 ft/s²
F = 135.25 lbf

(2) Set the dynamometer to road-load mode and program it with a calculated force to accelerate the roll at a nominal rate of 1 mph/s from 10 mph to 40 mph. Measure the elapsed time to reach the target speed, to the nearest 0.01 s. Repeat this measurement for a total of five runs. Determine the actual acceleration rate, a_{act}, for each run using Equation 1066.165–2. Repeat this step to determine measured "negative acceleration" rates using a calculated force to decelerate the roll at a nominal rate of 1 mph/s from 40 mph to 10 mph. Average the five repeat runs to calculate a mean acceleration rate, $a\bar{a}_{act}$, at each setting.

(3) Repeat the steps in paragraph (d)(2) of this section for additional acceleration and deceleration rates as specified in paragraph (c)(4) of this section.

(4) Compare each mean acceleration rate, $a\bar{a}_{act}$, to the corresponding nominal acceleration rate, a_{ref}, to determine values for acceleration error, a_{error}, using Equation 1066.165–4

(e) *Performance evaluation.* The acceleration error from paragraphs (c)(5) and (d)(4) of this section may not exceed ± 1.0%.

§ 1066.170 Unloaded coastdown verification.

(a) *Overview.* Use force measurements to verify the dynamometer's settings based on coastdown procedures.

(b) *Scope and frequency.* Perform this verification upon initial installation, within 7 days of testing, and after major maintenance.

(c) *Procedure.* This procedure verifies dynamometer's settings derived from coastdowns testing. For dynamometers that have an automated process for this procedure, perform this evaluation by setting the initial speed, final speed, inertial, and road load coefficients as required for each test, using good engineering judgment to ensure that these values properly represent in-use operation. Use the following procedure if your dynamometer does not perform this verification with have an automated process:

(1) Warm up the dynamometer as specified by the dynamometer manufacturer.

(2) With the dynamometer in coastdown mode, set the dynamometer inertia for the smallest vehicle weight that you expect to test and set A, B, and C road load coefficients to values typical of those used during testing. Program the dynamometer to operate at 10 mph. Perform a coastdown two times at this speed setting. Repeat these coastdown steps in 10 mph increments up to and including one increment above the maximum speed expected during testing. You may stop the verification before reaching 0 mph, with any appropriate adjustments in calculating the results.

(3) Repeat the steps in paragraph (c)(2) of this section with the dynamometer inertia set for the largest vehicle weight that you expect to test.

(4) Determine the average coastdown force, F, for each speed and inertia setting using the following equation:

$$F = \frac{I \cdot S_{si}}{t} \qquad \text{Eq. 1066.170-1}$$

Where:

F = the average force measured during the coastdown for each speed and inertia setting, expressed in lbf · s²/ft and rounded to four significant figures.
I = the dynamometer's inertia setting, in lbf · s²/ft.
S_{si} = the speed setting at the start of the coastdown, expressed in ft/s and rounded to four significant figures.
t = coastdown time for each speed and inertia setting, accurate to at least 0.01 s.

Where:

I = 2000 lbm = 65.17 lbf · s²/ft
S_{si} = 10 mph = 14.66 ft/s
t = 5.00 s

$$F = \frac{65.17 \cdot 14.66}{5.00}$$

F = 191 lbf

(5) Calculate the target value of coastdown force, F_{ref}, based on the applicable dynamometer parameters for each speed and inertia setting.

(6) Compare the mean value of the coastdown force measured for each speed and inertia setting, $\bar{F}_{act}$, to the corresponding F_{ref} to determine values for coastdown force error, F_{error}, using the following equation:

$$F_{error} = \frac{\bar{F}_{act} - F_{ref}}{F_{ref}} \cdot 100\ \% \qquad \text{Eq. 1066.170-2}$$

Where:

F_{ref} = 192 lbf
$\bar{F}_{act}$ = 191 lbf

$$F_{error} = \frac{191 - 192}{192} \cdot 100\ \%$$

F_{error} = −0.5%

(7) Calculate the maximum allowable error for all speed and inertia settings as follows:

$F_{errormax}$ = Max [±1.0% or (2.2 lbf/F_{ref}) · 100%]

§ 1066.180 Driver's aid.

Use good engineering judgment to provide a driver's aid that facilitates compliance with the requirements of § 1066.330.

Subpart C—Coastdown

§ 1066.201 Overview of coastdown procedures.

(a) The coastdown procedures described in this subpart are used to determine the load coefficients (A, B, and C) for the simulated road load equation in § 1066.110(d)(3).

(b) The general procedure for performing coastdown tests and calculating load coefficients is described in SAE J2263 (incorporated by reference in § 1066.710). This subpart specifies certain deviations from SAE J2263 for certain applications.

(c) Use good engineering judgment for all aspects of coastdown testing. For example, minimize the effects of grade by performing coastdown testing on reasonably level surfaces and determining coefficients based on average values from vehicle operation in opposite directions over the course.

§ 1066.210 Coastdown procedures for heavy-duty vehicles.

This section describes coastdown procedures that are unique to heavy-duty motor vehicles.

(a) Determine load coefficients by performing a minimum of 20 coastdown runs (10 in each direction).

(b) Follow the provisions of SAE J2263 (incorporated by reference in § 1066.710), except as described in this paragraph (b). The terms and variables identified in this paragraph (b) have the

meaning given in SAE J2263 unless specified otherwise.

(1) You are not required to reach the top speed specified in Section 9.3 of SAE J2263, as long as your top speed for each run is no lower than 100 km/h (62.2 mph).

(2) Section 9.3.1 of SAE J2263 allows split runs, but we recommend whole runs. If you use split runs, analyze them separately but count them together with respect to the minimum number of runs required.

(3) You may perform consecutive runs in a single direction, followed by consecutive runs in the opposite direction, consistent with good engineering judgment. Harmonize starting and stopping points to the extent practicable to allow runs to be paired.

(4) Section 12.1 of SAE J2263 allows determination of calibration coefficients from calibration runs conducted at a constant 50 mph in each road direction.

(i) We recommend using the following equation to correct relative wind speed (Sr) in calibration runs:

$$S_{r,i} = \frac{1}{2} S_{r,meas,dir,i} \sum_{dir} \left[\frac{1}{n_{i,dir}} \sum_{i} \left(\frac{S_{dir,i}}{S_{r,meas,dir,i}} \right) \right] \qquad \text{Eq. 1066.210-1}$$

(ii) We recommend using the following equation to correct yaw angle (*Y*) in coastdowns:

$$Y_i = Y_{meas,i} - \frac{1}{2} \sum_{dir} \left[\frac{1}{n_{i,dir}} \sum_{i=1}^{25} Y_{meas,dir,i} \right] \qquad \text{Eq. 1066.210-2}$$

(5) Use the following equation of motion instead of the equation specified in SAE J2263:

$$-M_e \frac{\Delta S}{\Delta t} = A_m + D_a \cdot S_r^2 + E \cdot S_r^2 \cdot Y^2 \pm M \cdot g \left(\frac{\Delta h}{\Delta s} \right) \qquad \text{Eq. 1066.210-3}$$

(i) Determine A_m, D_a, and E using a mixed model technique, with the run being the random effect.

(ii) Determine the A, B, and C coefficients identified in § 1066.110 as follows:

$A = A_m$

$B = 0$

$C = D_a$

(iii) Consistent with good engineering judgment, set E equal to zero if wind direction effects are not statistically significant. Use the following simplified equation of motion if wind direction effects are not statistically significant and grade effects are negligible:

$$-M_e \frac{\Delta S}{\Delta t} = A_m + D_a \cdot S_r^2 \qquad \text{Eq. 1066.210-4}$$

Subpart D—Vehicle Preparation and Running a Test

§ 1066.301 Overview.

(a) Use the procedures detailed in this subpart to measure vehicle emissions over a specified drive schedule. This subpart describes how to:

(1) Determine road load power, test weight, and inertia class.

(2) Prepare the vehicle, equipment, and measurement instruments for an emission test.

(3) Perform pre-test procedures to verify proper operation of certain equipment and analyzers and to prepare them for testing.

(4) Record pre-test data.

(5) Sample emissions.

(6) Record post-test data.

(7) Perform post-test procedures to verify proper operation of certain equipment and analyzers.

(8) Weigh PM samples.

(b) An emission test generally consists of measuring emissions and other parameters while a vehicle follows the drive schedules specified in the standard-setting part. There are two general types of test cycles:

(1) *Transient cycles.* Transient test cycles are typically specified in the standard-setting part as a second-by-second sequence of vehicle speed commands. Operate a vehicle over a transient cycle such that the speed follows the target values. Proportionally sample emissions and other parameters and use the calculations in 40 CFR part 86, subpart B, or 40 CFR part 1065, subpart G, to calculate emissions. The standard-setting part may specify three types of transient testing based on the approach to starting the measurement, as follows:

(i) A cold-start transient cycle where you start to measure emissions just before starting an engine that has not been warmed up.

(ii) A hot-start transient cycle where you start to measure emissions just before starting a warmed-up engine.

(iii) A hot running transient cycle where you start to measure emissions after an engine is started, warmed up, and running.

(2) *Cruise cycles.* Cruise test cycles are typically specified in the standard-

setting part as a discrete operating point that has a single speed command.

(i) Start a cruise cycle as a hot running test, where you start to measure emissions after the engine is started and warmed up and the vehicle is running at the target test speed.

(ii) Sample emissions and other parameters for the cruise cycle in the same manner as a transient cycle, with the exception that reference speed value is constant. Record instantaneous and mean speed values over the cycle.

§ 1066.304 Road load power and test weight determination.

To determine road load power and test weight, follow SAE J2263 and SAE J2264 (incorporated by reference in § 1066.710), with the following exceptions:

(a) *Test weight.* The rotational inertia of drive-axle and nondrive-axle components that rotate with the wheels is expressed as additional "linear" mass. For Class 7 combination and Class 8 heavy-duty vehicles, without dual drive tires (or other driveline components which are likely to increase real rotational inertia to greater than 1.5% per axle) and if the actual effective mass of rotating components is unknown, the effective mass of all rotating components may be estimated as 4.0% of the vehicle test mass.

(b) [Reserved]

§ 1066.307 Vehicle preparation and preconditioning.

This section describes steps to take before measuring exhaust emissions for those vehicles that are subject to evaporative or refueling emission tests as specified in subpart F of this part. Other preliminary procedures may apply as specified in the standard-setting part.

(a) Prepare the vehicle for testing as described in 40 CFR 86.131–00.

(b) If testing will include measurement of refueling emissions, perform the vehicle preconditioning steps as described in 40 CFR 86.153–98. Otherwise, perform the vehicle preconditioning steps as described in 40 CFR 86.132–00.

§ 1066.310 Dynamometer test procedure.

(a) Dynamometer testing may consist of multiple drive cycles with both cold-start and hot-start portions, including prescribed soak times before each test phase. *See* the standard-setting part for test cycles and soak times for the appropriate vehicle category. A test phase consists of engine startup (with accessories operated according to the standard-setting part), operation over the drive cycle, and engine shutdown.

(b) During dynamometer operation, position a road-speed modulated cooling fan that appropriately directs cooling air to the vehicle. This generally requires squarely positioning the fan within 30 centimeters of the front of the vehicle and directing the airflow to the vehicle's radiator. Use a fan system that achieves a linear speed of cooling air at the blower outlet that is within ±3 mph of the corresponding roll speed when vehicle speeds are between 5 to 30 mph, and within ±10 mph of the corresponding roll speed at higher vehicle speeds. The fan must provide no cooling air for vehicle speeds below 5 mph, unless we approve your request to provide cooling during low-speed operation based on a demonstration that this is appropriate to simulate the cooling experienced by in-use vehicles. If the cooling specifications in this paragraph (b) are impractical for special vehicle designs, such as vehicles with rear-mounted engines, you may arrange for an alternative fan configuration that allows for proper simulation of vehicle cooling during in-use operation.

(c) Record the vehicle's speed trace based on the time and speed data from the dynamometer. Record speed to at least the nearest 0.1 mph and time to at least the nearest 0.1 s.

(d) You may perform practice runs to for operating the vehicle and the dynamometer controls to meet the driving tolerances specified in § 1066.330 or adjust the emission sampling equipment. Verify that accelerator pedal allows for enough control to closely follow the prescribed driving schedule. You may not measure emissions during a practice run.

(e) Inflate the drive wheel tires according to the vehicle manufacturer's specifications. The drive wheels' tire pressure must be the same for dynamometer operation and for coastdown procedures for determining road load coefficients. Report these tire pressure values with the test results.

(f) Warm up the dynamometer as recommended by the dynamometer manufacturer.

(g) Following the test, determine the actual driving distance by counting the number of dynamometer roll or shaft revolutions, or by integrating speed over the course of testing from a high-resolution encoder system.

(h) Use good engineering judgment to test four-wheel drive and all-wheel drive vehicles. This may involve testing on a dynamometer with a separate dynamometer roll for each drive axle. This may also involve operation on a single roll, which would require disengaging the second set of drive wheels, either with a switch available to the driver or by some other means; however, operating such a vehicle on a single roll may occur only if this does not decrease emissions or energy consumption relative to normal in-use operation.

§ 1066.320 Pre-test verification procedures and pre-test data collection.

(a) Follow the procedures for PM sample preconditioning and tare weighing as described in 40 CFR 1065.590 if your engine must comply with a PM standard.

(b) Unless the standard-setting part specifies different tolerances, verify at some point before the test that ambient conditions are within the tolerances specified in this paragraph (b). For purposes of this paragraph (b), "before the test" means any time from a point just prior to engine starting (excluding engine restarts) to the point at which emission sampling begins.

(1) Ambient temperature must be (20 to 30) °C. *See* § 1066.330(m) for circumstances under which ambient temperatures must remain within this range during the test.

(2) Atmospheric pressure must be (80.000 to 103.325) kPa. You are not required to verify atmospheric pressure prior to a hot-start test interval for testing that also includes a cold start.

(3) Dilution air conditions must meet the specifications in 40 CFR 1065.140, except in cases where you preheat your CVS before a cold-start test. We recommend verifying dilution air conditions just before starting each test phase.

(c) You may test vehicles at any intake-air humidity and we may test vehicles at any intake-air humidity.

(d) You may perform a final calibration of the proportional-flow control systems, which may include performing practice runs.

(e) You may perform the following recommended procedure to precondition sampling systems:

(1) Operate the vehicle over the test cycle.

(2) Operate any dilution systems at their expected flow rates. Prevent aqueous condensation in the dilution systems.

(3) Operate any PM sampling systems at their expected flow rates.

(4) Sample PM for at least 10 min using any sample media. You may change sample media during preconditioning. You must discard preconditioning samples without weighing them.

(5) You may purge any gaseous sampling systems during preconditioning.

(6) You may conduct calibrations or verifications on any idle equipment or analyzers during preconditioning.

(7) Proceed with the test sequence described in § 1066.330.

(f) Verify the amount of nonmethane contamination in the exhaust and background HC sampling systems within 8 hours before the start of the first test drive cycle for each individual vehicle tested as described in 40 CFR 1065.515(g).

§ 1066.325 Engine starting and restarting.

(a) Start the vehicle's engine as follows:

(1) At the beginning of the test cycle, start the engine according to the procedure you describe in your owners manual.

(2) Place the transmission in gear as described by the test cycle in the standard-setting part. During idle operation, you may apply the brakes if necessary to keep the drive wheels from turning.

(b) If the vehicle does not start after your recommended maximum cranking time, wait and restart cranking according to your recommended practice. If you don't recommend such a cranking procedure, stop cranking after 10 seconds, wait for 10 seconds, then start cranking again for up to 10 seconds. You may repeat this for up to three start attempts. If the vehicle does not start after three attempts, you must determine and record the reason for failure to start. Shut off sampling systems and either turn the CVS off, or disconnect the exhaust tube from the tailpipe during the diagnostic period. Reschedule the vehicle for testing from a cold start.

(c) Repeat the recommended starting procedure if the engine has a "false start".

(d) Take the following steps if the engine stalls:

(1) If the engine stalls during an idle period, restart the engine immediately and continue the test. If you cannot restart the engine soon enough to allow the vehicle to follow the next acceleration, stop the driving schedule indicator and reactivate it when the vehicle restarts.

(2) If the engine stalls during operation other than idle, stop the driving schedule indicator, restart the engine, accelerate to the speed required at that point in the driving schedule, reactivate the driving schedule indicator, and continue the test.

(3) Void the test if the vehicle will not restart within one minute. If this happens, remove the vehicle from the dynamometer, take corrective action, and reschedule the vehicle for testing. Record the reason for the malfunction (if determined) and any corrective action. *See* the standard-setting part for instructions about reporting these malfunctions.

§ 1066.330 Performing emission tests.

The overall test consists of prescribed sequences of fueling, parking, and operating test conditions.

(a) Vehicles are tested for criteria pollutants and greenhouse gas emissions as described in the standard-setting part.

(b) Take the following steps before emission sampling begins:

(1) For batch sampling, connect clean storage media, such as evacuated bags or tare-weighed filters.

(2) Start all measurement instruments according to the instrument manufacturer's instructions and using good engineering judgment.

(3) Start dilution systems, sample pumps, and the data-collection system.

(4) Pre-heat or pre-cool heat exchangers in the sampling system to within their operating temperature tolerances for a test.

(5) Allow heated or cooled components such as sample lines, filters, chillers, and pumps to stabilize at their operating temperatures.

(6) Verify that there are no significant vacuum-side leaks according to 40 CFR 1065.345.

(7) Adjust the sample flow rates to desired levels, using bypass flow, if desired.

(8) Zero or re-zero any electronic integrating devices, before the start of any test interval.

(9) Select gas analyzer ranges. You may automatically or manually switch gas analyzer ranges during a test only if switching is performed by changing the span over which the digital resolution of the instrument is applied. During a test you may not switch the gains of an analyzer's analog operational amplifier(s).

(10) Zero and span all continuous gas analyzers using NIST-traceable gases that meet the specifications of 40 CFR 1065.750. Span FID analyzers on a carbon number basis of one (1), C_1. For example, if you use a C_3H_8 span gas of concentration 200 μmol/mol, span the FID to respond with a value of 600 μmol/mol. Span FID analyzers consistent with the determination of their respective response factors, *RF*, and penetration fractions, *PF*, according to 40 CFR 1065.365.

(11) We recommend that you verify gas analyzer responses after zeroing and spanning by sampling a calibration gas that has a concentration near one-half of the span gas concentration. Based on the results and good engineering judgment, you may decide whether or not to re-zero, re-span, or re-calibrate a gas analyzer before starting a test.

(12) If you correct for dilution air background concentrations of associated engine exhaust constituents, start measuring (*i.e.* sampling) and recording background concentrations.

(13) Turn on cooling fans immediately prior to the start of the test.

(c) Operate vehicles during testing as follows:

(1) Where we do not give specific instructions, operate the vehicle according to your recommendations in the owners manual, unless those recommendations are unrepresentative of what may reasonably be expected for in-use operation.

(2) If vehicles have features that preclude dynamometer testing, modify these features as necessary to allow testing, consistent with good engineering judgment.

(3) Operate vehicles during idle as follows:

(i) For a vehicle with an automatic transmission, operate at idle with the transmission in "Drive" with the wheels braked, except that you may shift to "Neutral" for the first idle period and for any idle period longer than one minute. If you put the vehicle in "Neutral" during an idle, you must shift the vehicle into "Drive" with the wheels braked at least 5 seconds before the end of the idle period.

(ii) For a vehicle with a manual transmission, operate at idle with the transmission in gear with the clutch disengaged, except that you may shift to "Neutral" with the clutch disengaged for the first idle period and for any idle period longer than one minute. If you put the vehicle in "Neutral" during idle, you must shift to first gear with the clutch disengaged at least 5 seconds before the end of the idle period.

(4) If the vehicle cannot accelerate at the specified rate, operate it at maximum available power until the vehicle speed reaches the value prescribed for that time in the driving schedule.

(5) Decelerate without changing gears, using the brakes or accelerator pedal as necessary to maintain the desired speed. Keep the clutch engaged on manual transmission vehicles and do not change gears after the end of the acceleration event. Depress manual transmission clutches when the speed drops below 15 mph (24.1 km/h), when engine roughness is evident, or when engine stalling is imminent.

(6) For test vehicles equipped with manual transmissions, shift gears in a way that represents reasonable shift

patterns for in-use operation, considering vehicle speed, engine speed, and any other relevant variables. You may recommend a shift schedule in your owners manual that differs from your shift schedule during testing as long as you include both shift schedules in your application for certification. In this case, we may use the shift schedule you describe in your owners manual.

(d) *See* the standard-setting part for drive schedules. These are defined by a smooth trace drawn through the specified speed vs. time sequence.

(e) The driver must attempt to follow the target schedule as closely as possible, consistent with the specifications in paragraph (b) of this section. Instantaneous speeds must stay within the following tolerances:

(1) The upper limit is 2.0 mph higher than the highest point on the trace within 1.0 s of the given point in time.

(2) The lower limit is 2.0 mph lower than the lowest point on the trace within 1.0 second of the given time.

(3) The same limits apply For vehicle preconditioning, except that the upper and lower limits for speed values are ±4.0 mph.

(4) Void the test if you do not maintain speed values as specified in this paragraph (e)(4). Speed variations (such as may occur during gear changes or braking spikes) may occur as follows, provided that such variations are clearly documented, including the time and speed values and the reason for deviation:

(i) Speed variations greater than the specified limits are acceptable for up to 2.0 seconds on any occasion.

(ii) For vehicle preconditioning, up to three additional occurrences of speed variations outside the specified limits are acceptable for up to 15 seconds on any occasion.

(iii) For vehicles that are not able to maintain acceleration as specified in paragraph (b)(4) of this section, do not count the insufficient acceleration as being outside the specified limits.

(f) Figure 1 and Figure 2 of this section show the range of acceptable speed tolerances for typical points during testing. Figure 1 of this section is typical of portions of the speed curve that are increasing or decreasing throughout the 2-second time interval. Figure 2 of this section is typical of portions of the speed curve that include a maximum or minimum value.

Figure 1 of § 1066.330—Example of the allowable ranges for the driver's trace.

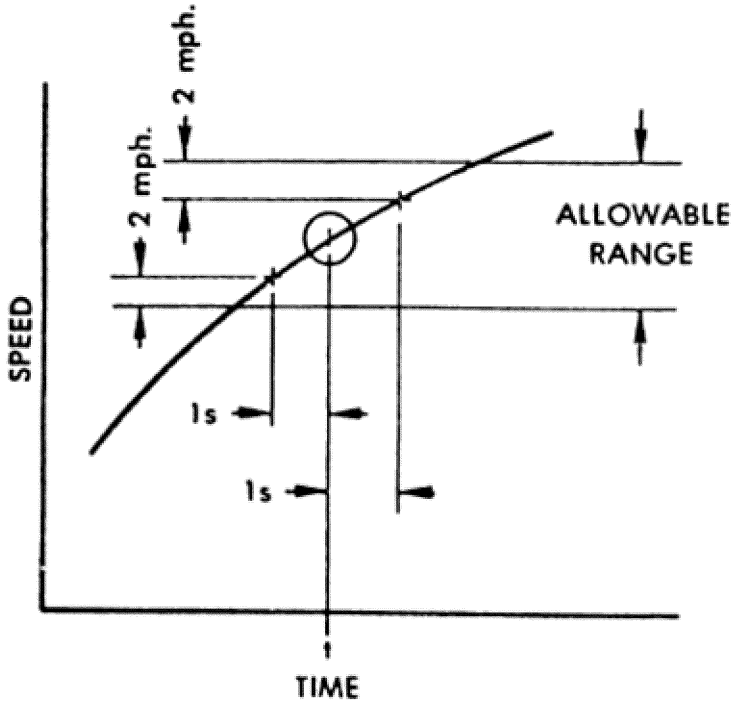
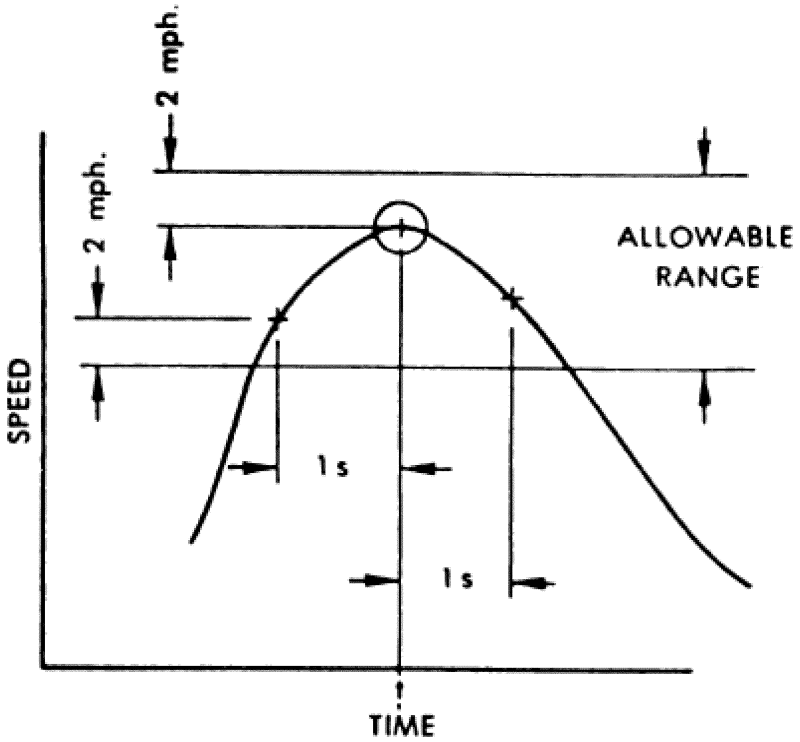


Figure 2 of § 1066.330---Example of the allowable ranges for the driver's trace.



(g) Start testing as follows:

(1) If a vehicle is already running and warmed up, and starting is not part of the test cycle, perform the following for the following types of test cycles:

(i) Transient test cycles. Control vehicle speeds to follow a drive schedule consisting of a series of idles, accelerations, cruises, and decelerations.

(ii) Cruise test cycles. Control the vehicle operation to match the speed of the first phase of the test cycle. Follow the instructions in the standard-setting part to determine how long to stabilize the vehicle during each phase, how long to sample emissions at each phase, and how to transition between phases.

(2) If engine starting is part of the test cycle, initiate data logging, sampling of exhaust gases, and integrating measured values before starting the engine. Initiate the driver's trace when the engine starts.

(h) At the end of each test interval, continue to operate all sampling and dilution systems to allow the response times to elapse. Then stop all sampling and recording, including the recording of background samples. Finally, stop any integrating devices and indicate the end of the duty cycle in the recorded data.

(i) Shut down the vehicle if it is part of the test cycle or if testing is complete.

(j) If testing involves engine shutdown followed by another test phase, start a timer for the vehicle soak when the engine shuts down.

(k) Take the following steps after emission sampling is complete:

(1) For any proportional batch sample, such as a bag sample or PM sample, verify that proportional sampling was maintained according to 40 CFR 1065.545. Void any samples that did not maintain proportional sampling according to specifications.

(2) Place any used PM samples into covered or sealed containers and return them to the PM-stabilization environment. Follow the PM sample post-conditioning and total weighing procedures in 40 CFR 1065.595.

(3) As soon as practical after the test cycle is complete, or optionally during the soak period if practical, perform the following:

(i) Drift check all continuous gas analyzers and zero and span all batch gas analyzers no later than 30 minutes after the test cycle is complete, or during the soak period if practical.

(ii) Analyze any conventional gaseous batch samples no later than 30 minutes after a test phase is complete, or during the soak period if practical.

(iii) Analyze background samples no later than 60 minutes after the test cycle is complete.

(iv) Analyze gaseous batch samples requiring off-line analysis, such as ethanol, no later than 30 minutes after the test cycle is complete.

(4) After quantifying exhaust gases, verify drift as follows:

(i) For batch and continuous gas analyzers, record the mean analyzer value after stabilizing a zero gas to the analyzer. Stabilization may include time to purge the analyzer of any sample gas, plus any additional time to account for analyzer response.

(ii) Record the mean analyzer value after stabilizing the span gas to the analyzer. Stabilization may include time to purge the analyzer of any sample gas, plus any additional time to account for analyzer response.

(iii) Use these data to validate and correct for drift as described in 40 CFR 1065.550.

(l) [Reserved]

(m) Measure and record ambient temperature and pressure. Also measure humidity, as required, such as for correcting NO_X emissions. For testing vehicles with the following engines, you must record ambient temperature continuously to verify that it remains within the temperature range specified in § 1066.320(b)(1) throughout the test:

(1) Air-cooled engines.

(2) Engines equipped with emission control devices that sense and respond to ambient temperature.

(3) Any other engine for which good engineering judgment indicates that this

is necessary to remain consistent with 40 CFR 1065.10(c)(1).

(n) Validate overall driver accuracy by comparing the expected power generated, based on measured vehicle speeds, to the theoretical power that would have been generated by driving exactly to the target trace. You may remove any vehicle speed points and corresponding target trace speed points based on insufficient engine power as allowed in paragraph (e)(5) of this section.

(1) Calculate the mean power demand at the wheels, P, based on the measured vehicle speed as follows:

$$\overline{P} = \frac{\sum_{i=1}^{N} S_i \cdot \left(\left(A + B \cdot S_i + C \cdot S_i^2 \right) + \left(\left(\frac{S_i - S_{i-1}}{t_i - t_{i-1}} \right) \cdot M_e \right) \right)}{N} \qquad \text{Eq. 1066.330-1}$$

Where:

i = An indexing variable that represents one recorded value of vehicle speed.

N = number of recorded speed values.

A, B, and C = the road load coefficients.

S_i = the measured vehicle speed at a given point in time, accurate to at least the nearest 0.01 mph. Convert speed values to ft/s in all cases except for the terms used with the B and C coefficients. Let S_i-1 = 0.

t_i = the measured vehicle speed at a given point in time, accurate to at least the nearest 0.01 s. Let t_i-1 = 0.

M_e = effective vehicle mass, accurate to at least the nearest 1 lbm, expressed in lbf · s²/ft. *See* § 1066.304(a).

Example:

S_0 = 0.00 mph = 0.00 ft/s
S_1 = 0.23 mph = 0.34 ft/s
S_2 = 0.47 mph = 0.69 ft/s
A = 69.2 lbf
B = -0.424 lbf/mph
C = 0.03089 lbf/mph ²
$t_2 - t_1$ = 0.1 s (10 Hz)

$$\left(\frac{S_1 - S_0}{t_1 - t_0} \right) = \left(\frac{0.23 - 0}{0.100} \right) = 2.30 \text{ mph/s} = 3.37 \text{ ft/s}^2$$

$$\left(\frac{S_2 - S_1}{t_2 - t_1} \right) = \left(\frac{0.47 - 0.23}{0.10} \right) = 2.40 \text{ mph/s} = 3.52 \text{ ft/s}^2$$

M_e = 9800 lbm = 304.59 lbf·s²/ft N = 6680

$$\overline{P} = \frac{\left(\begin{array}{l} \left(0.34 \cdot \left(\left(69.2 + \left(-0.424 \cdot 0.23 \right) + 0.03089 \cdot 0.23^2 \right) + \left(3.37 \cdot 304.59 \right) \right) \right) + \\ \left(0.69 \cdot \left(\left(69.2 + \left(-0.424 \cdot 0.47 \right) + 0.03089 \cdot 0.47^2 \right) + \left(3.52 \cdot 304.59 \right) \right) \right) + \\ \ldots + \left(S_{6680} \cdot \left(\left(69.2 + \left(-0.424 \cdot S_{6680} \right) + 0.03089 \cdot S_{6680}^2 \right) + \left(\left(\frac{S_{6680} - S_{6679}}{t_{6680} - t_{6679}} \right) \cdot 304.59 \right) \right) \right) \end{array} \right)}{6680}$$

$\bar{P}$ = 4931 ft·bf/s = 8.97 hp

(2) Calculate the reference value for power demand at the wheels, P_{ref}, based on the target vehicle speed using Equation 1066.330–1, substituting target values for actual values.

(3) Calculate the driving power error, P_{error}, by comparing the mean power demand calculated in paragraph (c)(1) of this section, $\bar{P}$, with the reference power calculated in paragraph (c)(2) of this section, P_{ref}, using the following equation:

$$P_{error} = \frac{\overline{P} - P_{ref}}{P_{ref}} \cdot 100\ \% \qquad \text{Eq. 1066.330-2}$$

Example:

$\bar{P}$= 8.965 hp

P_{ref} = 9.015 hp

$$P_{error} = \frac{8.965 - 9.015}{9.015} \cdot 100\ \%$$

P_{error} = -0.55%

(4) The driver power error may not exceed ±1.50% for a valid test.

Subpart E—Hybrids

§ 1066.401 Overview.

To determine State of Charge, Net Energy Change, and State of Charge correction for emission results, follow SAE J1711 and SAE J2711 (incorporated by reference in § 1066.710).

Subpart F—[Reserved]

Subpart G—Calculations

§ 1066.601 Overview.

(a) This subpart describes how to—

(1) Use the signals recorded before, during, and after an emission test to calculate distance-specific emissions of each regulated pollutant.

(2) Perform calculations for calibrations and performance checks.

(3) Determine statistical values.

(b) You may use data from multiple systems to calculate test results for a single emission test, consistent with good engineering judgment. You may also make multiple measurements from a single batch sample, such as multiple weighing of a PM filter or multiple readings from a bag sample. You may not use test results from multiple emission tests to report emissions. We allow weighted means where appropriate. You may discard statistical outliers, but you must report all results.

§ 1066.610 Mass-based and molar-based exhaust emission calculations.

(a) *General.* Calculate your total mass of emissions over a test cycle as specified in 40 CFR 86.144–94 or 40 CFR part 1065, subpart G.

(b) *Composite emissions over multiple test cycles.* For composite emission calculations over multiple test phases and corresponding weighting factors, *see* the standard-setting part.

Subpart H—Definitions and Other Reference Material

§ 1066.701 Definitions.

The definitions in this section apply to this part. The definitions apply to all subparts unless we note otherwise. Other terms have the meaning given in 40 CFR part 1065. The definitions follow:

Base inertia means a value expressed in mass units to represent the rotational inertia of the rotating dynamometer components between the vehicle driving tires and the dynamometer torque-measuring device, as specified in § 1066.150.

Driving schedule means a series of vehicle speeds that a vehicle must follow during a test. Driving schedules are specified in the standard-setting part. A driving schedule may consist of multiple test phases.

Duty cycle means a set of weighting factors and the corresponding test cycles, where the weighting factors are used to combine the results of multiple test phases into a composite result.

Road load coefficients means sets of A, B, and C road load force coefficients that are used in the dynamometer road load simulation, where road load force at speed S equals $A + B \cdot S + C \cdot S^2$.

Test phase means a duration over which a vehicle's emission rates are determined for comparison to an emission standard. For example, the standard-setting part may specify a complete duty cycle as a cold-start test phase and a hot-start test phase. In cases where multiple test phases occur over a duty cycle, the standard-setting part may specify additional calculations that weight and combine results to arrive at composite values for comparison against the applicable standards.

Unloaded coastdown means a dynamometer coastdown run with the vehicle wheels off the roll surface.

§ 1066.705 Symbols, abbreviations, acronyms, and units of measure.

The procedures in this part generally follow either the International System of Units (SI) or the United States customary units, as detailed in NIST Special Publication 811, 1995 Edition, "Guide for the Use of the International System of Units (SI)," which we incorporate by reference in § 1066.710. See 40 CFR 1065.25 for specific provisions related to these conventions. This section summarizes the way we use symbols, units of measure, and other abbreviations.

Symbols for quantities. This part uses the following symbols and units of measure for various quantities:

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Symbol	Quantity	Unit	Unit Symbol	Base SI units
Δ	symbol prefix to denote an interval	miles per hour	mph	
%	Percent	0.01	%	10^{-2}
d	Diameter	Inches	in	
F	Force	Pound force	lbf	
f	Frequency	Hertz	Hz	s^{-1}
I	Inertia	Pound mass	lbm	
i	indexing variable			
M	Mass	Pound mass	lbm	
N	total number in series			
n	total number of pulses in a series			
R	dynamometer roll revolutions	revolutions per minute	rpm	
RL	road load coefficient	horsepower	hp	
S	Speed	miles per hour	mph	
T	Celsius temperature	degree Celsius	°C	K-273.15
T	torque (moment of force)	newton meter	N·m	$m^2 \cdot kg \cdot s^{-2}$
t	Time	second	s	s
Δt	time interval, period, 1/frequency	second	s	s
y	generic variable			

(b) *Symbols for chemical species.* This part uses the following symbols for chemical species and exhaust constituents:

Symbol	Species
CH_4	Methane
CO	carbon monoxide
CO_2	carbon dioxide
NMHC	nonmethane hydrocarbon
NMHCE	nonmethane hydrocarbon equivalent
NO	nitric oxide
NO_2	nitrogen dioxide
NO_x	oxides of nitrogen
N_2O	nitrous oxide
O_2	molecular oxygen
PM	particulate mass
THC	total hydrocarbon
THCE	total hydrocarbon equivalent

(c) *Superscripts.* This part uses the following superscripts to define a quantity:

Superscript	Quantity
overbar (such as $\bar{y}$)	arithmetic mean

(d) *Subscripts.* This part uses the following subscripts to define a quantity:

Subscript	Quantity
Int	speed interval
Abs	absolute quantity
Act	actual or measured condition
Actint	actual or measured condition over the speed interval
Atmos	atmospheric
B	base
C	coastdown
E	effective
Error	error
Exp	expected quantity
I	an individual of a series
Final	final
Init	initial quantity, typically before an emission test
Max	the maximum (i.e., peak) value expected at the standard over a test interval; not the maximum of an instrument range
Meas	measured quantity
Ref	reference quantity
Rev	revolution
Roll	dynamometer roll
Sat	saturated condition
Si	speed interval
Span	span quantity
Test	test quantity
uncork	uncorrected quantity
Zero	zero quantity

(e) *Other acronyms and abbreviations.* This part uses the following additional abbreviations and acronyms:

CFR	Code of Federal Regulations
EPA	Environmental Protection Agency
FID	flame-ionization detector
NIST	National Institute for Standards and Technology
SAE	Society of Automotive Engineers
U.S.C.	United States Code

§ 1066.710 Reference materials.

Documents listed in this section have been incorporated by reference into this part. The Director of the Federal Register approved the incorporation by reference as prescribed in 5 U.S.C. 552(a) and 1 CFR part 51. Anyone may inspect copies at the U.S. EPA, Air and Radiation Docket and Information Center, 1301 Constitution Ave., NW., Room B102, EPA West Building, Washington, DC 20460 or 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/code_of_federal_regulations/ibr_locations.html.*

(a) *NIST material.* Table 1 of this section lists material from the National Institute of Standards and Technology that we have incorporated by reference. The first column lists the number and name of the material. The second column lists the section of this part where we reference it. Anyone may purchase copies of these materials from the Government Printing Office, Washington, DC 20402 or download them free from the Internet at *http://www.nist.gov*. Table 1 follows:

Table 1 of § 1066.710–NIST materials

Document number and name	Part 1066 reference
NIST Special Publication 811, 1995 Edition, Guide for the Use of the International System of Units (SI), Barry N. Taylor, Physics Laboratory	1066.20, 1066.705

(b) *SAE material.* Table 2 of this section lists material from the Society of Automotive Engineering that we have incorporated by reference. The first column lists the number and name of the material. The second column lists the sections of this part where we reference it. Anyone may purchase copies of these materials from the Society of Automotive Engineers, 400 Commonwealth Drive, Warrendale, PA 15096 or *http://www.sae.org.* Table 2 follows:

Table 2 of § 1066.710–SAE materials

Document number and name	Part 1066 reference
SAE J1711:2010, Recommended Practice for Measuring the Exhaust Emissions and Fuel Economy of Hybrid-Electric Vehicles	1066.401
SAE J2263:2008, Road Load Measurement Using On-Board Anemometry And Coastdown Techniques	1066.201, 1066.210, 1066.304
SAE J2264:1995, Chassis Dynamometer Simulation Of Road Load Using Coastdown Techniques	1066.304
SAE J2711: 2002, Recommended Practice for Measuring Fuel Economy and Emissions of Hybrid-Electric and Conventional Heavy-Duty Vehicles	1066.401

PART 1068—GENERAL COMPLIANCE PROVISIONS FOR HIGHWAY, STATIONARY, AND NONROAD PROGRAMS

15. The authority citation for part 1068 continues to read as follows:

Authority: 42 U.S.C. 7401–7671q.

16. The heading of part 1068 is revised to read as set forth above.

Subpart A—[Amended]

17. Section 1068.1 is revised to read as follows:

§ 1068.1 Does this part apply to me?

(a) The provisions of this part apply to everyone with respect to the following engines and to equipment using the following engines (including owners, operators, parts manufacturers, and persons performing maintenance):

(1) Locomotives we regulate under 40 CFR part 1033.

(2) Heavy-duty motor vehicles and motor vehicle engines as specified in 40 CFR parts 1036 and 1037.

(3) Land-based nonroad compression-ignition engines we regulate under 40 CFR part 1039.

(4) Stationary compression-ignition engines certified using the provisions of 40 CFR part 1039, as indicated in 40 CFR part 60, subpart IIII.

(5) Marine compression-ignition engines we regulate under 40 CFR part 1042.

(6) Marine spark-ignition engines we regulate under 40 CFR part 1045.

(7) Large nonroad spark-ignition engines we regulate under 40 CFR part 1048.

(8) Stationary spark-ignition engines certified using the provisions of 40 CFR parts 1048 or 1054, as indicated in 40 CFR part 60, subpart JJJJ.

(9) Recreational engines and vehicles we regulate under 40 CFR part 1051 (such as snowmobiles and off-highway motorcycles).

(10) Small nonroad spark-ignition engines we regulate under 40 CFR part 1054.

(b) This part does not apply to any of the following engine or vehicle categories, except as specified in

paragraph (d) of this section or as specified in other parts:

(1) Light-duty motor vehicles (*see* 40 CFR part 86).

(2) Highway motorcycles (*see* 40 CFR part 86).

(3) Aircraft engines (*see* 40 CFR part 87).

(4) Land-based nonroad compression-ignition engines we regulate under 40 CFR part 89.

(5) Small nonroad spark-ignition engines we regulate under 40 CFR part 90.

(c) Paragraph (a) of this section identifies the parts of the CFR that define emission standards and other requirements for particular types of engines and equipment. This part 1068 refers to each of these other parts generically as the "standard-setting part." For example, 40 CFR part 1051 is always the standard-setting part for snowmobiles. Follow the provisions of the standard-setting part if they are different than any of the provisions in this part.

(d) Specific provisions in this part 1068 start to apply separate from the schedule for certifying engines to new emission standards, as follows:

(1) The provisions of §§ 1068.30 and 1068.310 apply for stationary spark-ignition engines built on or after January 1, 2004, and for stationary compression-ignition engines built on or after January 1, 2006.

(2) The provisions of §§ 1068.30 and 1068.235 apply for the types of engines/equipment listed in paragraph (a) of this section beginning January 1, 2004, if they are used solely for competition.

Department of Transportation

National Highway Traffic Safety Administration

49 CFR Chapter V

In consideration of the foregoing, under the authority of 49 U.S.C. 32901 and 32902 and delegation of authority at 49 CFR 1.50, NHTSA proposes to amend 49 CFR chapter V as follows:

PART 523—VEHICLE CLASSIFICATION

18. The authority citation for part 523 continues to read as follows:

Authority: 49 U.S.C. 32901; delegation of authority at 49 CFR 1.50.

19. Revise § 523.2 to read as follows:

§ 523.2 Definitions.

As used in this part:

Approach angle means the smallest angle, in a plane side view of an automobile, formed by the level surface on which the automobile is standing and a line tangent to the front tire static loaded radius arc and touching the underside of the automobile forward of the front tire.

Axle clearance means the vertical distance from the level surface on which an automobile is standing to the lowest point on the axle differential of the automobile.

Base tire means the tire specified as standard equipment by a manufacturer on each vehicle configuration of a model type.

Basic vehicle frontal area is used as defined in 40 CFR 86.1803–01.

Breakover angle means the supplement of the largest angle, in the plan side view of an automobile that can be formed by two lines tangent to the front and rear static loaded radii arcs and intersecting at a point on the underside of the automobile.

Cab-complete vehicle means a vehicle that is first sold as an incomplete vehicle that substantially includes the vehicle cab section as defined in 40 CFR 1037.801. For example, vehicles known commercially as chassis-cabs, cab-chassis, box-deletes, bed-deletes, cut-away vans are considered cab-complete vehicles. A cab includes a steering column and passenger compartment. Note a vehicle lacking some components of the cab is a cab-complete vehicle if it substantially includes the cab.

Cargo-carrying volume means the luggage capacity or cargo volume index, as appropriate, and as those terms are defined in 40 CFR 600.315, in the case of automobiles to which either of those terms apply. With respect to automobiles to which neither of those terms apply "cargo-carrying volume" means the total volume in cubic feet rounded to the nearest 0.1 cubic feet of either an automobile's enclosed nonseating space that is intended primarily for carrying cargo and is not accessible from the passenger compartment, or the space intended primarily for carrying cargo bounded in the front by a vertical plane that is perpendicular to the longitudinal centerline of the automobile and passes through the rearmost point on the rearmost seat and elsewhere by the automobile's interior surfaces.

Class 2b vehicles are vehicles with a gross vehicle weight rating (GVWR) ranging from 8,501 to 10,000 pounds.

Class 3 through Class 8 vehicles are vehicles with a gross vehicle weight rating (GVWR) of 10,001 pounds or more as defined in 49 CFR 565.15.

Commercial medium- and heavy-duty on-highway vehicle means an on-highway vehicle with a gross vehicle weight rating of 10,000 pounds or more as defined in 49 U.S.C. 32901(a)(7).

Completed vehicle means a vehicle that requires no further manufacturing operations to perform its intended function.

Curb weight is defined the same as vehicle curb weight in 40 CFR 86.1803–01.

Departure angle means the smallest angle, in a plane side view of an automobile, formed by the level surface on which the automobile is standing and a line tangent to the rear tire static loaded radius arc and touching the underside of the automobile rearward of the rear tire.

Final stage manufacturer has the meaning given in 49 CFR 567.3.

Footprint is defined as the product of track width (measured in inches, calculated as the average of front and rear track widths, and rounded to the nearest tenth of an inch) times wheelbase (measured in inches and rounded to the nearest tenth of an inch), divided by 144 and then rounded to the nearest tenth of a square foot. For purposes of this definition, track width is the lateral distance between the centerlines of the base tires at ground, including the camber angle. For purposes of this definition, wheelbase is the longitudinal distance between front and rear wheel centerlines.

Gross combination weight rating or GCWR means the value specified by the manufacturer as the maximum allowable loaded weight of a combination vehicle (e.g. tractor plus trailer).

Gross vehicle weight rating or GVWR means the value specified by the vehicle manufacturer as the maximum design loaded weight of a single vehicle (e.g. vocational truck).

Heavy-duty truck means a non-passenger automobile meeting the criteria in § 523.6.

Heavy-duty off-road truck means a heavy-duty truck intended to be used extensively in off-road environments such as forests, oil fields, and construction sites. A vehicle may qualify as a heavy-duty off-road truck by meeting the criteria for "Off-road heavy-duty vocational trucks" or "Off-road truck tractors" or by getting separate approval, as follows:

(1) Off-road heavy-duty vocational trucks are those meeting the following criteria:

(i) The tires installed on the vehicle must be lug tires or contain a speed rating at or below 60 mph. For purposes of this section, a lug tire is one for which the elevated portion of the tread covers less than one-half of the tread surface.

(ii) The vehicle must include a vehicle speed limiter governed to 55 mph or less.

(2) Off-road truck tractors are those meeting the following criteria:

(i) The tires installed on the vehicle must be lug tires or contain a speed rating at or below 60 mph. For purposes of this section, a lug tire is one for which the elevated portion of the tread covers less than one-half of the tread surface.

(ii) The vehicle must include a vehicle speed limiter governed to 55 mph or less.

(iii) The vehicle must either:

(A) Contain power take-off (PTO) controls; or

(B) Have GVWR greater than 57,000 pounds and have axle configurations other than 4x2, 6x2, or 6x4 (axle configurations are expressed as total number of wheel hubs by number of drive wheel hubs).

(iv) The frame of the vehicle must have a resisting bending moment (RBM) greater than 2,000,000 inch-pounds. Use sound engineering judgment to determine the RBM for the frame.

(3) Vehicles not meeting the provisions in paragraphs (a) and (b) of this definition may still be considered as heavy-duty off-road trucks upon approval from the Administrators of NHTSA and EPA.

Incomplete vehicle means an assemblage consisting, at a minimum, of chassis (including the frame) structure, power train, steering system, suspension system, and braking system, in the state that those systems are to be part of the completed vehicle, but requires further manufacturing operations to become a completed vehicle.

Light truck means a non-passenger automobile meeting the criteria in § 523.5.

Medium duty passenger vehicle means a vehicle which would satisfy the criteria in § 523.5 (relating to light trucks) but for its gross vehicle weight rating or its curb weight, which is rated at more than 8,500 lbs GVWR or has a vehicle curb weight of more than 6,000 pounds or has a basic vehicle frontal area in excess of 45 square feet, and which is designed primarily to transport passengers, but does not include a vehicle that:

(1) Is an "incomplete truck"' as defined in this subpart; or

(2) Has a seating capacity of more than 12 persons; or

(3) Is designed for more than 9 persons in seating rearward of the driver's seat; or

(4) Is equipped with an open cargo area (for example, a pick-up truck box or bed) of 72.0 inches in interior length or more. A covered box not readily accessible from the passenger compartment will be considered an open cargo area for purposes of this definition.

Motor home has the meaning given in 49 CFR 571.3.

Passenger-carrying volume means the sum of the front seat volume and, if any, rear seat volume, as defined in 40 CFR 600.315, in the case of automobiles to which that term applies. With respect to automobiles to which that term does not apply, "passenger-carrying volume" means the sum in cubic feet, rounded to the nearest 0.1 cubic feet, of the volume of a vehicle's front seat and seats to the rear of the front seat, as applicable, calculated as follows with the head room, shoulder room, and leg room dimensions determined in accordance with the procedures outlined in Society of Automotive Engineers Recommended Practice J1100a, Motor Vehicle Dimensions (Report of Human Factors Engineering Committee, Society of Automotive Engineers, approved September 1973 and last revised September 1975).

(1) For front seat volume, divide 1,728 into the product of the following SAE dimensions, measured in inches to the nearest 0.1 inches, and round the quotient to the nearest 0.001 cubic feet.

(i) H61-Effective head room—front.

(ii) W3-Shoulder room—front.

(iii) L34-Maximum effective leg room-accelerator.

(2) For the volume of seats to the rear of the front seat, divide 1,728 into the product of the following SAE dimensions, measured in inches to the nearest 0.1 inches, and rounded the quotient to the nearest 0.001 cubic feet.

(i) H63-Effective head room—second.

(ii) W4-Shoulder room—second.

(iii) L51-Minimum effective leg room—second.

Pickup truck means a non-passenger automobile which has a passenger compartment and an open cargo area (bed).

Recreational vehicle or RV means a motor vehicle equipped with living space and amenities found in a motor home.

Running clearance means the distance from the surface on which an automobile is standing to the lowest point on the automobile, excluding unsprung weight.

Static loaded radius arc means a portion of a circle whose center is the center of a standard tire-rim combination of an automobile and whose radius is the distance from that center to the level surface on which the automobile is standing, measured with the automobile at curb weight, the wheel parallel to the vehicle's longitudinal centerline, and the tire inflated to the manufacturer's recommended pressure.

Temporary living quarters means a space in the interior of an automobile in which people may temporarily live and which includes sleeping surfaces, such as beds, and household conveniences, such as a sink, stove, refrigerator, or toilet.

Van means a vehicle that has an integral enclosure fully enclosing the driver compartment and load carrying compartment. The distance from the leading edge of the foremost body section of vans is typically shorter than that of pickup trucks and sport utility vehicles.

Vocational vehicle means a vehicle that is constructed for a particular industry, trade or occupation such as construction, heavy hauling, mining, logging, oil fields and refuse.

Work truck means a vehicle that is rated at more than 8,500 pounds and less than or equal to 10,000 pounds gross vehicle weight, and is not a medium-duty passenger vehicle as defined in 40 CFR 86.1803–01 effective as of December 20, 2007.

20. Add a new § 523.6 to read as follows:

§ 523.6 Heavy-duty truck.

(a) A heavy-duty truck is any Class 2b through 8 non-passenger vehicle that is a commercial medium and heavy duty on highway vehicle or a work truck, as defined in 49 U.S.C. 32901(a)(7) and (19). For the purpose of this part, heavy-duty trucks are divided into three regulatory categories as follows:

(1) Heavy-duty pickup trucks and vans;

(2) Heavy-duty vocational trucks; and

(3) Truck tractors with a GVWR above 26,000 pounds.

(b) The heavy-duty truck classification does not include:

(1) Vehicles defined as medium duty passenger vehicles in 40 CFR 86.1803–01 on December 20, 2007.

(2) Recreational vehicles including motor homes.

(3) Vehicles excluded from the definition of "heavy-duty truck" because of vehicle weight or weight rating (such as light duty vehicles and light duty trucks as defined in § 523.5).

(4) Heavy-duty off-road vehicles.

21. Add a new § 523.7 to read as follows:

§ 523.7 Heavy-duty pickup trucks and vans.

Heavy-duty pickup trucks and vans are pickup trucks and vans with a gross vehicle weight rating between 8,501

pounds and 14,000 pounds (Class 2b through 3 vehicles) manufactured as complete vehicles by a single or final stage manufacturer and include cab-complete vehicles that are first sold as incomplete vehicles that substantially include the vehicle cab section.

22. Add a new § 523.8 to read as follows:

§ 523.8 Heavy-duty vocational trucks.

Heavy-duty vocational trucks are vocational vehicles with a gross vehicle weight rating (GVWR) above 8,500 pounds excluding:

(a) Heavy-duty pickup trucks and vans defined in § 523.7;

(b) Medium duty passenger vehicles;

(c) Truck tractors with a GVWR above 26,000 pounds; and

(d) Heavy-duty vocational trucks with sleeper cabs.

23. Add a new § 523.9 to read as follows:

§ 523.9 Truck tractors.

Truck tractors for the purpose of this part are considered as any truck tractor as defined in 49 CFR part 571 having a GVWR above 26,000 pounds and include any heavy-duty vocational truck with a sleeper cab.

PART 534—RIGHTS AND RESPONSIBILITIES OF MANUFACTURERS IN THE CONTEXT OF CHANGES IN CORPORATE RELATIONSHIPS

24. The authority citation for part 534 continues to read as follows:

Authority: 49 U.S.C. 32901; delegation of authority at 49 CFR 1.50.

25. Revise § 534.1 to read as follows:

§ 534.1 Scope.

This part defines the rights and responsibilities of manufacturers in the context of changes in corporate relationships for purposes of the fuel economy and fuel consumption programs established by 49 U.S.C. chapter 329.

26. Revise § 534.2 to read as follows:

§ 534.2 Applicability.

This part applies to manufacturers of passenger automobiles, light trucks, heavy-duty trucks and the engines manufactured for use in heavy-duty trucks as defined in 49 CFR part 523.

27. Revise § 534.4 to read as follows.

§ 534.4 Successors and predecessors.

For purposes of the fuel economy and fuel consumption programs, "manufacturer" includes "predecessors" and "successors" to the extent specified in paragraphs (a) through (d) of this section.

(a) Successors are responsible for any civil penalties that arise out of fuel economy and fuel consumption shortfalls incurred and not satisfied by predecessors.

(b) If one manufacturer has become the successor of another manufacturer during a model year, all of the vehicles or engines produced by those manufacturers during the model year are treated as though they were manufactured by the same manufacturer. A manufacturer is considered to have become the successor of another manufacturer during a model year if it is the successor on September 30 of the corresponding calendar year and was not the successor for the preceding model year.

(c)(1) For passenger automobiles and light trucks, fuel economy credits earned by a predecessor before or during model year 2007 may be used by a successor, subject to the availability of credits and the general three-year restriction on carrying credits forward and the general three-year restriction on carrying credits backward. Fuel economy credits earned by a predecessor after model year 2007 may be used by a successor, subject to the availability of credits and the general five-year restriction on carrying credits forward and the general three-year restriction on carrying credits backward.

(2) For heavy-duty trucks and heavy-duty truck engines, available fuel consumption credits earned by a predecessor after model year 2015, and in model years 2014 and 2015 if a manufacturer voluntarily complies in those model years, may be used by a successor, subject to the availability of credits and without restriction on carrying credits forward, except for the heavy-duty pickup truck and van category that have a 5 year carry forward expiry date, and the successor may use excess credits from the predecessor to offset a successor's past credit shortfall within the general three year restriction specified in the requirements of 49 CFR 535.7.

(d)(1) For passenger automobiles and light trucks, fuel economy credits earned by a successor before or during model year 2007 may be used to offset a predecessor's shortfall, subject to the availability of credits and the general three-year restriction on carrying credits forward and the general three-year restriction on carrying credits backward. Credits earned by a successor after model year 2007 may be used to offset a predecessor's shortfall, subject to the availability of credits and the general five-year restriction on carrying credits forward and the general three-year restriction on carrying credits backward.

(2) For heavy-duty trucks and heavy-duty truck engines, available credits earned by a successor after model year 2015, and in model years 2014 and 2015, if a manufacturer voluntarily complies in those model years, may be used by a predecessor within the guidelines of the three year provisions to offset a predecessor's past credit shortfall as specified in the requirements of 49 CFR 535.7.

28. Amend § 534.5 by revising paragraphs (a), (c), and (d) to read as follows:

§ 534.5 Manufacturers within control relationships.

(a) If a civil penalty arises out of a fuel economy or fuel consumption shortfall incurred by a group of manufacturers within a control relationship, each manufacturer within that group is jointly and severally liable for the civil penalty.

* * * * *

(c)(1) For passenger automobiles and light trucks, fuel economy credits of a manufacturer within a control relationship may be used by the group of manufacturers within the control relationship to offset shortfalls, subject to the agreement of the other manufacturers, the availability of the credits, and the general three year restriction on carrying credits forward or backward prior to or during model year 2007, or the general five year restriction on carrying credits forward and the general three-year restriction on carrying credits backward after model year 2007.

(2) For heavy-duty trucks and heavy-duty engines, credits of a manufacturer within a control relationship may be used by the group of manufacturers within the control relationship to offset shortfalls, subject to the agreement of the other manufacturers, the availability of the credits to carry forward without restriction, except for the heavy-duty pickup truck and van category that have a 5-year carry forward expiry date, and the general three year restriction on offsetting past credit shortfalls as specified in the requirements of 49 CFR 535.7.

(d)(1) For passenger automobiles and light trucks, if a manufacturer within a group of manufacturers is sold or otherwise spun off so that it is no longer within that control relationship, the manufacturer may use credits that were earned by the group of manufacturers within the control relationship while the manufacturer was within that relationship, subject to the agreement of the other manufacturers, the availability of the credits, and the general three-year restriction on carrying credits forward

or backward prior to or during model year 2007, or the general five-year restriction on carrying credits forward and the general three-year restriction on carrying credits backward after model year 2007.

(2) For heavy-duty trucks and heavy-duty truck engines, if a manufacturer within a group of manufacturers is sold or otherwise spun off so that it is no longer within that control relationship, the manufacturer may use credits that were earned by the group of manufacturers within the control relationship while the manufacturer was within that relationship, subject to the agreement of the other manufacturers, the availability of the credits, and the requirements of 49 CFR 535.7.

* * * * *

29. Revise § 534.6 to read as follows.

§ 534.6 Reporting corporate transactions.

Manufacturers who have entered into written contracts transferring rights and responsibilities such that a different manufacturer owns the controlling stock or exerts control over the design, production or sale of automobiles or heavy-duty trucks to which Corporate Average Fuel Economy or Fuel Consumption standards apply shall report the contract to the agency as follows:

(a) The manufacturers must file a certified report with the agency affirmatively stating that the contract transfers rights and responsibilities between them such that one manufacturer has assumed a controlling stock ownership or control over the design, production or sale of vehicles. The report must also specify the first full model year to which the transaction will apply.

(b) Each report shall—

(1) Identify each manufacturer;

(2) State the full name, title, and address of the official responsible for preparing the report;

(3) Identify the production year being reported on;

(4) Be written in the English language; and

(5) Be submitted to: Administrator, National Highway Traffic Safety Administration, 1200 New Jersey Avenue, SE., Washington, DC 20590.

(c) The manufacturers may seek confidential treatment for information provided in the certified report in accordance with 49 CFR part 512.

30. A new part 535 is added to chapter V to read as follows:

PART 535—MEDIUM- AND HEAVY-DUTY VEHICLE FUEL EFFICIENCY PROGRAM

Sec.

535.1 Scope.
535.2 Purpose.
535.3 Applicability.
535.4 Definitions.
535.5 Standards.
535.6 Measurement and calculation procedures.
535.7 Averaging, banking, and trading (ABT) program.
535.8 Reporting requirements.
535.9 Enforcement approach.

Authority: 49 U.S.C. 32902; delegation of authority at 49 CFR 1.50.

§ 535.1 Scope.

This part establishes fuel consumption standards pursuant to 49 U.S.C. 32902(k) for work trucks and commercial medium-duty and heavy-duty on-highway vehicles (hereafter referenced as heavy-duty trucks) and engines and establishes a credit program manufacturers may use to comply with standards and requirements for manufacturers to provide reports to the National Highway Traffic Safety Administration regarding their efforts to reduce the fuel consumption of these vehicles.

§ 535.2 Purpose.

The purpose of this part is to reduce the fuel consumption of new heavy-duty trucks by establishing maximum levels for fuel consumption standards while providing a flexible credit program to assist manufacturers in complying with standards.

§ 535.3 Applicability.

(a) This part applies to vehicle and chassis manufacturers of all new heavy-duty trucks, as defined in 49 CFR part 523, and to the manufacturers of all engines manufactured for use in the applicable vehicles (hereafter referenced as heavy-duty engines).

(b) Vehicle manufacturer, for the purpose of this part, means a manufacturer that manufactures heavy-duty pickup trucks and vans or truck tractors as complete vehicles.

(c) Chassis manufacturer, for the purpose of this part, means a manufacturer that manufactures the chassis of a vocational vehicle.

(d) The heavy-duty engines excluded from the requirements of this part include:

(1) Engines used in medium-duty passenger vehicles.

(2) Engines fueled by other than petroleum fuels, natural gas, liquefied petroleum gas, and methanol.

(e) Small business manufacturers as defined by the Small Business Administration at 13 CFR 121.201, and as reported to and approved by the Administrators of EPA and NHTSA, are exempted from the requirements of this part.

§ 535.4 Definitions.

The terms *manufacture* and *manufacturer* are used as defined in section 501 of the Act and the terms *commercial medium-duty and heavy-duty on-highway vehicle, fuel and work truck* are used as defined in 49 U.S.C. 32901.

Act means the Motor Vehicle Information and Cost Savings Act, as amended by Public Law 94–163 and 96–425.

Administrator means the Administrator of the National Highway Traffic Safety Administration (NHTSA) or the Administrator's delegate.

Averaging set means, for the purpose of this part, the collective regulatory category (or subcategory) of heavy-duty pickup trucks and vans and is made up of multiple test groups that determine the manufacturer's "fleet average fuel consumption" as defined in this section.

Cab-complete vehicle has the meaning given in 49 CFR part 523.

Chassis means the incomplete part of a vehicle that includes a frame, a completed occupant compartment and that requires only the addition of cargo-carrying, work-performing, or load-bearing components to perform its intended functions.

Chief Counsel means the NHTSA Chief Counsel, or his or her designee.

Complete vehicle has the meaning given in 49 CFR part 523.

Compression-ignition means relating to a type of reciprocating, internal-combustion engine, such as a diesel engine, that is not a spark-ignition engine.

Credits (or fuel consumption credits) in this part means an earned or purchased allowance recognizing the fuel consumption of a particular manufacturer's vehicles or engines within a particular regulatory subcategory or fleet exceeds (credit surplus or positive credits) or falls below (credit shortfall or negative credits) that manufacturer's fuel consumption standard for a regulatory subcategory or fleet for a given model year. The value of a credit is calculated according to § 535.7.

Curb weight has the meaning given in 40 CFR 86.1803–01.

Day cab means a type of truck tractor cab that is not a "sleeper cab", as defined in this section.

Dedicated truck has the same meaning as dedicated automobile as defined in 49 U.S.C. 32901(a)(8).

Dual fueled or flexible-fuel truck has the same meaning as dual fueled automobile as defined in 49 U.S.C. 32901(a)(9).

Engine family has the meaning given in 40 CFR 1036.230.

Family certification level (FCL) means the family certification limit for an engine family as defined in 40 CFR 1036.801.

Family emission limit (FEL) means the family emission limit for a vehicle family as defined in 40 CFR 1036.801.

Final-stage manufacturer has the meaning given in 49 CFR part 523.

Fleet in this part means all the heavy-duty trucks or engines within each of the regulatory sub-categories that are manufactured by a manufacturer in a particular model year and that are subject to fuel consumption standards under § 535.5.

Fleet average fuel consumption is the calculated average fuel consumption performance value for a manufacturer's fleet derived from the production weighted fuel consumption values of the unique vehicle configurations within each vehicle model type that makes up that manufacturer's vehicle fleet in a given model year. In this part, the fleet average fuel consumption value is determined for each manufacturer's fleet of heavy-duty pickup trucks and vans.

Fleet average fuel consumption standard is the actual average fuel consumption standard for a manufacturer's fleet derived from the production weighted fuel consumption standards of each unique vehicle configuration, based on payload, tow capacity and drive configuration (2, 4 or all-wheel drive), of the model types that makes up that manufacturer's vehicle fleet in a given model year. In this part, the fleet average fuel consumption standard is determined for each manufacturer's fleet of heavy-duty pickup trucks and vans.

Fuel efficiency means the amount of work performed for each gallon of fuel consumed.

Gross combination weight rating (GCWR) has the meaning given in 49 CFR part 523.

Gross vehicle weight rating (GVWR) has the meaning given in 49 CFR part 523.

Hearing Officer means a NHTSA employee who has been delegated the authority to assess civil penalties by the Administrator.

Heavy-duty truck has the meaning given in 49 CFR part 523.

Incomplete vehicle has the meaning given in 49 CFR 567.3.

Liquefied petroleum gas (LPG) has the meaning given in 40 CFR 1036.801.

Model type has the meaning given in 40 CFR 600.002.

Model year means the manufacturer's annual new model production period, except as restricted under this definition and 40 CFR part 85, subpart X. It must include January 1 of the calendar year for which the model year is named, may not begin before January 2 of the previous calendar year, and it must end by December 31 of the named calendar year. A manufacturer must use the date on which a vehicle is shipped from the factory in which the assembly process is finished as the date of manufacture for determining model year. For example, where a certificate holder (*i.e.*, a manufacturer that obtains a vehicle emission certification from EPA) sells a cab-complete vehicle to a secondary vehicle manufacturer, the model year is based on the date the vehicle leaves the factory as a cab-complete vehicle.

Natural gas has the meaning given in 40 CFR 1036.801.

NHTSA Enforcement means the NHTSA Associate Administrator for Enforcement, or his or her designee.

Notice of violation means a notification of violation and preliminary assessment of penalty issued by the Chief Counsel to a party.

Party means the person alleged to have committed a violation of § 535.9, and includes manufacturers of vehicles and manufacturers of engines.

Payload means in this part the resultant of subtracting the curb weight from the gross vehicle weight rating.

Petroleum has the meaning given in 40 CFR 1036.801.

Pickup truck has the meaning given in 49 CFR part 523.

Power take-off (PTO) control means a device used for hybrid applications in heavy-duty vocational trucks or truck tractors such as a secondary hybrid power source to operate secondary equipment like a utility bucket or dump bed that would otherwise require the use of the truck's engine.

Regulatory category means each of the three types of heavy-duty trucks defined in 49 CFR 523.6 and the heavy-duty engines defined in § 535.3.

Regulatory subcategory means the sub-groups in each regulatory category to which fuel consumption requirements apply, and are defined as follows:

(1) Heavy-duty pick-up trucks and vans

(2) Vocational light-heavy vehicles at or below 19,500 pounds GVWR.

(3) Vocational medium-heavy vehicles above 19,500 pounds GVWR but at or below 33,000 pounds GVWR.

(4) Vocational heavy-heavy vehicles above 33,000 pounds GVWR.

(5) Low roof day cab tractors above 26,000 pounds GVWR but at or below 33,000 pounds GVWR.

(6) Mid roof day cab tractors above 26,000 pounds GVWR but at or below 33,000 pounds GVWR.

(7) High roof day cab tractors above 26,000 pounds GVWR but at or below 33,000 pounds GVWR.

(8) Low roof day cab tractors above 33,000 pounds GVWR.

(9) Mid roof day cab tractors above 33,000 pounds GVWR.

(10) High roof day cab tractors above 33,000 pounds GVWR.

(11) Low roof sleeper cab tractors above 33,000 pounds GVWR.

(12) Mid roof sleeper cab tractors above 33,000 pounds GVWR.

(13) High roof sleeper cab tractors above 33,000 pounds GVWR.

(14) Light heavy-duty diesel engines in Class 2b to 5 trucks with a GVWR above 8,500 pounds but at or below 19,500 pounds.

(15) Medium heavy-duty diesel engines in Class 6 and 7 trucks with a GVWR above 19,500 but at or below 33,000 pounds.

(16) Heavy heavy-duty diesel engines in Class 8 trucks with a GVWR above 33,000 pounds.

(17) Spark ignition engines in Class 2b to 8 trucks with a GVWR above 8,500 pounds.

Roof height means the maximum height of a vehicle (rounded to the nearest inch), excluding narrow accessories such as exhaust pipes and antennas, but including any wide accessories such as roof fairings. Measure roof height of the vehicle configured to have its maximum height that will occur during actual use, with properly inflated tires and no driver, passengers, or cargo onboard. Once the maximum height is determined, roof heights are divided into the following categories:

(1) Low roof means relating to a vehicle with a roof height of 120 inches or less (includes tractors with adjustable fairings).

(2) Mid roof means relating to a vehicle with a roof height of 121 to 147 inches.

(3) High roof means relating to a vehicle with a roof height of 148 inches or more.

Sleeper cab means a type of truck tractor cab including a compartment behind the driver's seat intended to be used by the driver for sleeping. This includes both cabs accessible from the driver's compartment and those accessible from outside the vehicle.

Spark-ignition engines means relating to a gasoline-fueled engine or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark-ignition engines usually use a throttle to regulate intake air flow to control power during normal operation.

Test group means the multiple vehicle lines and model types that share critical emissions and fuel consumption related features and that are certified as a group by a common certificate of conformity issued by EPA and is used collectively with other test groups within an averaging set (a regulatory subcategory) and is used by NHTSA for determining the fleet average consumption.

Towing capacity in this part is equal to the resultant of subtracting the gross vehicle weight rating from the gross combined weight rating.

Trade means to exchange fuel consumption credits, either as a buyer or a seller.

Truck tractor has the meaning given in 49 CFR 571.3.

Useful life has the meaning given in 40 CFR 1037.801.

Vehicle configuration has the meaning given in 40 CFR 600.002.

Vehicle family has the meaning given in 40 CFR 1037.230.

Violation means a failure to comply with an applicable fuel consumption standard for a regulatory subcategory of vehicles or engines, after all flexibilities available under § 535.7 are taken into account.

§ 535.5 Standards.

(a) *Heavy-duty pickup trucks and vans.* Each manufacturer of heavy-duty pickup trucks and vans shall comply with the fuel consumption standards in this paragraph expressed in gallons per 100 miles.

(1) *For model years 2016 and later.* Each manufacturer must comply with the fleet average standard derived from the unique vehicle configuration (payload, towing capacity and drive configuration) target standards of the model types that make up the manufacturer's fleet in a given model year. Each vehicle configuration has a unique attribute-based target standard, defined by each group of vehicles having the same payload, towing capacity and whether the vehicles are equipped with a 2-wheel or 4-wheel drive configuration.

(2) *Vehicle configuration target standards.* (i) Two alternatives exist for determining the vehicle configuration target standards for model years 2016 and later. For each alternative, separate standards exist for compression-ignition and spark-ignition vehicles:

(A) The first alternative allows manufacturers to determine a fixed fuel consumption standard that is constant over the model years; and

(B) The second alternative allows manufacturers to determine standards that are phased-in gradually each year.

(ii) Calculate the vehicle configuration target standards as specified in this paragraph (a)(2)(ii), using the appropriate coefficients from Table 1 of this section to choose between the alternatives in paragraphs (a)(2)(i)(A) and (B) of this section. For electric or fuel cell heavy-duty trucks, use compression-ignition vehicle coefficients "c and d" and for hybrid (including plug-in hybrid), dedicated and dual-fueled trucks, use coefficients "c and d" appropriate for the engine type used. Round each standard to the nearest 0.1 gallons per 100 miles and specify all weights in pounds rounded to the nearest pound. Calculate the vehicle configuration target standards using the following equation:

Vehicle Configuration Target Standard (gallons per 100 miles) = [c × (WF)] + d

Where:

WF = Work Factor = [0.75 × (Payload Capacity + Xwd)] + [0.25 × Towing Capacity]

Xwd = 4wd Adjustment = 500 lbs if the vehicle group is equipped with 4wd and all-wheel drive, otherwise equals 0 lbs for 2wd.

Payload Capacity = GVWR (lbs) − Curb Weight (lbs) (for each vehicle group)

Towing Capacity = GCWR (lbs) − GVWR (lbs) (for each vehicle group)

Table 1– Equation Coefficients for Vehicle Configuration Target Standards

Alternative 1 – Fixed Target Standards		
Compression-ignition Vehicle Coefficients for Model Years 2016 and later		
Model Year	c	d
2016 and later	0.000432	3.33
Spark-ignition Vehicle Coefficients for Model Years 2016 and later		
2016 and later	0.000448	3.45
Alternative 2 – Phased-in Target Standards		
Compression-ignition Vehicle Coefficients for Model Years 2016 and later		
Model Year	c	d
2016	0.000452	3.48
2017	0.000437	3.37
2018 and later	0.000408	3.15
Spark-ignition Vehicle Coefficients for Model Years 2016 and later		
2016	0.000461	3.55
2017	0.000452	3.48
2018 and later	0.000432	3.33

(3) *Fleet average fuel consumption standard.* (i) Calculate each manufacturer's fleet average fuel consumption standard from the vehicle configuration target standards specified in paragraph (a)(2) of this section, weighted to production volumes and averaged using the following equation combining all the applicable vehicles in a manufacturer's fleet (compression-ignition and spark-ignition vehicles) for a given model year, rounded to the nearest 0.1 gallons per 100 miles:

$$\text{Fleet Average Standard} = \frac{\sum[\text{Vehicle Configuration Target Standard}_i \times \text{Volume}_i]}{\sum[\text{Volume}_i]}$$

Where:

Vehicle Configuration Target Standard$_i$ = fuel consumption standard for each group of vehicles with same payload, towing capacity and drive configuration.

Volume$_i$ = production volume of each unique vehicle configuration of a model type based upon payload, towing capacity and drive configuration.

(ii) A manufacturer complies with the requirements of this part, if at the end of the model year, it provides reports, as specified in § 535.8, to the Administrator by the required deadlines and meets one of the following conditions:

(A) The manufacturer's fleet average performance, as determined in § 535.6, is less than the fleet average standard; or

(B) The manufacturer uses one or more of the credit flexibilities provided under NHTSA's Averaging, Banking and Trading Program, as specified in § 535.7, to comply with standards; and

(iii) Manufacturers must select an alternative for vehicle configuration target standards at the same time they submit the model year 2016 Pre-Certification Compliance Report, specified in § 535.8. Once selected, the decision cannot be reversed and the manufacturer must continue to comply with the same alternative for subsequent model years.

(iv) A manufacturer failing to comply with the provisions specified in paragraph (a)(3)(ii) of this section is liable to pay civil penalties in accordance with § 535.9.

(4) *Voluntary standards.* (i) Manufacturers may choose voluntarily to comply early with fuel consumption standards for model years 2013 through 2015, as determined in paragraphs (a)(3)(iii) and (iv) in this section, for example, in order to begin accumulating credits through over-compliance with the applicable standard.

(ii) A manufacturer must declare its intent to voluntarily comply with fuel consumption standards at the same time it submits a Pre-Certification Compliance Report, prior to the compliance model year beginning as specified in § 535.8; and, once selected, the decision cannot be reversed and the manufacturer must continue to comply for each subsequent model year.

(iii) Calculate separate vehicle configuration target standards for compression-ignition and spark-ignition vehicles for model years 2013 through 2015 using the equation in paragraph (a)(2)(ii) in this section, substituting the appropriate values for the coefficients in Table 2 of this section as appropriate.

Table 2 – Voluntary Compliance Equation Coefficients for Vehicle Fuel Consumption Standards

Compression-ignition Vehicle Coefficients For Voluntary Compliance in Model Years 2013 through 2015		
Model Year	c	d
2013 and 14	0.000470	3.62
2015	0.000466	3.59
Spark-ignition Vehicle Coefficients for Voluntary Compliance in Model Years 2013 through 2015		
Model Year	c	d
2013 and 14	0.000473	3.65
2015	0.000471	3.63

(iv) Calculate the fleet average fuel consumption standards for model years 2013 through 2015 using the equation in paragraph (a)(3) of this section.

(5) *Cab-complete vehicles.* The provisions of this section apply to applicable cab-complete vehicles in the same manner as they apply to complete vehicles. Calculate the unique vehicle configuration target standards based on the same values that would apply for the most similar complete vehicle to the cab-complete vehicle.

(6) *Low volume exclusion.* A manufacturer may exclude a limited number of vehicles from the standards of this section. The number of excluded vehicles may not exceed 2000 in any model year, unless the total production of vehicles in this category for that model year is greater than 100,000 and the excluded vehicles are not more than 2.00 percent of the manufacturer's total production of vehicles in this subcategory for any model year. For example, a vehicle manufacturer producing 200,000 vehicles in a given model year could exclude up to 4,000 vehicles under this paragraph (a)(6). The vehicle standards and requirements of paragraph (b) of this section apply for the excluded vehicles. The standards in paragraph (d) of this section also apply for engines used in these excluded vehicles. Manufacturers must submit information in their Pre-Certification Compliance Report, as specified in § 535.8, describing how they intend to use the provisions of this paragraph (a)(6). If the chassis manufacturer is not the engine manufacturer, the chassis manufacturer must notify the engine manufacturer, as required by EPA in 40 CFR 1037.104, that their engines are subject to the requirements of paragraph (d) of this section and are intended for use in excluded vehicles.

(b) *Heavy-duty vocational trucks.* Each manufacturer of heavy-duty vocational trucks shall comply with the fuel consumption standards in this paragraph (b) expressed in gallons per 1000 ton-miles.

(1) *For model years 2016 and later.* Each chassis manufacturer of heavy-duty vocational trucks must comply with the fuel consumption standards in paragraph (b)(3) of this section.

(i) The heavy-duty vocational truck chassis category is subdivided by GVWR into three regulatory subcategories, each with its own assigned standard.

(ii) For purposes of certifying vehicles to fuel consumption standards, manufacturers must divide their product lines into vehicle families that have similar emissions and fuel consumption features, as specified by EPA in 40 CFR part 1037, subpart C, and these families will be subject to the applicable standards. Each vehicle family is limited to a single model year.

(iii) Standards for heavy-duty vocational truck engines are given in paragraph (d) of this section.

(iv) A manufacturer complies with the requirements of this part, if at the end of the model year, it provides reports, as specified in § 535.8, to the Administrator by the required deadlines and meets one of the following conditions:

(A) The manufacturer's fuel consumption performance for each vehicle family, as determined in § 535.6, is lower than the applicable standard; or

(B) The manufacturer uses one or more of the credit flexibilities provided under NHTSA's Averaging, Banking and Trading Program, specified in § 535.7, to comply with standards; and

(v) A manufacturer failing to comply with the provisions specified in paragraph (b)(1)(iv) of this section is liable to pay civil penalties in accordance with § 535.9.

(2) *Voluntary compliance.* (i) For model years 2013 through 2015, a manufacturer may choose voluntarily to comply early with the fuel consumption standards provided in paragraph (b)(3) of this section, for each regulatory subcategory. For example, a manufacturer may choose to comply early in order to begin accumulating credits through over-compliance with the applicable standard.

(ii) A manufacturer must declare its intent to voluntarily comply with fuel consumption standards at the same time it submits a Pre-Certification Compliance Report, prior to the compliance model year beginning as specified in § 535.8; and, once selected, the decision cannot be reversed and the manufacturer must continue to comply for each subsequent model year.

(3) *Regulatory subcategory standards.* The fuel consumption standards for heavy-duty vocational trucks are given in the following table:

Table 3 – Heavy-Duty Vocational Truck Fuel Consumption Standards

Fuel Consumption Standards (gallons per 1000 ton-miles) Effective for Model Years 2017 and later			
Regulatory Subcategories	Light Heavy Vehicles Class 2b - 5	Medium Heavy Vehicles Class 6 - 7	Heavy Heavy Vehicles Class 8
Fuel Consumption Standard	33.8	20.0	10.5
Fuel Consumption Voluntary Standards (gallons per 1000 ton-miles) Effective for Model Years 2013 to 2016			
Regulatory Subcategories	Light Heavy Vehicles Class 2b - 5	Medium Heavy Vehicles Class 6 - 7	Heavy Heavy Vehicles Class 8
Fuel Consumption Standard	35.2	20.8	10.7

(c) *Truck tractors.* Each manufacturer of truck tractors with a GVWR above 26,000 pounds shall comply with the fuel consumption standards in this paragraph (c) expressed in gallons per 1000 ton-miles.

(1) *For model years 2016 and later.* Each manufacturer of truck tractors must comply with the fuel consumption standards in paragraph (c)(3) of this section.

(i) The truck tractor category is subdivided by roof height and cab design into nine regulatory subcategories as shown in Table 4 of this section, each with its own assigned standard.

(ii) For purposes of certifying vehicles to fuel consumption standards, manufacturers must divide their product lines into vehicles families that have similar emissions and fuel consumption features, as specified by EPA in 40 CFR part 1037, subpart C, and these families will be subject to the applicable standards. Each vehicle family is limited to a single model year.

(iii) Standards for truck tractor engines are given in paragraph (d) of this section.

(iv) A manufacturer complies with the requirements of this part, if at the end of the model year, it provides reports, as specified in § 535.8, to the Administrator by the required deadlines and meets one of the following conditions:

(A) The manufacturer's fuel consumption performance for each vehicle family, as determined in § 535.6, is lower than the applicable standard; or

(B) The manufacturer uses one or more of the credit flexibilities provided under NHTSA's Averaging, Banking and Trading Program, specified in § 535.7, to comply with standards; and

(v) A manufacturer failing to comply with the provisions specified in paragraph (c)(1)(iv) of this section is liable to pay civil penalties in accordance with § 535.9.

(2) *Voluntary compliance.* (i) For model years 2013 through 2015, a manufacturer may choose voluntarily to comply early with the fuel consumption standards provided in paragraph (c)(3) of this section, for each regulatory subcategory. For example, a manufacturer may choose to comply early in order to begin accumulating credits through over-compliance with the applicable standard.

(ii) A manufacturer must declare its intent to voluntarily comply with fuel consumption standards at the same time it submits a Pre-Certification Compliance Report, prior to the compliance model year beginning as specified in § 535.8; and, once selected, the decision cannot be reversed and the manufacturer must continue to comply for each subsequent model year.

(3) *Regulatory subcategory standards.* The fuel consumption standards for truck tractors are given in the following table:

Table 4 – Truck Tractor Fuel Consumption Standards

Fuel Consumption Standards (gallons per 1000 ton-miles) Effective for Model Years 2017 and later			
Regulatory Subcategories	Day Cab		Sleeper Cab
	Class 7	Class 8	Class 8
Low Roof	10.1	7.7	6.3
Mid Roof	10.1	7.7	6.8
High Roof	11.4	8.5	7.0
Fuel Consumption Standards (gallons per 1000 ton-miles) Effective for Model Years 2013 to 2016			
Regulatory Subcategories	Day Cab		Sleeper Cab
	Class 7	Class 8	Class 8
Low Roof	10.3	7.8	6.3
Mid Roof	10.3	7.8	6.9
High Roof	11.6	8.6	7.1

(d) *Heavy-duty engines.* Each manufacturer of heavy-duty engines shall comply with the fuel consumption standards in this paragraph (d) expressed in gallons per 100 brake-horsepower-hours;

(1) *For model years 2017 and later compression-ignition engines and for model years 2016 and later spark-ignition engines.* Each manufacturer must comply with the fuel consumption standard in paragraph (d)(3) of this section.

(i) The heavy-duty engine regulatory category is divided into four regulatory subcategories, three compression-ignition subcategories and one spark-ignition subcategory, as shown in Table 5 of this section.

(ii) Separate standards exist for engines manufactured for use in heavy-duty vocational trucks and in truck tractors.

(iii) For purposes of certifying engines to fuel consumption standards, manufacturers must divide their product lines into engine families that have similar fuel consumption features, as specified by EPA in 40 CFR part 1036, subpart C, and these families will be subject to the same standards. Each engine family is limited to a single model year.

(iv) A manufacturer complies with the requirements of this part, if at the end of the model year, it provides reports, as specified in § 535.8, to the Administrator by the required deadlines and meets one of the following conditions:

(A) The manufacturer's fuel consumption performance of each engine family as determined in § 535.6 is less than the applicable standard; or

(B) The manufacturer uses one or more of the flexibilities provided under NHTSA's Averaging, Banking and Trading Program, specified in § 535.7, to comply with standards; and

(v) A manufacturer failing to comply with the provisions specified in paragraph (d)(1)(iv) of this section is liable to pay civil penalties in accordance with § 535.9.

(2) *Voluntary compliance.* (i) For model years 2013 through 2016 for compression-ignition engines, and for model years 2013 through 2015 for spark-ignition engines, a manufacturer may choose voluntarily to comply with the fuel consumption standards provided in paragraph (d)(3) of this section. For example, a manufacturer may choose to comply early in order to begin accumulating credits through over-compliance with an applicable standard.

(ii) A manufacturer must declare its intent to voluntarily comply with fuel consumption standards at the same time it submits a Pre-Certification Compliance Report, prior to the compliance model year beginning as specified in § 535.8; and, once selected, the decision cannot be reversed and the manufacturer must continue to comply for each subsequent model year.

(3) *Regulatory subcategory standards.* The fuel consumption standards for heavy-duty engines are given in the following table:

Table 5 – Heavy-Duty Engine Standards

Fuel Consumption Standards (gallons per100 bhp-hr)						
Regulatory Subcategory	Light Heavy-Duty Compression-Ignition Engine	Medium Heavy-Duty Compression-Ignition Engine		Heavy Heavy-Duty Compression-Ignition Engine		Spark-ignition Engines
Truck Application	Vocational	Vocational	Tractor	Vocational	Tractor	All
Effective Model Years	2017 and later					2016 and later
Fuel Consumption Standard	5.57	5.57	4.78	5.45	4.52	7.05
Fuel Consumption Standards for Voluntary Compliance (gallons per100 bhp-hr)						
Regulatory Subcategory	Light Heavy-Duty Diesel Engine	Medium Heavy-Duty Diesel Engine		Heavy Heavy-Duty Diesel Engine		Spark-ignition Engine
Truck Application	Vocational	Vocational	Tractor	Vocational	Tractor	All
Effective Model Years	2013 through 2016					2013 through 2015
Voluntary Fuel Consumption Standard	5.89	5.89	4.93	5.57	4.67	7.05

§ 535.6 Measurement and calculation procedures.

(a) Manufacturers must calculate the fleet average fuel consumption of heavy-duty pickup trucks and vans that are manufactured in a model year and compare the value to the fleet average fuel consumption standard, determined in § 535.5, as follows:

(1) Manufacturers must calculate the fleet average fuel consumption from the average fuel economy of the production weighted test results for the test groups that make up the manufacturer's fleet of heavy-duty pickup trucks and vans as specified in 40 CFR part 86, subpart S, and 40 CFR part 600.

(i) Test groups are selected according to EPA in 40 CFR part 86, subpart S.

(ii) Determine the fuel economy applicable for each test group, in miles per gallon, according to EPA in 40 CFR part 600.

(A) Test conventional gasoline and diesel fueled vehicle test groups and, determine the fuel economy values in accordance with 40 CFR part 600.

(B) Test dual fueled (flexible fueled) vehicle test groups and determine the fuel economy values in accordance with 40 CFR part 600.

(C) Test dedicated (alternative) fueled vehicle test groups and determine the fuel economy values in accordance with 40 CFR part 600.

(D) Test advanced technology vehicles including electric vehicles, fuel cell vehicles, hybrid vehicles and plug-in hybrid electric vehicles and determine the fuel economy values in accordance with 40 CFR part 600.

(E) Test cab-chassis complete vehicle test groups and determine the average fuel economy values in accordance with 40 CFR part 600. Each manufacturer must determine the fuel economy values using the same test weight and other dynamometer settings as apply to that of complete vehicle from which was used for the WF value in § 535.5(a). For certification, a manufacturer may submit the test data from that similar vehicle instead of performing the test on the cab-complete vehicle.

(F) Manufacturers must calculate their fleet average fuel economy value, in miles per gallon, from the fuel economy values of the test groups in accordance with 40 CFR part 600.

(G) Manufacturers must calculate an equivalent fleet average fuel consumption value, in gallons per 100 miles, from the average fuel economy value of the fleet, in miles per gallon, using the following equation:

Fleet Average Fuel Consumption Value (gallons per 100 miles) = 1/[Average Fuel Economy Value of the Fleet (miles per gallon) × (10^2)]

(2) The manufacturer must submit equivalent fuel consumption values for each test group and its fleet to NHTSA and EPA in accordance with § 535.8. After each model year ends, EPA will verify the manufacturer's fuel economy levels for each test group and the fleet using testing and verify the equivalency of fuel consumption values. EPA will prepare a final report with all the verified values and submit the report to the NHTSA within three months of receiving the manufacturer's end-of-the-year and final year reports as specified in § 535.8.

(3) NHTSA will use the verified values provided by EPA in determining

compliance with fuel consumption standards in § 535.5 and for verifying end of year fuel consumption credits under its ABT program specified in § 535.7.

(b) The manufacturer must calculate the fuel consumption value for each vehicle family that makes up its fleet of heavy-duty vocational trucks in each regulatory subcategory and compare the results to the applicable fuel consumption standard, determined in § 535.5, as follows:

(1) Manufacturers must determine the family emission limit (FEL) for each vocational truck vehicle family in accordance with 40 CFR part 1037, subpart F.

(i) Determine the vehicle families in accordance with 40 CFR 1037.230.

(ii) Use the attribute values in the GEM Model to determine the fuel consumption values, in gallons per 1,000 ton-miles, for each vehicle type within the test groups and the FEL for each vehicle family as specified in 40 CFR 1037.241 and 40 CFR part 1037, subpart F.

(iii) Round each fuel consumption value to the nearest 0.1 gallons per 1,000 ton-miles.

(2) The manufacturer must submit the vehicle type fuel consumption values and the FELs for vehicle families to NHTSA and EPA in accordance with § 535.8. After each model year ends, EPA will verify the manufacturer's CO_2 family emission limit through modeling and verify the equivalent fuel consumption values.

(c) Manufacturers must calculate the fuel consumption value for each vehicle family that makes up the manufacturer's fleet of truck tractors in each regulatory subcategory and compare the results to the applicable fuel consumption standard, determined in § 535.5, as follows:

(1) Manufacturers must determine the family emission limit (FEL) for the truck tractor vehicle family in accordance with 40 CFR part 1037, subpart F.

(i) Determine the vehicle families in accordance with 40 CFR 1037.230.

(ii) Use the attribute values in the GEM Model to determine the fuel consumption values, in gallons per 1,000 ton-mile, for each vehicle type within the test groups and the FEL for each vehicle family as specified in 40 CFR 1037.241 and 40 CFR part 1037, subpart F.

(iii) Round each fuel consumption value to the nearest 0.1 gallons per 1,000 ton-miles.

(2) The manufacturer must submit the vehicle type fuel consumption values and the FELs for vehicle families to NHTSA and EPA in accordance with § 535.8. After each model year ends, EPA will verify the manufacturer's CO_2 family emission limit through modeling and verify the equivalent fuel consumption values.

(d) The manufacturer must calculate the fuel consumption value for each engine family for engines installed in vehicles that make up the manufacturer's fleet of heavy-duty trucks in each regulatory subcategory and compare the results to the applicable fuel consumption standard, determined in § 535.5, as follows:

(1) The manufacturer must determine the CO_2 emission values for the family certification level (FCL) of each engine family within the heavy-duty engine regulatory subcategories for each model year, in accordance with 40 CFR part 1036, subpart C, and then calculate equivalent fuel consumption values for each family certification level.

(i) Determine the CO_2 family certification level in grams per bhp-hr.

(ii) Calculate equivalent fuel consumption values, in gallons per 100 bhp-hr.

(iii) Round each fuel consumption value to the nearest 0.1 gallon per 100 bhp-hr.

(2) If a manufacturer certifies an engine family for use both as a vocational engine and as a tractor engine, the manufacturer must split the family into two separate subfamilies. The manufacturer may assign the numbers and configurations of engines within the respective subfamilies at any time prior to the submission of the end-of-year report required by 40 CFR 1036.730 and § 535.8. The manufacturer must track into which type of vehicle each engine is installed, although EPA may allow the manufacturer to use statistical methods to determine this for a fraction of its engines.

(3) The following engines are excluded from the engine families used to determined FCL values and the benefit for these engines is determined as an advanced technology credit under the ABT provisions provided in § 535.7(e):

(i) Engines certified as hybrid engines or power packs.

(ii) Engines certified as hybrid engines designed with PTO capability and that are sold with the engine coupled to a transmission.

(iii) Engines certified as Rankine-cycle engines.

(4) Manufacturers must submit the engine type fuel consumption values and the FCLs for engine families to NHTSA and EPA in accordance with § 535.8. After each model year ends, EPA will verify the manufacturer's CO_2 family certification levels through modeling and verify the equivalent fuel consumption values.

§ 535.7 Averaging, banking, and trading (ABT) Program.

(a) *Fuel consumption credits (FCC).* At the end of each model year, manufacturers may earn credits for exceeding the fuel consumption standards specified in this regulation. Manufacturers may average, bank, and trade fuel consumption credits for purposes of complying with the standards as described in this section.

(b) *ABT provisions for heavy-duty pickup trucks and vans.* (1) This regulatory category consists of one regulatory subcategory, heavy-duty pickup trucks and vans.

(2) Manufacturers that manufacture vehicles within this regulatory subcategory shall calculate credits at the end of each model year based upon the final average fleet fuel consumption standard and final average fleet fuel consumption performance value within this one regulatory subcategory as identified in paragraph (a)(8) of this section.

(3) Fuel consumption levels below the standard create a "credit surplus," while fuel consumption levels above the standard create a "credit shortfall."

(4) Surplus credits generated and calculated within this regulatory subcategory may only be used to offset a credit shortfall in this same regulatory subcategory.

(5) Surplus credits may be traded among credit holders but must stay within the same regulatory subcategory.

(6) Surplus credits, if not used to offset a credit shortfall may be banked by the manufacturer for use in future model years, or traded, given the restriction that the credits have an expiration date of five model years after the year in which the credits are earned. For example, credits earned in model year 2014 may be utilized through model year 2019.

(7) Credit shortfalls must be offset by an available credit surplus within three model years after the shortfall was incurred. If the shortfall cannot be offset, the manufacturer is liable for civil penalties as discussed in § 535.9.

(8) Calculate the value of credits generated in a model year for this regulatory subcategory using the following equation:

$$\text{Total MY Fleet FCC (gallons)} = (\text{Std} - \text{Act}) \times (\text{Volume}) \times (\text{UL}) \times (10^2)$$

Where:

Std = Fleet average fuel consumption standard (gal/100 mile).

Act = Fleet average actual fuel consumption value (gal/100 mile).

Volume = the total production of vehicles in the regulatory subcategory.
UL = the useful life for the regulatory subcategory (120,000 miles).

(9) In model year 2013, if a manufacturer voluntarily complies, it may calculate credits for its entire fleet, as specified in paragraph (b)(8) of this section, or it may choose to calculate only advanced technology credits for its electric and zero emissions vehicles as specified in paragraph (e)(1) of this section.

(c) *ABT provisions for vocational trucks and tractors.* (1) The two regulatory categories for vocational trucks and tractors consist of 12 regulatory subcategory as follows:

(i) Vocational trucks with a GVWR up to and including 19,500 pounds (Light Heavy-Duty (LHD));

(ii) Vocational trucks with a GVWR above 19,500 pounds and no greater than 33,000 pounds (Medium Heavy-Duty (MHD));

(iii) Vocational trucks with a GVWR over 33,000 pounds (Heavy Heavy-Duty (HHD));

(iv) Low roof day cab tractors with a GVWR above 26,000 pounds and no greater than 33,000 pounds;

(v) Mid roof day cab tractors with a GVWR above 26,000 pounds and no greater than 33,000 pounds;

(vi) High roof day cab tractors with a GVWR above 26,000 pounds and no greater than 33,000 pounds;

(vii) Low roof day cab tractors with a GVWR above 33,000 pounds;

(viii) Mid roof day cab tractors with a GVWR above 33,000 pounds;

(ix) High roof day cab tractors with a GVWR above 33,000 pounds;

(x) Low roof sleeper cab tractors with a GVWR above 33,000 pounds;

(xi) Mid roof sleeper cab tractors with a GVWR above 33,000 pounds; and

(xii) High roof sleeper cab tractors with a GVWR above 33,000 pounds.

(2) Manufacturers that manufacture vehicles within either of these two vehicle categories, in one or more of the regulatory subcategories, shall calculate a total credit balance within each regulatory subcategory at the end of each model year based upon final production volumes and the sum of the credit balances derived for each of the vehicle family groups within each regulatory subcategory as defined by EPA.

(3) Each designated vehicle family group has a "family emissions limit" (FEL) which is compared to the associated regulatory subcategory standard. A FEL that falls below the regulatory subcategory standard creates "positive credits," while fuel consumption level of a family group above the standard creates "negative credits."

(4) Manufacturers shall sum all shortfalls and surplus credits for each vehicle family within a regulatory subcategory to obtain the total credit balance for the model year before rounding. The sum of fuel consumptions credits must be rounded to the nearest gallon.

(5) A surplus total credit balance generated and calculated within a regulatory subcategory may only be used to offset credit shortfalls in this same regulatory subcategory.

(6) Surplus credits may be traded among credit holders but must stay within the same regulatory subcategory.

(7) Surplus credits, if not used to offset past or current model year credit shortfalls may be banked by the manufacturer for use in future model years, or traded.

(8) Credit shortfalls must be offset by available surplus credits within three model years after a shortfall has incurred. If the shortfall cannot be offset, the manufacturer is liable for civil penalties as discussed in § 535.9.

(9) The value of credits generated in a model year is calculated as follows:

(i) Calculate the value of credits generated in a model year for each vehicle family within a regulatory subcategory using the following equation:

$$\text{Vehicle Family FCC (gallons)} = (\text{Std} - \text{FEL}) \times (\text{Payload}) \times (\text{Volume}) \times (\text{UL}) \times (10^3)$$

Where:

Std = the standard for the respective vehicle family regulatory subcategory (gal/1000 ton-mile).
FEL = family emissions limit for the vehicle family (gal/1000 ton-mile).
Payload = the prescribed payload in tons for each regulatory subcategory as shown in the following table:

Regulatory subcategory	Payload (Tons)
LHD Vocational Trucks	2.85
MHD Vocational Trucks	5.60
HHD Vocational Trucks	19.00
Class 7 Tractor	12.50
Class 8 Tractor	19.00

Volume = the number of vehicles in the corresponding vehicle family.
UL = the useful life for the regulatory subcategory (miles) as shown in the following table:

Regulatory subcategory	UL (miles)
LHD Vocational Trucks	110,000
MHD Vocational Trucks	185,000
HHD Vocational Trucks	435,000
Class 7 Tractor	185,000
Class 8 Tractor	435,000

(ii) Calculate the total credits generated in a model year for each regulatory subcategory equals using the following equation:

Total regulatory subcategory MY credits = Σ Vehicle family credits within each regulatory subcategory

(d) *ABT provisions for heavy-duty engines.* (1) Heavy-duty engines consist of four regulatory subcategories as follows:

(i) Spark-ignition engines.

(ii) Light heavy-duty compression-ignition engines.

(iii) Medium heavy-duty compression-ignition engines.

(iv) Heavy heavy-duty compression-ignition engines.

(2) Manufacturers that manufacture engines within one or more of the regulatory subcategories, shall calculate a total credit balance within each regulatory subcategory at the end of each model year based upon final production volumes and the sum of the credit balances derived for each of the engine families within each regulatory subcategory as defined by EPA.

(3) Each designated engine family has a "family certification level" (FCL) which is compared to the associated regulatory subcategory standard. A FCL that falls below the regulatory subcategory standard creates "positive credits," while fuel consumption level of a family group above the standard creates "negative credits."

(4) Manufacturers shall sum all surplus and shortfall credits for each engine family within a regulatory subcategory to obtain the total credit balance for the model year before rounding. Round the sum of fuel consumptions credits to the nearest gallon.

(5) A surplus total credit balance generated and calculated within a regulatory subcategory may only be used to offset credit shortfalls in this same regulatory subcategory.

(6) Surplus credits may be traded among credit holders but must stay within the same regulatory subcategory.

(7) Surplus credits, if not used to offset past or current model year credit shortfalls may be banked by the manufacturer for use in future model years, or traded.

(8) Credit shortfalls must be offset by available surplus credits within three model years after shortfall was incurred. If the shortfall cannot be offset, the manufacturer is liable for civil penalties as discussed in § 535.9.

(9) The value of credits generated in a model year is calculated as follows:

(i) The value of credits generated in a model year for each engine family within a regulatory subcategory equals

$$\text{Engine Family FCC (gallons)} = (\text{Std} - \text{FCL}) \times (\text{CF}) \times (\text{Volume}) \times (\text{UL}) \times (10^2)$$

Where:

Std = the standard for the respective engine regulatory subcategory (gal/100 bhp-hr).

FCL = family certification level for the engine family (gal/100 bhp-hr).

CF = a transient cycle conversion factor in bhp-hr/mile which is the integrated total cycle brake horsepower-hour divided by the equivalent mileage of the applicable test cycle. For spark-ignition heavy-duty engines, the equivalent mileage is 6.3 miles. For compression-ignition heavy-duty engines, the equivalent mileage is 6.5 miles.

Volume = the number of engines in the corresponding engine family.

UL = the useful life of the given engine family (miles) as shown in the following table:

Regulatory Subcategory	UL (miles)
Class 2b-5 Vocational Trucks, Spark Ignited (SI), and Light Heavy-Duty Diesel Engines	110,000
Class 6-7 Vocational Trucks and Medium Heavy-Duty Diesel Engines	185,000
Class 8 Vocational Trucks and Heavy Heavy-Duty Diesel Engines	435,000

Regulatory Subcategory	UL (miles)
Class 7 Tractors and Medium Heavy-Duty Diesel Engines	185,000
Class 8 Tractors and Heavy Heavy-Duty Diesel Engines	435,000

(ii) Calculate the total credits generated in a model year for each regulatory subcategory using the following equation:

Total regulatory subcategory MY credits = Σ Engine family credits within each regulatory subcategory

(e) *Additional credit provisions*—(1) *Advanced technology credits.* Manufacturers of heavy-duty pickup trucks and vans, vocational trucks and tractors showing improvements in CO_2 emissions and fuel consumption using hybrid vehicles, vehicles equipped with Rankine-cycle engines, electric vehicles and fuel cell vehicles are eligible for advanced technology credits that may be applied to any heavy-duty vehicle or engine subcategory consistent with sound engineering judgment as follows:

(i) *Heavy-duty vocational trucks and truck tractors.* (A) For hybrid vehicles with regenerative braking (or the equivalent) and energy storage systems and for hybrids that incorporate power take-off (PTO) systems, calculate the advanced technology credits as follows:

(*1*) Measure the effectiveness of the hybrid system by simulating the chassis test procedure applicable for each type of hybrid vehicle under 40 CFR part 1037.

(*2*) The effectiveness of the hybrid system is measured using chassis testing against an equivalent conventional vehicle. For purposes of this paragraph (e), a conventional vehicle is considered to be equivalent if it has the same footprint, intended service class, aerodynamic drag, and other factors not directly related to the hybrid powertrain. If there is no equivalent vehicle, the manufacturer may create and test a prototype equivalent vehicle. The conventional vehicle is considered Vehicle A, and the hybrid vehicle is considered Vehicle B. EPA may specify

an alternate test if the hybrid vehicle includes a power take-off system.

(*3*) The benefit associated with the hybrid system for fuel consumption is determined from the weighted fuel consumption results from the chassis tests of each vehicle using the following equation:

Benefit (gallon/1000 ton mile) = Improvement Factor x GEM Fuel Consumption Result_B

Where:

Improvement Factor = (Fuel Consumption_A − Fuel Consumption_B)/(Fuel Consumption_A)

Fuel Consumption Rates A and B are the gallons per 1000 ton-mile of the conventional and hybrid vehicles, respectively.

GEM Fuel Consumption Result B is the estimated gallons per 1000 ton-mile rate resulting from modeling the emissions of the hybrid vehicle as specified in 40 CFR 1037.520 and § 535.6(b) and (c).

(*4*) Calculate the benefit in credits using the equation in paragraph (d)(9) of this section and replacing the term (Std-FEL) with the benefit.

(B) For Rankine Cycle engines, determine the emission performance benefit according to 40 CFR 1036.615 and convert to an equivalent fuel consumption benefit value. Calculate fuel consumption credits in gallons utilizing the credit equation in paragraph (d)(9) of this section and replacing the term (Std-FCL) with the fuel consumption benefit value.

(C) For electric and fuel cell vehicles, determine the emission performance benefit according to 40 CFR 1037.610 and convert to an equivalent fuel consumption benefit value. Calculate fuel consumption credits in gallons utilizing the credit equation in paragraph (d)(9) of this section and replacing the term (Std-FEL) with the fuel consumption benefit value.

(ii) *Heavy-duty pickup trucks and vans.* (A) For model year 2013, manufacturers may generate advanced technology credits for electric and zero emissions vehicles. Advanced technology credits for electric and zero emissions vehicles may be earned voluntarily as an alternative to generating credits for the manufacturer's entire fleet. Advanced technology credits for electric and zero emissions vehicles are not limited for use within the heavy-duty pickup truck and van regulatory category. Advanced technology credits generated for electric and zero emission vehicles in model year 2013 are treated as though they were generated in model year 2014 for purposes of credit life.

(B) In model years 2014 and later, a manufacturer may choose to calculate credits for its entire fleet as specified in paragraph (a)(8) of this section or may choose to exclude its electric vehicles and zero emissions vehicles from the fleet and calculate the credits for these vehicles separately as advanced technology credits. In this case, the manufacturer may gain credits for its fleet without its electric and zero emissions vehicles and gain the advanced technology credits for these vehicles. Advanced technology credits for electric and zero emissions vehicles are not limited for use within the heavy-duty pickup truck and van regulatory category.

(2) *Innovative technology credits.* EPA allows manufacturers to generate credits consistent with the provisions of 40 CFR 86.1866–12(d) for introducing innovative technology in heavy-duty vehicles for reducing greenhouse gas emissions. Upon identification from EPA of a manufacturer seeking to obtain innovative technology credits in a given model year, NHTSA may adopt the same amount of fuel consumption credits into its program. Such credits must remain within the same regulatory subcategory in which the credits were generated. NHTSA will adopt these fuel consumption credits depending upon whether:

(i) The technology has a direct impact upon reducing fuel consumption performance;

(ii) The manufacturer has provided sufficient information to make sound engineering judgments on the impact of the technology in reducing fuel consumption performance; and

(iii) Credits will be accepted on a one-for-one basis expressed in terms of gallons.

§ 535.8 Reporting requirements.

(a) *General Requirements*—(1) *Required reports.* For the each model year, manufacturers must submit a pre-certification compliance report, an end-of-the-year report, a final report and supplemental reports (if needed) to the Administrator for each regulatory category and regulatory subcategory of heavy-duty trucks and engines as identified in § 535.3.

(2) *Report deadlines.* Reports required by this part for each model year must be submitted by the deadlines specified in this section and must be based upon all the information and data available to the manufacturer 30 days before the report is submitted to the Administrator.

(i) *Pre-certification compliance report for heavy-duty pickup truck and van.* (A) For model year 2013 through 2015, a manufacturer choosing to voluntarily comply must submit a pre-certification compliance report for the given model year and, to the extent possible, the two subsequent model years. The report must be sent before the certification of any applicable test group and no later than December 31 of the calendar year before the given model year. For example, the pre-certification compliance report for model year 2014 must be submitted no later than December 31, 2013 and must contain fuel consumption information for vehicles manufactured for model years 2014 to 2016, to the extent possible.

(B) For model years 2016 and later, a manufacturer complying with mandatory standards must submit a pre-certification compliance report for the given model year and, to the extent possible, the two subsequent model years. The report must be sent before the certification of any applicable test group and no later than December 31 of the calendar year two years before the given model year. No report is required for model years 2016 and 2017 if the manufacturer voluntarily complied in model years 2014 and 2015 and if the manufacturer has subsequently provided accurate information regarding its 2016 and 2017 model year fleets in its prior submissions. For example, the pre-certification compliance report for model year 2016 must be submitted no later than December 31, 2013 and must contain fuel consumption information for vehicles manufactured for model years 2016 to 2018, to the extent possible, but if the manufacturer has already provided the required information in its model year 2014 report, no submission would be required for model year 2016.

(ii) *Pre-certification compliance report for heavy-duty vocational trucks, truck tractors and heavy-duty engines.* For model years 2013 and later, a manufacturer complying with voluntary and mandatory standards must submit a pre-certification compliance report for the given model year. The report must be sent before the certification of any applicable vehicle or engine family and no later than December 31 of the calendar year two years before the given model year. No report is required for model years 2016 and 2017 if the manufacturer voluntarily complied in model years 2014 and 2015 and if the manufacturer has subsequently provided accurate information regarding its model years 2016 and 2017 fleets in its prior submissions. For example, the pre-certification compliance report for model year 2016 must be submitted no later than December 31, 2013 and must contain fuel consumption information for vehicles manufactured for model years 2016 to 2018, to the extent possible, but if the manufacturer has

already provided the required information in its model year 2014 report, no submission would be required for model year 2016.

(iii) *End-of-the-year-report for all heavy-duty trucks.* A manufacturer complying with voluntary and mandatory standards must submit an end-of-the-year report for each model year. This report must be submitted within 90 days after the end of the given model year and no later than April 1 of the next calendar year. For example, the end-of-the-year report for model year 2014 must be submitted no later than April 1, 2015.

(A) Upon notification from EPA, NHTSA may waive the requirement to send the end-of-the year report, conditioned upon the manufacturer contacting EPA by letter to certify that the final report will be sent on time. NHTSA will not waive this requirement for a manufacturer that has a deficit for a given model year or an outstanding deficit from a prior model year.

(B) If a manufacturer expects differences in the information reported between the end-of-the-year report and the final year report, it must provide the most up-to-date projections in the end-of-the-year report and indentify the information as preliminary.

(C) If the manufacturer cannot provide any of the required fuel consumption information, it must state the specific reason for the insufficiency and identify the additional testing needed or explain what analytical methods are believed by the manufacturer will be necessary to eliminate the insufficiency and certify that the results will be available for the final report.

(iv) *Final report for all heavy-duty trucks.* A manufacturer complying with voluntary and mandatory standards must submit a final report for each model year. This report must be submitted within 270 days after the given model year and no later than October 1 of the next calendar year. For example, the final year report for model year 2014 must be submitted no later than October 1, 2015.

(v) *Supplemental reports.* A manufacturer must submit a supplemental report within 30 days after making a change to an application for certification with EPA as specified in 40 CFR 1037.225.

(b) *General contents of reports.* (1) Each report submitted by a manufacturer must include the general information identified in this paragraph (b) and, for each regulatory category of vehicles, include the information required in paragraphs (c), (d), and (e) of this section as applicable to each category. The following general information is required for each report:

(i) A designation identifying the report as a pre-certification compliance report, end-of-the-year report, final year report or a supplemental report, as appropriate;

(ii) The name of the manufacturer submitting the report;

(iii) The full name, title, and address of the official responsible for preparing the report;

(iv) The model year; and

(v) The documents the manufacturer plans to incorporate by reference as specified in paragraph (g) of this section.

(2) For model years 2014 and 2015, a manufacturer must follow the instructions on the NHTSA Web site at *http://www.nhtsa.gov* for submitting reports electronically or download a form containing the format and instructions for each report. Electronic submissions must be uploaded to the NHTSA Web site by the required deadlines specified in paragraph (a) of this section.

(3) For model years 2016 and later, manufacturers must submit reports electronically through the NHTSA Web site at *http://www.nhtsa.gov.*

(i) Each manufacturer must register electronically in advance of submitting its first report to obtain a unique and private username, password, and account for accessing the Web site and entering data.

(ii) Electronic reports submitted through the NHTSA Web site must include all the required information specified in paragraphs (b) through (e) of this section to be accepted.

(4) Manufacturers must submit a request for confidentiality with each electronic report specifying any part of the information or data in a report that it believes should be withheld from *public* disclosure as trade secret or other confidential business information. A form will be available through the NHTSA Web site to request confidentiality. Confidential information shall be treated according to paragraph (i) of this section.

(i) For any information or data requested by the manufacturer to be withheld under 5 U.S.C. 552(b)(4) and 15 U.S.C. 2005(d)(1), the manufacturer shall provide evidence in its request for confidentiality to justify that:

(A) The item is within the scope of 5 U.S.C. 552(b)(4) and 15 U.S.C. 2005(d)(1);

(B) The disclosure of such as item would result in significant competitive damage;

(C) The period during which the item must be withheld to avoid that damage; and

(D) How earlier disclosure would result in that damage.

(ii) NHTSA shall make reports available to the public as specified in paragraph (h) of this section.

(c) *Pre-certification compliance report.* Each pre-certification compliance report must comply with the provisions in this paragraph (c) as applicable to each regulatory subcategory of vehicles or, alternatively, manufacturers may provide copies of any pre-certification documents including the applications for certification and pre-model year reports that are sent to EPA as a substitute as long as those documents contain equivalent fuel consumption information for each carbon-related value. In either case, NHTSA may ask a manufacturer to provide additional information if necessary to verify the fuel consumption requirements of this regulation.

(1) *Pre-certification compliance report for heavy-duty pickups and vans.* (i) For each vehicle configuration (defined by payload, towing capacity and drivetrain configuration) that makes up the manufacturer's combined fleet of heavy-duty pickups and vans as determined by § 535.5(a)(2) for a given model year, identify:

(A) The final fuel consumption standards;

(B) Final production volumes;

(C) Workfactors;

(D) Payload;

(E) Towing capacity;

(F) Existence of 4-wheel drive (indicate yes or no);

(G) Gross Vehicle Weight Rating; and

(H) Gross Combined Weight Rating.

(ii) For the manufacturer's combined fleet of heavy-duty pickups and vans as determined by § 535.5(a)(3), for a given model year, identify the projected final fleet average fuel consumption standard.

(iii) For each vehicle in the test groups used to determine the manufacturer's fleet average fuel consumption value as determined by § 535.6(a), for a given model year, identify:

(A) The final fuel consumption value;

(B) Make and model designation;

(C) Final production volumes for each make and model designation;

(D) Payload;

(E) Towing capacity;

(F) Existence of 4-wheel drive (indicate yes or no);

(G) Gross Vehicle Weight Rating;

(H) Gross Combined Weight Rating;

(I) Loaded vehicle weight;

(J) Equivalent test weight;

(K) Engine displacement, liters;
(L) SAE net rated power, kilowatts;
(M) SAE net horsepower;
(N) Engine code;
(O) Fuel system (number of carburetor barrels or, if fuel injection is used, so indicate);
(P) Fuel consumption control system;
(Q) Transmission class;
(R) Number of forward speeds;
(S) Existence of overdrive (indicate yes or no);
(T) Total drive ratio;
(U) Axle ratio; and
(V) If available, any advanced or innovative technology that reduces fuel consumption.

(iv) For the manufacturer's combined fleet of heavy-duty pickups and vans as determined by § 535.6(a), for a given model year, identify the projected fleet average fuel consumption value.

(v) Identify the projected final U.S.-directed production volumes for:

(A) The vehicle configurations that make up the manufacturer's combined fleet of heavy-duty pickups and vans for a given model year;

(B) The vehicles in each test group used to determine the manufacturer's fleet average fuel consumption value for a given model year; and

(C) Attest to the authenticity and accuracy of each projected final production volume and provide the signature of an officer (a corporate executive of at least the rank of Vice President) designated by the corporation. The signature of the designated officer shall constitute a representation by the required attestation. Such attestation shall constitute a representation by the manufacturer that the manufacturer has established reasonable, prudent procedures to ascertain and provide production data that are accurate and authentic in all material respects and that these procedures have been followed by employees of the manufacturer involved in the reporting process.

(vi) For flexible fueled, dedicated fuel and advanced technology vehicles including electric vehicles, hybrid vehicles, plug-in hybrid vehicles and fuel cell vehicles identify:

(A) Make and model designation;

(B) Projected final production volumes; and

(C) The method that will be used to calculate the fuel consumption values.

(vii) Report information on the manufacturer's projected fuel consumption credits:

(A) Report a projection of the credits and balances to be generated for the fleet for each model year;

(B) Report and provide a description of the various planned credit flexibility options that will be used to comply with the standards, if necessary, including the amount of credit the manufacturer intends to generate from innovative or advanced technologies, and for voluntary compliance in model years 2014 or 2015, or by trade; and

(C) If a credit shortfall is generated (or projected to be generated) at the end of the model year, a manufacturers must submit the compliance plan required by § 535.9(a)(6) in its pre-certification compliance report with the most up-to-date information demonstrating how the manufacturer will comply with the fleet average fuel consumption standard by the end of the third year after the shortfall occurs.

(viii) Manufacturers using the low volume exclusion and exempting 2 percent of their total production in accordance with § 535.5(a)(6) must provide a plan describing how the exclusion will be used, including a description and a production volume for each excluded vehicle.

(ix) Manufacturers choosing early compliance must submit a statement in the pre-certification compliance report announcing their intent to comply with fuel consumption standards and must attest to understanding that compliance is mandatory thereafter for each model year until 2018.

(2) *Pre-certification compliance reports for vocational trucks and truck tractors.* (i) For each regulatory category and subcategory, describe the annual fuel consumption credit activities under NHTSA's ABT program by:

(A) The balance of credits in each regulatory category and subcategory;

(B) The fuel consumption credits that you plan to trade as described in § 535.7.

(C) A description of the various planned credit flexibility options that will be used to comply with the standards, if necessary, including the amount of credit the manufacturer intends to generate from innovative or advanced technologies, and for voluntary compliance in model years 2014 or 2015, or by trade; and

(D) If a credit shortfall is generated (or projected to be generated) at the end of the model year, a manufacturer must submit the compliance plan required by § 535.9(a)(6) in its pre-certification compliance report with the most up-to-date information demonstrating how the manufacturer will comply with the fleet average fuel consumption standard by the end of the third year after the shortfall occurs.

(ii) Identify the projected final U.S.-directed production volumes for:

(A) Each of the manufacturer's combined fleets of heavy-duty vocational trucks and trucks tractors for the model year;

(B) Each regulatory subcategory of heavy-duty vocational trucks and trucks tractors for the model year;

(C) The vehicles in each vehicle family used to determine the manufacturer's fleet average fuel consumption value for the model year; and

(D) Attest to the authenticity and accuracy of each projected final production volume and provide the signature of an officer (a corporate executive of at least the rank of Vice President) designated by the corporation. The signature of the designated officer shall constitute a representation by the required attestation. Such attestation shall constitute a representation by the manufacturer that the manufacturer has established reasonable, prudent procedures to ascertain and provide production data that are accurate and authentic in all material respects and that these procedures have been followed by employees of the manufacturer involved in the reporting process.

(iii) Report the methodology which the manufacturer plans to use to comply with EPA's N_2O and CH_4 emission standards. If the manufacturer plans to choose an option which could increase its CO_2 emission, it must report any calculated increases in its emission values that are associated directly with these gases. It must also report any increases in CO_2 emissions in equivalent terms of fuel consumption.

(iv) Manufacturers choosing early compliance must submit a statement in the pre-certification compliance report announcing their intent to comply with fuel consumption standards and must attest to understanding that compliance is mandatory thereafter for each model year until 2018.

(v) For each regulatory subcategory of vocational trucks and truck tractors identify:

(A) The vehicle-family and subfamily designations selected in accordance with 40 CFR part 1037, subpart C;

(B) The fuel consumption standards that would otherwise apply to each vehicle family;

(C) The vehicle family fuel consumption FELs (gallons per 1,000 ton-mile);

(D) The projected final U.S.-directed production volumes for the model year as a total for the subcategory and for each vehicle family;

(E) The useful life value for each vehicle family; and

(F) The calculated projected final surplus or shortfall fuel consumption

credits for each vehicle family. If you have a projected shortfall credit balance for a regulatory subcategory in the given model year, specify which vehicle families (or certain subfamilies with the vehicle family) have a credit shortfall for the year. Consider for example, a manufacturer with three vehicle families ("A", "B", and "C") in a given regulatory subcategory. If family A generates enough credits to offset the shortfall credits of family B but not enough to also offset the credit shortfall of family C (and the manufacturer has no banked credits in the averaging set), the manufacturer may designate families A and B as having no shortfall for the model year, provided it designates family C as having a shortfall for the model year.

(vi) For vehicles in each vehicle family belonging to the vocational vehicle regulatory subcategories identify:

(A) The FEL for each family and the fuel consumption performance for each vehicle in the family.

(B) Intended commercial use.

(C) Gross Vehicle Weight Rating.

(D) Rolling resistance coefficient for the tires.

(E) Any aerodynamic features.

(F) Any weight reduction features.

(G) Any drivetrain (*i.e.*, axles, accessories, and transmission) improvements that reduce emissions and fuel consumption.

(H) Any idle reduction technologies.

(I) Any hybrid powertrains including hydraulic, electric, and plug-in electric.

(J) The model types and projected final production of all alternate and dedicated fueled vehicles.

(vii) For vehicles in each vehicle family belonging to the truck tractor regulatory subcategories identify:

(A) The FEL for each family and the fuel consumption performance for each vehicle in the family.

(B) Aerodynamic drag coefficient (Cd).

(C) Steer tire rolling resistance (kg/metric ton).

(D) Drive tire rolling resistance (kg/metric ton).

(E) Weight reduction (lbs).

(F) Extended idle reduction (g/ton-mile).

(G) Vehicle speed limiter.

(viii) For flexible fueled, dedicated fuel and advanced technology vehicles including electric vehicles, hybrid vehicles, plug-in hybrid vehicles and fuel cell vehicles in each vehicle family and regulatory subcategory identify:

(A) Make and model designation;

(B) Projected final production volumes; and

(C) The method that will be used to calculate the fuel consumption values.

(3) *Pre-certification compliance reports for heavy-duty engines.* (i) For each regulatory category and subcategory, describe the annual fuel consumption credit activities under NHTSA's ABT program by:

(A) The balance of credits in each regulatory category and subcategory;

(B) The fuel consumption credits that you plan to trade as described in § 535.7;

(C) A description of the various planned credit flexibility options that will be used to comply with the standards, if necessary, including the amount of credit the manufacturer intends to generate from innovative or advanced technologies, and for voluntary compliance in model years 2014 or 2015, or by trade; and

(D) If a credit shortfall is generated (or projected to be generated) at the end of the model year, a manufacturer must submit the compliance plan required by § 535.9(a)(6) in its pre-certification compliance report with the most up-to-date information demonstrating how the manufacturer will comply with the fleet average fuel consumption standard by the end of the third year after the shortfall occurs.

(ii) Identify the projected final U.S.-directed production volumes for:

(A) The manufacturer's combined fleet of heavy-duty engines for the model year;

(B) Each regulatory subcategory of heavy-duty engines for the model year;

(C) The vehicles in each vehicle family used to determine the manufacturer's fleet average fuel consumption value for the model year; and

(D) Attest to the authenticity and accuracy of each projected final production volume and provide the signature of an officer (a corporate executive of at least the rank of Vice President) designated by the corporation. The signature of the designated officer shall constitute a representation by the required attestation. Such attestation shall constitute a representation by the manufacturer that the manufacturer has established reasonable, prudent procedures to ascertain and provide production data that are accurate and authentic in all material respects and that these procedures have been followed by employees of the manufacturer involved in the reporting process.

(iii) Report the methodology which the manufacturer plans to use to comply with EPA's N_2O and CH_4 emission standards. If the manufacturer plans to choose an option which could increase its CO_2 emission, it must report any calculated increases in its emission values that are associated directly with these gases. It must also report any increases in CO2 emissions in equivalent terms of fuel consumption.

(iv) Manufacturers choosing early compliance must submit a statement in the pre-certification compliance report announcing their intent to comply with fuel consumption standards and must attest to understanding that compliance is mandatory thereafter for each model year until 2018.

(v) For each engine regulatory subcategory, identify:

(A) The engine-family and subfamily designations selected in accordance with 40 CFR part 1036, subpart C;

(B) The fuel consumption standards that would otherwise apply to each engine family;

(C) The engine family fuel consumption FCLs (gallons per 100 bhp-hr);

(D) The projected final U.S.-directed production volumes for the model year as a total for the subcategory and for each engine family;

(E) The useful life value for each engine family; and

(F) The calculated projected final surplus or shortfall fuel consumption credits for each engine family. If you have a projected shortfall credit balance for a regulatory subcategory in the given model year, specify which engine families (or certain subfamilies with the vehicle family) have a credit shortfall for the year. Consider for example, a manufacturer with three engine families ("A", "B", and "C") in a given regulatory subcategory. If family A generates enough credits to offset the shortfall credits of family B but not enough to also offset the credit shortfall of family C (and the manufacturer has no banked credits in the averaging set), the manufacturer may designate families A and B as having no shortfall for the model year, provided it designates family C as having a shortfall for the model year.

(vi) For each engine in an engine family, report the following technologies and information if existing:

(A) Engine friction reduction.

(B) Coupled cam phasing.

(C) Cylinder deactivation.

(D) Diesel engine.

(E) Baseline engine.

(F) Turbochargers.

(G) Low temperature exhaust gas recirculation.

(H) Engine friction reduction.

(I) Selective catalytic reduction (SCR).

(J) Improved combustion process.

(K) Reduced parasitic loads.

(d) *End-of-the-year and final reports.* After the end of each model year,

manufacturers must provide to the Administrator copies of the end-of-the-year and final reports sent to EPA specified in 40 CFR 1037.730. Manufacturer must also provide equivalent fuel consumption information for each CO_2 value and the specified information described in paragraphs (d)(1) and (2) of this section. In either case, NHTSA may ask a manufacturer to provide additional information if necessary to verify the fuel consumption requirements of this regulation.

(1) Report and provide a description of the various credit flexibility options that were used to comply with the standards and, if necessary, include the amount of credits the manufacturer acquired from innovative or advanced technologies, from voluntary compliance with model years 2014 or 2015, or by trade.

(2) Report the methodology which the manufacturer used to comply with N_2O and CH_4 emission standards. If the manufacturer chose an option which increased its CO_2 emission, it must report the calculated increases in its emission values that were associated directly with these gases. It must also report the increase in CO_2 emissions in equivalent terms of fuel consumption.

(e) *Supplemental reports.* (1) A manufacturer must submit a supplemental report to the Administrator at any time the manufacturer amends an application for certification with EPA, in accordance with 40 CFR 1036.225 and 40 CFR 1037.225.

(2) The supplemental report must include the changes that the manufacturer makes to an application for certification.

(f) *Additional reporting provisions.* (1) *Small business exemption.* Vehicles produced by small business manufacturers are exempted from the requirements of this regulation but are required to provide to EPA and NHTSA a statement explaining how they qualify as a small business as defined by the Small Business Administration at 13 CFR 121.201. The statement must be submitted to the Administrators of EPA and NHTSA and must be submitted no later than December 31 of the calendar year before the model year begins.

(2) *Heavy-duty vehicle off-road exclusion.* Heavy-duty vehicles intended to be used extensively in off-road environments such as forests, oil fields, and construction sites may be exempted from the requirements of this part if EPA and NHTSA approve the exemption. This provision applies to all heavy-duty vehicles except for vocational trucks and truck tractors meeting the qualifications specified in 49 CFR 523.2 that are already exempted. Manufacturers seeking an exemption must send the request to the Administrators of EPA and NHTSA explaining the basis for defining their vehicle for exclusive use as an off-road vehicle.

(g) *Incorporation by reference.* (1) A manufacturer may incorporate by reference in a report required by this part any document other than a report, petition, or application, or portion thereof submitted to any Federal department or agency more than two model years before the model year of the applicable report.

(2) A manufacturer that incorporates by references a document not previously submitted to the National Highway Traffic Safety Administration shall append that document to the report.

(3) A manufacturer that incorporates by reference a document shall clearly identify the document and, in the case of a document previously submitted to the National Highway Traffic Safety Administration, indicate the date on which and the person by whom the document was submitted to this agency.

(h) *Public inspection of information.* (1) Except as provided in paragraph (i) of this section, any person may inspect the information and data submitted by a manufacturer under this part in the docket section of the National Highway Traffic Safety Administration. Any person may obtain copies of the information available for inspection under this section in accordance with the regulations of the Secretary of Transportation in 49 CFR part 7.

(2) In model year 2016, summary reports containing the electronic data submitted by manufacturers, except as provided in paragraph (i) of this section, will be made publically available.

(i) *Confidential information.* (1) Information will not be made available for public inspection under paragraph (h) of this section if confidentiality is granted in accordance with section 505 of the Act and 5 U.S.C. 552(b) or while the manufacturer's request in accordance with paragraph (b)(4) is under consideration.

(2) When the Administrator denies a manufacturer's request under paragraph (b)(4) of this section for confidential treatment of information, the Administrator gives the manufacturer written notice of the denial and the reasons for it. Public disclosure of the information is not made until after the ten-day period immediately following the giving of the notice.

(3) After giving written notice to a manufacturer and allowing ten days, when feasible, for the manufacturer to respond, the Administrator may make available for public inspection any information submitted under this part, except for information submitted by the manufacturer on its emission control and fuel-system operations and the design of system components including any information to read, record, and interpret all the information broadcast by a vehicle's onboard computers and electronic control units, that is relevant to a proceeding under the Act, including information that was granted confidential treatment by the Administrator pursuant to a request by the manufacturer under paragraph (b)(4) of this section.

§ 535.9 Enforcement approach.

(a) *Compliance.* (1) NHTSA assesses compliance with fuel consumption standards each year, utilizing the certified and reported fuel consumption data provided by the Environmental Protection Agency for enforcement of the heavy-duty truck fuel efficiency program established pursuant to 49 U.S.C. 32902(k).

(2) Credit values in gallons are calculated based on the final CO_2 emissions and fuel consumption data submitted by manufacturers and verified/validated by EPA.

(3) If a manufacturer's regulatory subcategory fuel consumption in any model year is found to exceed the applicable standard(s), NHTSA identifies surplus credits in a manufacturer's account for that model year and regulatory subcategory in the appropriate amount by which the manufacturer has exceeded the applicable standard(s).

(4) If a manufacturer's engines or vehicles in a particular regulatory subcategory are found not to meet the applicable fuel consumption standard(s), calculated as a credit shortfall, NHTSA will provide written notification to the manufacturer that it has failed to meet a particular regulatory subcategory standard. The manufacturer will be required to confirm the performance shortfall and must either: Submit a plan indicating how it will allocate existing credits or earn, and/or acquire by trade credits; or will be liable for a civil penalty as determined in paragraph (b) of this section. The manufacturer must submit a plan within 60 days of receiving agency notification.

(5) Credit shortfall within a regulatory subcategory may be carried forward only three years, and if not offset by earned or traded credits, the manufacturer may be liable for a civil penalty as described in paragraph (b) of this section.

(6) Credit allocation plans received from a manufacturer will be reviewed and approved by NHTSA. NHTSA will approve a credit allocation plan unless it determines that the proposed credits are unavailable or that it is unlikely that the plan will result in the manufacturer earning sufficient credits to offset the subject credit shortfall. If a plan is approved, NHTSA will revise the respective manufacturer's credit account accordingly by identifying which existing or traded credits are being used to address the credit shortfall, or by identifying the manufacturer's plan to earn future credits for addressing the respective credit shortfall. If a plan is rejected, NHTSA will notify the respective manufacturer and request a revised plan. The manufacturer must submit a revised plan within 14 days of receiving agency notification. The agency will provide a manufacturer one opportunity to submit a revised credit allocation plan before it initiates civil penalty proceedings.

(7) For purposes of this part, NHTSA will treat the use of future credits for compliance, as through a credit allocation plan, as a deferral of civil penalties for non-compliance with an applicable fuel consumption standard.

(8) If NHTSA receives and approves a manufacturer's credit allocation plan to earn future credits within the following three model years in order to comply with regulatory obligations, NHTSA will defer levying civil penalties for non-compliance until the date(s) when the manufacturer's approved plan indicates that credits will be earned or acquired to achieve compliance, and upon receiving confirmed CO_2 emissions and fuel consumption data from EPA. If the manufacturer fails to acquire or earn sufficient credits by the plan dates, NHTSA will initiate civil penalty proceedings.

(9) In the event that NHTSA fails to receive or is unable to approve a plan for a non-compliant manufacturer due to insufficiency or untimeliness, NHTSA will initiate civil penalty proceedings.

(b) *Civil penalties*—(1) *Generally*. The provisions of 5 U.S.C. 554, 556, and 557 do not apply to any proceedings conducted pursuant to this section.

(2) *Determination of non-compliance*. NHTSA Enforcement will make a determination of non-compliance with applicable fuel consumption standards utilizing the certified and reported CO_2 emissions and fuel consumption data provided by the Environmental Protection Agency as described in this part, and after considering all the flexibilities available under § 535.7. If NHTSA Enforcement determines that a regulatory subcategory of vehicles or engines fails to comply with the applicable fuel consumption standard, the chassis, vehicle or engine manufacturer shall be subject to a civil penalty of not more than $37,500.00 per vehicle or engine. NHTSA may adjust this civil penalty amount to account for inflation. Any such violation as defined in § 535.4 shall constitute a separate violation with respect to each vehicle or engine within the applicable regulatory subcategory.

(3) *Maximum civil penalty limit*. The maximum civil penalty under this section for a related series of violations shall be determined by multiplying $37,500.00 times the vehicle or engine production volume for the model year in question within the regulatory subcategory.

(4) *Factors for determining proposed penalty amount*. In determining the amount of any civil penalty proposed to be assessed under this section, NHTSA Enforcement shall take into account the gravity of the violation, the size of the violator's business, the violator's history of compliance with applicable fuel consumption standards, the actual fuel consumption performance related to the applicable standard, the estimated cost to comply with the regulation and applicable standard, the quantity of vehicles or engines not complying, the effect of the penalty on the violator's ability to continue in business, and civil penalties paid under Clean Air Act section 205 (42 U.S.C. 7524) for non-compliance for the same vehicles or engines.

(5) *NHTSA enforcement report of determination of non-compliance*. (i) If NHTSA Enforcement determines that a violation has occurred, NHTSA Enforcement may prepare a report and send the report to the NHTSA Chief Counsel.

(ii) The NHTSA Chief Counsel will review the reports prepared by NHTSA Enforcement to determine if there is sufficient information to establish a likely violation.

(iii) If the Chief Counsel determines that a violation has likely occurred, the Chief Counsel may issue a Notice of Violation to the party.

(iv) If the Chief Counsel issues a Notice of Violation, he or she will prepare a case file with recommended actions. A record of any prior violations by the same party shall be forwarded with the case file.

(6) *Notice of violation*. (i) NHTSA has authority to assess a civil penalty for any violation of this part under 49 U.S.C. 32902(k). The penalty may not be more than $37,500.00 for each violation.

(ii) The Chief Counsel may issue a Notice of Violation to a party. The Notice of Violation will contain the following information:

(A) The name and address of the party;

(B) The alleged violation and the applicable fuel consumption standards violated;

(C) The amount of the proposed penalty;

(D) The place to which, and the manner in which, payment is to be made;

(E) A statement that the party may decline the Notice of Violation and that if the Notice of Violation is declined, the party has the right to a hearing prior to a final assessment of a penalty by a Hearing Officer; and

(F) A statement that failure to either pay the proposed penalty or to decline the Notice of Violation and request a hearing within 30 days of the date shown on the Notice of Violation will result in a finding of violation by default and that NHTSA will proceed with the civil penalty in the amount proposed on the Notice of Violation without processing the violation under the hearing procedures set forth in this subpart.

(iii) The Notice of Violation may be delivered to the party by:

(A) Mailing to the party (certified mail is not required);

(B) Use of an overnight or express courier service; or

(C) Facsimile transmission or electronic mail (with or without attachments) to the part or an employee of the party.

(iv) If a party submits a written request for a hearing as provided in the Notice of Violation or an amount agreed on in compromise within 30 days of the date shown on the Notice of Violation, a finding of "resolved with payment" will be entered into the case file.

(v) If the party agrees to pay the proposed penalty, but has not made payment within 30 days of the date shown on the Notice of Violation, NHTSA will enter a finding of violation by default in the matter and NHTSA will proceed with the civil penalty in the amount proposed on the Notice of Violation without processing the violation under the hearing procedures set forth in this subpart.

(vi) If within 30 days of the date shown on the Notice of Violation a party fails to pay the proposed penalty on the Notice of Violation, and fails to request a hearing, then NHTSA will enter a finding of violation by default in the case file, and will assess the civil penalty in the amount set forth on the Notice of Violation without processing

the violation under the hearing procedures set forth in this subpart.

(vii) NHTSA's order assessing the civil penalty following a party's default is a final agency action.

(7) *Hearing Officer.* (i) If a party timely requests a hearing after receiving a Notice of Violation, the Hearing Officer shall hear the case.

(ii) The Hearing Officer is solely responsible for the case referred to him or her. The Hearing Officer has no other responsibility, direct or supervisory, for the investigation of cases referred for the assessment of civil penalties.

(iii) The Hearing Officer decides each case on the basis of the information before him or her, and must have no prior connection with the case.

(8) *Initiation of action before the Hearing Officer.* (i) After the Hearing Officer receives the case file from the Chief Counsel, the Hearing Officer notifies the party in writing of:

(A) The date, time, and location of the hearing and whether the hearing will be conducted telephonically or at the DOT Headquarters building in Washington, DC;

(B) The right to be represented at all stages of the proceeding by counsel as set forth in the paragraph (b)(9) of this section;

(C) The right to a free copy of all written evidence in the case file.

(ii) On the request of a party, or at the Hearing Officer's direction, multiple proceedings may be consolidated if at any time it appears that such consolidation is necessary or desirable.

(9) *Counsel.* A party has the right to be represented at all stages of the proceeding by counsel. A party electing to be represented by counsel must notify the Hearing Officer of this election in writing, after which point the Hearing Officer will direct all further communications to that counsel. A party represented by counsel bears all of its own attorneys' fees and costs.

(10) *Hearing location and costs.* (i) Unless the party requests a hearing at which the party appears before the Hearing Officer in Washington, DC, the hearing shall be held telephonically. In DC, the hearing is held at the headquarters of the U.S. Department of Transportation.

(ii) The Hearing Officer may transfer a case to another Hearing Officer at a party's request or at the Hearing Officer's direction.

(iii) A party is responsible for all fees and costs (including attorneys' fees and costs, and costs that may be associated with travel or accommodations) associated with attending a hearing.

(11) Hearing procedures. (i) There is no right to discovery in any proceedings conducted pursuant to this subpart.

(ii) The material in the case file pertinent to the issues to be determined by the Hearing Officer is presented by the Chief Counsel or his or her designee.

(iii) The Chief Counsel may supplement the case file with information prior to the hearing. A copy of such information will be provided to the party no later than 3 days before the hearing.

(iv) At the close of the Chief Counsel's presentation of evidence, the party has the right to examine, respond to and rebut material in the case file and other information presented by the Chief Counsel.

(v) In receiving evidence, the Hearing Officer is not bound by strict rules of evidence. In evaluating the evidence presented, the Hearing Officer must give due consideration to the reliability and relevance of each item of evidence.

(vi) At the close of the party's presentation of evidence, the Hearing Officer may allow the introduction of rebuttal evidence that may be presented by the Chief Counsel. The Hearing Officer may allow the party to respond to any such evidence submitted.

(vii) After the evidence in the case has been presented, the Chief Counsel and the party may present arguments on the issues in the case. The party may also request an opportunity to submit a written statement for consideration by the Hearing Officer and for further review. If granted, the Hearing Officer shall allow a reasonable time for submission of the statement and shall specify the date by which it must be received. If the statement is not received within the time prescribed, or within the limits of any extension of time granted by the Hearing Officer, the Hearing Officer prepares the decision in the case.

(viii) A verbatim transcript of the hearing will not normally be prepared. A party may, solely at its own expense, cause a verbatim transcript to be made. If a verbatim transcript is made, the party shall submit two copies to the Hearing Officer not later than 15 days after the hearing. The Hearing Officer shall include such transcript in the record.

(12) *Assessment of civil penalties.* (i) Not later than 30 days following the close of the hearing, the Hearing Officer shall issue a written decision on the Notice of Violation, based on the hearing record. The decisions shall set forth the basis for the Hearing Officer's assessment of a civil penalty, or decision not to assess a civil penalty. In determining the amount of the civil penalty, the gravity of the violation, the size of the violator's business, the violator's history of compliance with applicable fuel consumption standards, the actual fuel consumption performance related to the applicable standard, the estimated cost to comply with the regulation and applicable standard, the quantity of vehicles or engines not complying, the effect of the penalty on the violator's ability to continue in business, and civil penalties paid under Clean Air Act section 205 (42 U.S.C. 7524) for non-compliance for the same vehicles or engines shall be taken into account. The assessment of a civil penalty by the Hearing Officer shall be set forth in an accompanying final order.

(ii) If the Hearing Officer assesses civil penalties in excess of $250,000,000, the Hearing Officer's decision contains a statement advising the party of the right to an administrative appeal to the Administrator. The party is advised that failure to submit an appeal within the prescribed time will bar its consideration and that failure to appeal on the basis of a particular issue will constitute a waiver of that issue in its appeal before the Administrator.

(iii) The filing of a timely and complete appeal to the Administrator of a Hearing Officer's order assessing a civil penalty shall suspend the operation of the Hearing Officer's penalty.

(iv) There shall be no administrative appeals of civil penalties of less than $250,000,000.

(13) *Appeals of civil penalties in excess of $250,000,000.* (i) A party may appeal the Hearing Officer's order assessing civil penalties over $250,000,000 to the Administrator within 21 days of the date of the issuance of the Hearing Officer's order.

(ii) The Administrator will affirm the decision of the Hearing Officer unless the Administrator finds that the Hearing Officer's decision was unsupported by the record as a whole.

(iii) If the Administrator finds that the decision of the Hearing Officer was unsupported, in whole or in part, then the Administrator may:

(A) Assess or modify a civil penalty;

(B) Rescind the Notice of Violation; or

(C) Remand the case back to the Hearing Officer for new or additional proceedings.

(iv) In the absence of a remand, the decision of the Administrator in an appeal is a final agency action.

(14) *Collection of assessed or compromised civil penalties.* (i) Payment of a civil penalty, whether assessed or compromised, shall be made by check, postal money order, or

electronic transfer of funds, as provided in instructions by the agency. A payment of civil penalties shall not be considered a request for a hearing.

(ii) The party must remit payment of any assessed civil penalty to NHTSA within 30 days after receipt of the Hearing Officer's order assessing civil penalties, or, in the case of an appeal to the Administrator, within 30 days after receipt of the Administrator's decision on the appeal.

(iii) The party must remit payment of any compromised civil penalty to NHTSA on the date and under such terms and conditions as agreed to by the party and NHTSA. Failure to pay may result in NHTSA entering a finding of violation by default and assessing a civil penalty in the amount proposed in the Notice of Violation without processing the violation under the hearing procedures set forth in this part.

(c) *Changes in corporate ownership and control.* Manufacturers must inform NHTSA of corporate relationship changes to ensure that credit accounts are identified correctly and credits are assigned and allocated properly.

(1) In general, if two manufacturers merge in any way, they must inform NHTSA how they plan to merge their credit accounts. NHTSA will subsequently assess corporate fuel consumption and compliance status of the merged fleet instead of the original separate fleets.

(2) If a manufacturer divides or divests itself of a portion of its automobile manufacturing business, it must inform NHTSA how it plans to divide the manufacturer's credit holdings into two or more accounts. NHTSA will subsequently distribute holdings as directed by the manufacturer, subject to provision for reasonably anticipated compliance obligations.

(3) If a manufacturer is a successor to another manufacturer's business, it must inform NHTSA how it plans to allocate credits and resolve liabilities per 49 CFR part 534.

Dated: October 25, 2010.

Lisa P. Jackson,

Administrator, Environmental Protection Agency.

Dated: October 25, 2010.

Ray LaHood,

Secretary, Department of Transportation.

[FR Doc. 2010–28120 Filed 11–29–10; 8:45 am]

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Federal Register

Tuesday,
November 30, 2010

Part III

Environmental Protection Agency

40 CFR Part 98

Mandatory Reporting of Greenhouse Gases: Petroleum and Natural Gas Systems; Final Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 98

[EPA–HQ–OAR–2009–0923; FRL–9226–1]

RIN 2060–AP99

Mandatory Reporting of Greenhouse Gases: Petroleum and Natural Gas Systems

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: EPA is promulgating a regulation to require monitoring and reporting of greenhouse gas emissions from petroleum and natural gas systems. This action adds this source category to the list of source categories already required to report greenhouse gas emissions. This action applies to sources with carbon dioxide equivalent emissions above certain threshold levels as described in this regulation. This action does not require control of greenhouse gases.

DATES: The final rule is effective on December 30, 2010. The incorporation by reference of certain publications listed in the rule is approved by the Director of the Federal Register as of December 30, 2010.

ADDRESSES: EPA established a single docket under Docket ID No. EPA–HQ–OAR–2009–0923 for this action. All documents in the docket are listed on the *http://www.regulations.gov* Web site. Although listed in the index, some information is not publicly available, *e.g.,* confidential business information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through *http://www.regulations.gov* or in hard copy at EPA's Docket Center, Public Reading Room, EPA West Building, Room 3334, 1301 Constitution Avenue, NW., Washington, DC 20004. This Docket Facility is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566–1744, and the telephone number for the Air Docket is (202) 566–1741.

FOR FURTHER INFORMATION CONTACT: Carole Cook, Climate Change Division, Office of Atmospheric Programs (MC–6207J), Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460; telephone number: (202) 343–9263; fax number: (202) 343–2342; e-mail address: *GHGReportingRule@epa.gov.* For technical information and implementation materials, please go to the Web site *http://www.epa.gov/climatechange/emissions/ghgrulemaking.html.* To submit a question, select Rule Help Center, followed by Contact Us.

SUPPLEMENTARY INFORMATION:

Regulated Entities. The Administrator determined that this action is subject to the provisions of Clean Air Act (CAA) section 307(d). See CAA section 307(d)(1)(V) (the provisions of section 307(d) apply to "such other actions as the Administrator may determine"). This final rule affects owners or operators of petroleum and natural gas systems. Regulated categories and entities may include those listed in Table 1 of this preamble:

TABLE 1—EXAMPLES OF AFFECTED ENTITIES BY CATEGORY

Source category	NAICS	Examples of affected facilities
Petroleum and Natural Gas Systems	486210	Pipeline transportation of natural gas.
	221210	Natural gas distribution facilities.
	211	Extractors of crude petroleum and natural gas.
	211112	Natural gas liquid extraction facilities.

Table 1 of this preamble is not intended to be exhaustive, but rather provides a guide for readers regarding facilities likely to be affected by this action. Although Table 1 of this preamble lists the types of facilities of which EPA is aware that could be potentially affected by this action, other types of facilities not listed in the table could also be subject to reporting requirements. To determine whether you are affected by this action, you should carefully examine the applicability criteria found in 40 CFR part 98, subpart A as amended by this action. If you have questions regarding the applicability of this action to a particular facility, consult the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

Many facilities that are affected by the final rule have GHG emissions from multiple source categories listed in 40 CFR part 98. Table 2 of this preamble has been developed as a guide to help potential reporters in the petroleum and natural gas industry affected by this action identify other source categories (by subpart) that they may need to: (1) Consider in their facility applicability determination, and (2) include in their reporting. Table 2 of this preamble identifies the subparts that are likely to be relevant to sources with petroleum and natural gas systems. The table should only be seen as a guide. Additional subparts in 40 CFR part 98 may be relevant for a given reporter. Similarly, not all listed subparts are relevant for all reporters.

TABLE 2—SOURCE CATEGORIES AND RELEVANT SUBPARTS

Source category	Other subparts recommended for review to determine applicability
Petroleum and Natural Gas Systems.	40 CFR part 98, subpart C: General Stationary Fuel Combustion Sources.
	40 CFR part 98, subpart Y: Petroleum Refineries.
	40 CFR part 98, subpart MM: Suppliers of Petroleum Products.
	40 CFR part 98, subpart NN: Suppliers of Natural Gas and Natural Gas Liquids.
	40 CFR part 98, subpart PP: Suppliers of Carbon Dioxide
	40 CFR part 98, subpart RR: Injection and Geologic Sequestration of Carbon Dioxide (proposed).

What is the effective date? The final rule is effective on December 30, 2010. Section 553(d) of the Administrative Procedure Act (APA), 5 U.S.C. Chapter 5, generally provides that rules may not take effect earlier than 30 days after they are published in the **Federal Register**. EPA is issuing this final rule under section 307(d)(1) of the Clean Air Act, which states: "The provisions of section 553 through 557 * * * of Title 5 shall not, except as expressly provided in this section, apply to actions to which this subsection applies." Thus, section 553(d) of the APA does not apply to this rule. EPA is nevertheless acting consistently with the purposes underlying APA section 553(d) in making this rule effective on December 30, 2010. Section 5 U.S.C. 553(d)(3) allows an effective date less than 30 days after publication "as otherwise provided by the agency for good cause found and published with the rule." As explained below, EPA finds that there is good cause for this rule to become effective on or before December 31, 2010, even if this results in an effective date fewer than 30 days from date of publication in the **Federal Register.**

While this action is being signed prior to December 1, 2010, there is likely to be a significant delay in the publication of this rule as it contains complex diagrams, equations, and charts, and is relatively long in length. As an example, EPA signed a shorter technical amendments package related to the same underlying reporting rule on October 7, 2010, and it was not published until October 28, 2010, 75 FR 66434, three weeks later.

The purpose of the 30-day waiting period prescribed in 5 U.S.C. 553(d) is to give affected parties a reasonable time to adjust their behavior and prepare before the final rule takes effect. Where, as here, the final rule will be signed and made available on the EPA Web site more than 30 days before the effective date, but where the publication is likely to be delayed due to the complexity and length of the rule, that purpose is still met. Moreover, for specified emission sources for certain industry segments, EPA has made available the optional use of best available monitoring methods (BAMM) during the 2011 calendar year. For these circumstances, facilities covered by this rule may use BAMM for any parameter for which it is not reasonably feasible to acquire, install, or operate a required piece of monitoring equipment in a facility, or to procure measurement services from necessary providers. This will provide facilities a substantial additional period to adjust their behavior to the requirements of the final rule. Accordingly, we find good cause exists to make this rule effective on or before December 31, 2010, consistent with the purposes of 5 U.S.C. 553(d)(3).[1]

Judicial Review

Under CAA section 307(b)(1), judicial review of this final rule is available only by filing a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit by January 31, 2011. Under CAA section 307(d)(7)(B), only an objection to this final rule that was raised with reasonable specificity during the period for public comment can be raised during judicial review. This section also provides a mechanism for us to convene a proceeding for reconsideration, "[i]f the person raising an objection can demonstrate to EPA that it was impracticable to raise such objection within [the period for public comment] or if the grounds for such objection arose after the period for public comment (but within the time specified for judicial review) and if such objection is of central relevance to the outcome of this rule." Any person seeking to make such a demonstration to us should submit a Petition for Reconsideration to the Office of the Administrator, Environmental Protection Agency, Room 3000, Ariel Rios Building, 1200 Pennsylvania Ave., NW., Washington, DC 20004, with a copy to the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section, and the Associate General Counsel for the Air and Radiation Law Office, Office of General Counsel (Mail Code 2344A), Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20004. Note, under CAA section 307(b)(2), the requirements established by this final rule may not be challenged separately in any civil or criminal proceedings brought by EPA to enforce these requirements.

Acronyms and Abbreviations. The following acronyms and abbreviations are used in this document.

AAPG American Association of Petroleum Geologists
AGA American Gas Association
AGR Acid gas removal
ANSI American National Standards Institute
API American Petroleum Institute
ASME American Society of Mechanical Engineers
ASTM American Society for Testing and Materials
BLS Bureau of Labor Statistics
BOEMRE Bureau of Ocean Energy Management, Regulation and Enforcement
CAA Clean Air Act
CBI Confidential business information
CBM Coal bed methane
CEMS Continuous emission monitoring systems
cf cubic feet
CFR Code of Federal Regulations
CH_4 methane
CO_2 carbon dioxide
CO_2e CO_2-equivalent
DOE Department of Energy
E&P exploration and production
EIA Economic Impact Analysis
EO Executive Order
EOR enhanced oil recovery
EPA U.S. Environmental Protection Agency
ESD emergency shutdown
FPSO floating production and storage offloading
FR **Federal Register**
GHG greenhouse gas
GOR gas to oil ratio
GRI Gas Research Institute
GWP global warming potential
HHV high heat value
IBR incorporation by reference
ICR information collection request
IPCC Intergovernmental Panel on Climate Change
IR infrared
ISO International Organization for Standardization
kg kilograms
LACT lease automatic custody transfer
LDCs local natural gas distribution companies
LNG liquefied natural gas
LPG liquefied petroleum gas
M&R meters and regulators
mmBtu million British thermal units
MMS Minerals Management Service
MMscfd million standard cubic feet per day
$MMTCO_2e$ million metric tons carbon dioxide equivalent
MRR mandatory GHG reporting rule
N_2O nitrous oxide
NAESB North American Energy Standards Board
NAICS North American Industry Classification System
NGLs natural gas liquids
NTTAA National Technology Transfer and Advancement Act
OAQPS Office of Air Quality, Planning and Standards
OMB Office of Management and Budget
OVA organic vapor analyzer
ppm parts per million
QA quality assurance
QA/QC quality assurance/quality control
RFA Regulatory Flexibility Act
RGGI Regional Greenhouse Gas Initiative
RIA Regulatory Impact Analysis
SBA Small Business Administration
SBREFA Small Business Regulatory Enforcement and Fairness Act
SSM startup, shutdown, and malfunction
STP standard temperature and pressure
TCR The Climate Registry
TSD technical support document
TVA toxic vapor analyzer

[1] We recognize that this rule could be published at least 30 days before December 31, 2010, which would negate the need for this good cause finding, and we plan to request expedited publication of this rule in order to decrease the likelihood of a printing delay. However, as we cannot know the date of publication in advance of signing this rule, we are proceeding with this good cause finding for an effective date on or before December 31, 2010.

U.S. United States
UMRA Unfunded Mandates Reform Act of 1995
U.S.C. United States Code
USGS United States Geologic Society
VOC volatile organic compound(s)
WCI Western Climate Initiative

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I. Background

A. Organization of This Preamble

This preamble consists of four sections. The first section provides a brief history of 40 CFR part 98 and describes the purpose and legal authority for this action.

The second section of this preamble summarizes the revisions made to the general provisions in 40 CFR part 98, subpart A and outlines the specific requirements for subpart W being incorporated into 40 CFR part 98 by this action. It also describes the major changes made to this source category since proposal and provides a brief summary of significant public comments and EPA's responses on issues specific to each industry segment. Additional responses to significant comments can be found in the document Mandatory Greenhouse Gas Reporting Rule: EPA's Response to Public Comments, Subpart W: Petroleum and Natural Gas Systems.

The third section of this preamble provides the summary of the cost impacts, economic impacts, and benefits of the final rule and discusses comments on the economic impact analyses for subpart W.

Finally, the last section discusses the various statutory and executive order requirements applicable to this rulemaking.

B. Background on the Final Rule

This action finalizes monitoring and reporting requirements for petroleum and natural gas systems.

On April 12, 2010, EPA proposed subpart W—Petroleum and Natural Gas Systems, amending 40 CFR part 98 (*i.e.,* the regulatory requirements for the Greenhouse Gas Reporting Program). The GHG Reporting Program requires reporting of GHG emissions and other relevant information from certain source categories in the United States. The GHG Reporting Program, which became effective on December 29, 2009, includes reporting requirements for facilities and suppliers in 32 source categories. EPA established this program in response to the fiscal year 2008 Consolidated Appropriations Act.[2] This Act authorized funding for EPA to develop and publish a rule "* * * to require the mandatory reporting of greenhouse gas emissions above appropriate thresholds in all sectors of the economy of the United States." An accompanying joint explanatory statement directed EPA to "use its existing authority under the Clean Air Act" to develop a mandatory GHG reporting rule. For more detailed background information on the GHG Reporting Program, see the preamble to the final rule establishing the GHG Reporting Program (74 FR 56260, October 30, 2009).

This final action adds requirements for facilities that contain petroleum and natural gas systems to report equipment leaks and vented GHG emissions (subpart W) to the GHG Reporting Program. The rule applies to facilities in specific segments of the petroleum and natural gas industry that emit GHGs greater than or equal to 25,000 metric tons of CO_2 equivalent per year. These data will inform EPA's implementation of CAA section 103(g) regarding improvements in sector based non-regulatory strategies and technologies for preventing or reducing air pollutants, and inform policy on possible regulatory actions to address GHG emissions. As stated earlier in this section, this rule was proposed by EPA on April 12, 2010. One public hearing was held in April 2010, and the 60-day public comment period ended June 11, 2010.

C. Legal Authority

EPA is promulgating 40 CFR part 98, subpart W under the existing CAA authorities provided in CAA section 114. As discussed in detail in Sections I.C and II.Q of the preamble to the 2009 final rule (74 FR 56260), CAA section 114(a)(1) provides EPA with broad authority to require emissions sources, persons subject to the CAA, manufacturers of process or control equipment, or persons whom the Administrator believes may have necessary information to monitor and report emissions and provide such other information as the Administrator requests for the purposes of carrying out any provision of the CAA. EPA may gather information for a variety of purposes, including for the purpose of assisting in the development of emissions reduction regulations in the petroleum and natural gas industry, determining compliance with implementation plans or standards, or more broadly for "carrying out any provision" of the CAA. Section 103 of the CAA authorizes EPA to establish a national research and development program, including non-regulatory approaches and technologies, for the prevention and control of air pollution, including GHGs. As discussed in the petroleum and natural gas systems proposal (75 FR 18608, April 12, 2010), among other things, data from petroleum and natural gas systems will inform decisions about possible emissions reduction regulations in the petroleum and natural gas industry. The data collected will also inform EPA's implementation of CAA section 103(g) regarding improvements in sector-based

[2] Consolidated Appropriations Act, 2008, Public Law 110–161, 121 Stat. 1844, 2128. Congress reaffirmed interest in a GHG reporting rule, and provided additional funding in the 2009 and 2010 Appropriations Acts (Consolidated Appropriations Act, 2009, Pub. L. 110–329, 122 Stat. 3574–3716 and Consolidated Appropriations Act, 2010, Pub. L. 111–117, Stat. 3034–3408).

non-regulatory strategies and technologies for preventing or reducing air pollutants.

EPA has the authority under the CAA to collect emissions information from offshore petroleum and natural gas platforms including those located in areas of the Central and Western Gulf of Mexico as identified in CAA section 328(b). This final action does not regulate GHG emissions; rather it gathers information to inform EPA's evaluation of various CAA provisions. Moreover, EPA's authority under CAA section 114 is broad, and extends to any person "who the Administrator believes may have information necessary for the purposes" of carrying out the CAA, even if that person is not subject to the CAA. Indeed, by specifically authorizing EPA to collect information from both persons subject to any requirement of the CAA, as well as any person who the Administrator believes may have necessary information, Congress clearly intended that EPA could gather information from a person not otherwise subject to CAA requirements. EPA is comprehensively considering how to address climate change under the CAA, including both regulatory and non-regulatory options. The information from offshore platforms will inform our analyses, including options applicable to emissions of any offshore platforms that EPA is authorized to regulate under the CAA.

II. Reporting Requirements for Petroleum and Natural Gas Systems

A. Overview of Greenhouse Gas Reporting Program

The GHG Reporting Program requires reporting of GHG emissions and other relevant information from certain source categories in the United States, as discussed in Section I.B. of this preamble. The rule requires annual reporting of GHGs including carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and other fluorinated compounds (*e.g.,* hydrofluoroethers (HFEs)).

The GHG Reporting Program requires that source categories subject to 40 CFR part 98 monitor and report GHGs in accordance with the methods specified in the individual subparts. For a list of the specific GHGs to be reported and the GHG calculation procedures, monitoring, missing data procedures, recordkeeping, and reporting required by facilities subject to subpart W included in this action, see Section II.D of this preamble.

B. Overview of Confidentiality Determination for Data Elements in the Greenhouse Gas Reporting Program

This final rule does not address whether data reported under subpart W will be released to the public or will be treated as confidential business information. EPA published a proposed rule and confidentiality determination on July 7, 2010 (75 FR 39094) that addressed this issue. In that action, EPA proposed which specific data elements would be released to the public and which would be treated as confidential business information. EPA received comments on the proposal, and is in the process of considering these comments. A final rule and determination will be issued before any data are released, and the final determination will include all of the data elements under subpart W.

C. Summary of Changes to the General Provisions of the Greenhouse Gas Reporting Program

This final action amends certain requirements in 40 CFR part 98, subpart A (General Provisions). These amendments are summarized in this section of the preamble.

Changes to Applicability. In this final action, EPA is amending Table A–4 of subpart A, referenced in 40 CFR 98.2(a)(2), to add the petroleum and natural gas systems source category. In addition, EPA is amending 40 CFR 98.2(a) so that 40 CFR part 98 applies to facilities located in the United States and on or under the Outer Continental Shelf. This revision is necessary to ensure that any petroleum or natural gas platforms located on or under the Outer Continental Shelf of the United States are required to report under 40 CFR part 98, subpart W.

Changes to Definitions. In this final action, EPA is also amending 40 CFR 98.6 (definitions). EPA is revising the definition of United States as applied under part 98 to clarify that it includes the territorial seas. Other facilities located offshore of the United States covered by the GHG Reporting Program at 40 CFR part 98 may also be affected by this change in the definition of United States. In addition to the change to the definition of United States, EPA has amended 40 CFR 98.6 by adding a definition of "Outer Continental Shelf." This definition is drawn from the definition in the U.S. Code and the Clean Air Act, 328(a)(4)(A). These revisions are necessary to ensure that facilities on land, in the territorial seas, or on or under the Outer Continental Shelf, as defined in 43 U.S.C. 1331, and that otherwise meet the applicability criteria of the rule are required to report.

Incorporation by Reference (IBR). In the April 2010 proposal, EPA proposed to amend 40 CFR 98.7 by including the following standard methods: GRI GlyCalc software, the E&P Tank software, and the American Association of Petroleum Geologist (AAPG) Geologic Provinces Code Map. EPA has revised the listing of proposed methods for incorporation by reference. Hence, in this final action EPA is finalizing amendments to 40 CFR 98.7 (incorporation by reference) to include standard methods referenced in 40 CFR part 98, subpart W. Those include: American Association of Petroleum Geologists Geologic Provinces Code Map including the Alaska Geological Province Boundary Map; and the Energy Information Administration Oil and Gas Field Code Master List.

D. Summary of the Requirements for Petroleum and Natural Gas Systems (Subpart W)

1. Summary of the Final Rule

Source Category Definition. This source category consists of the following segments of the petroleum and natural gas systems source category:

- *Offshore petroleum and natural gas production.* Offshore petroleum and natural gas production is any platform structure, affixed temporarily or permanently to offshore submerged lands, that houses equipment to extract hydrocarbons from the ocean or lake floor and that processes and/or transfers such hydrocarbons to storage, transport vessels, or onshore. In addition, offshore production includes secondary platform structures connected to the platform structure via walkways, storage tanks associated with the platform structure, and floating production and storage offloading equipment (FPSO). This source category does not include reporting of emissions from offshore drilling and, exploration that is not conducted on production platforms.
- *Onshore petroleum and natural gas production.* Onshore petroleum and natural gas production means all equipment on a well pad or associated with a well pad (including compressors, generators, or storage facilities), and portable non-self-propelled equipment on a well pad or associated with a well pad (including well drilling and completion equipment, workover equipment, gravity separation equipment, auxiliary non-transportation-related equipment, and leased, rented or contracted equipment) used in the production, extraction, recovery, lifting, stabilization, separation or treating of petroleum and/or natural gas (including condensate). This equipment also includes associated storage or measurement vessels and all enhanced oil recovery (EOR) operations using CO_2, and all petroleum and natural gas production located on islands, artificial islands, or structures connected by a causeway to land, an island, or artificial island.

• *Onshore natural gas processing.* Natural gas processing means facilities that separate and recovers natural gas liquids (NGLs) and/or other non-methane gases and liquids from a stream of produced natural gas using equipment performing one or more of the following processes: oil and condensate removal, water removal, separation of natural gas liquids, sulfur and carbon dioxide removal, fractionation of NGLs, or other processes, and also the capture of CO_2 separated from natural gas streams. This segment also includes all residue gas compression equipment owned or operated by the natural gas processing facility, whether inside or outside the processing facility fence. This source category does not include reporting of emissions from gathering lines and boosting stations. This source category includes: (1) all processing facilities that fractionate and (2) those that do not fractionate with throughput of 25 MMscf per day or greater.

• *Onshore natural gas transmission compression.* Onshore natural gas transmission compression includes any stationary combination of compressors that move natural gas at elevated pressure from production fields or natural gas processing facilities, in transmission pipelines, to natural gas distribution pipelines, or into storage. In addition, transmission compressor stations may include equipment for liquids separation, natural gas dehydration, and tanks for the storage of water and hydrocarbon liquids. Residue (sales) gas compression operated by natural gas processing facilities are included in the onshore natural gas processing segment and are excluded from this segment. This source category also does not include reporting of emissions from gathering lines and boosting stations—these sources are currently not covered by subpart W.

• *Underground natural gas storage.* Underground natural gas storage includes subsurface storage, including depleted gas or oil reservoirs and salt dome caverns that store natural gas that has been transferred from its original location for the primary purpose of load balancing (the process of equalizing the receipt and delivery of natural gas); natural gas underground storage processes and operations (including compression, dehydration and flow measurement, and excluding transmission pipelines); and all the wellheads connected to the compression units located at the facility that inject natural gas into and remove natural gas from the underground reservoirs.

• *Liquefied natural gas (LNG) storage.* LNG storage includes onshore LNG storage vessels located above ground, equipment for liquefying natural gas, compressors to capture and re-liquefy boil-off-gas, re-condensers, and vaporization units for re-gasification of the liquefied natural gas.

• *LNG import and export facilities.* LNG import equipment includes all onshore or offshore equipment that receives imported LNG via ocean transport, stores LNG, re-gasifies LNG, and delivers re-gasified natural gas to a natural gas transmission or distribution system. LNG export equipment means all onshore or offshore equipment that receives natural gas, liquefies natural gas, stores LNG, and transfers the LNG via ocean transportation to any location, including locations in the United States.

• *Natural gas distribution.* Natural gas distribution includes the distribution pipelines (not interstate transmission pipelines or intrastate transmission pipelines) and metering and regulating equipment at city gate stations, and excluding customer meters, that physically deliver natural gas to end users and is operated by a Local Distribution Company (LDC) that is regulated as a separate operating company by a public utility commission or that is operated as an independent municipally-owned distribution system. This segment excludes customer meters and infrastructure and pipelines (both interstate and intrastate) delivering natural gas directly to major industrial users and "farm taps" upstream of the local distribution company inlet—these sources are not covered by subpart W.

Facilities from the following segments: (1) Offshore petroleum and natural gas production, (2) onshore natural gas processing, (3) onshore natural gas transmission compression, (4) underground natural gas storage, (5) LNG storage, and (6) LNG import and export equipment, that meet the applicability criteria in the General Provisions (40 CFR 98.2(a)(2)) and summarized in Section II.C of this preamble must report GHG emissions. Facilities assessing their applicability in the onshore petroleum and natural gas production segment (as defined in 40 CFR 98.238), must include only emissions from equipment, as specified in 40 CFR 98.232(c) to determine if they exceed the 25,000 metric ton CO_2e threshold and thus are required to report their GHG emissions. Facilities assessing their applicability in the onshore natural gas distribution industry segment (as defined in 40 CFR 98.238), must include only emissions from equipment as specified 40 CFR 98.232(i) to determine if they exceed the 25,000 metric ton CO_2e threshold and thus are required to report their GHG emissions. For other segments, facilities must assess applicability based on all source categories for which methods are provided in the GHG Reporting Program.

GHGs to Report. Facilities must report:

• Carbon dioxide (CO_2) and methane (CH_4) emissions from equipment leaks and vents.

• CO_2, CH_4, and nitrous oxide (N_2O) from combustion.

• CO_2, CH_4, and nitrous oxide (N_2O) emissions from combustion at flares.

Reporting Threshold. Facilities that contain petroleum and natural gas systems that meet the requirements of 40 CFR 98.2(a)(2) are to report GHG emissions under subpart W. For applying the threshold defined in 40 CFR 98.2(a)(2), an onshore petroleum and natural gas production facility will consider emissions only from equipment specified in 40 CFR 98.232(c). For applying the threshold defined in 40 CFR 98.2(a)(2), a natural gas distribution facility shall consider emissions only from equipment specified in 40 CFR 98.232(i).

GHG Emissions Calculation and Monitoring. The petroleum and natural gas source category consists of several segments (*e.g.,* onshore petroleum and natural gas production, natural gas processing). Within those segments, there are different types of emissions sources, some of which appear in multiple segments (*e.g.,* pneumatic devices, blowdown vents, *etc.*). Subpart W provides methodologies for calculating emissions from each source type. Although the rule, in some cases, allows reporters the flexibility to choose from more than one method for calculating emissions from a specific source type, reporters must keep record in their monitoring plans as outlined in 40 CFR 98.3(g) of this chapter. Table 3 of this preamble summarizes those source types and indicates their applicable segments. Reporters of an industry segment as defined by 40 CFR 98.230 would report emissions under subpart W only from the corresponding source types listed for that particular industry segment as defined in 40 CFR 98.232. For example, an onshore natural gas transmission compression reporter as defined by 40 CFR 98.230(a)(4) would report emissions under subpart W only for sources defined in 40 CFR 98.232(e). The text following the table summarizes the different methodologies reporters must use to monitor and calculate their GHG emissions from each emissions source.

It is important to note, as detailed in Section II.F of this preamble, that for specified time periods during the 2011 data collection year, reporters may use best available monitoring methods for certain emissions sources in lieu of the methods prescribed for specific sources below. This is intended to give reporters flexibility as they revise procedures and contractual arrangements during early implementation of the rule.

TABLE 3—SUMMARY OF SOURCE TYPES IN EACH INDUSTRY SEGMENT

Source type	Offshore production	Onshore production	Natural gas processing	Natural gas transmission compression	Underground storage	LNG Storage	LNG Import and export equipment	Distribution
Natural gas pneumatic device venting		X		X	X			
Natural gas driven pneumatic pump venting		X						
Acid gas removal vent stack		X	X					
Dehydrator vent stacks		X	X					
Well venting for liquids unloading		X						
Gas well venting during well completions and workovers with hydraulic fracturing		X						
Gas well venting during well completions and workovers without hydraulic fracturing		X						
Blowdown vent stacks		X	X	X			X	
Onshore production storage tanks		X						
Transmission storage tanks				X				
Well testing venting and flaring		X						
Associated gas venting and flaring		X						
Flare stacks		X	X					
Centrifugal compressor venting		X	X	X	X	X	X	
Reciprocating compressor rod packing venting		X	X	X	X	X	X	
Other emissions from equipment leaks		X	X	X	X	X	X	X
Population Count and Emissions Factor		X			X	X	X	X
Vented, Equipment Leaks and Flare Emissions Identified in BOEMRE GOADS Study	X							
Enhanced Oil Recovery hydrocarbon liquids dissolved CO_2		X						
Enhanced Oil Recovery injection pump blowdown		X						
Onshore Petroleum and Natural Gas Production and Natural Gas Distribution Combustion Emissions		X						X

2. Summary of Methodologies for Each Source Type in Table 3 of this preamble.

• *Natural gas pneumatic device venting:* Calculate CO_2 and CH_4 emissions from natural gas pneumatic devices using component count for each type (*i.e.,* continuous high bleed, continuous low bleed, and intermittent bleed) together with a population emission factor for each type from Tables W–1A, W–3, and W–4 of subpart W. Onshore petroleum and natural gas production reporters must complete a total count of pneumatic devices any time within the first three calendar years. A reporter must report pneumatic device emissions annually. For any years where activity data (count of pneumatic devices) is incomplete, use best available data or engineering estimates to calculate pneumatic device emissions.

• *Natural gas driven pneumatic pump venting:* Calculate CO_2 and CH_4 emissions using component count of natural gas pneumatic pumps together with a population emission factor from Table W–1A of subpart W.

• *Acid gas removal (AGR) vents:* Calculate CO_2 emissions using one of the following calculation methodologies:

—Use CEMS as specified under subpart C of this section. If CEMS is not operated or maintained, a CEMS may be installed.

—Use metered flow and volume weighted CO_2 content of the vent stack gas. The approaches available to measure the volume weighted CO_2 content include using a continuous gas analyzer or sampling the gas quarterly.

—Use metered flow of the inlet natural gas and volume weighted CO_2 content of the natural gas flowing into and out of the AGR unit. The approaches available to measure the volume weighted CO_2 content include using a continuous gas analyzer or sampling the gas quarterly.

—Use a process simulator that uses the Peng-Robinson equation of state and speciates CO_2 emissions.

• *Dehydrator vents.* Calculate CH_4 and CO_2 emissions using the following calculation methodologies:

—For glycol dehydrators with a throughput greater than or equal to 0.4 million standard cubic feet per day, use a software program such as GRI GlyCalc or AspenTech HYSYS® for example, to calculate emissions. The software program must determine the equilibrium coefficient using the Peng-Robinson equation of state, speciates CH_4 and CO_2 emissions from dehydrators, and have provisions to include regenerator control devices, a separator flash tank, stripping gas, and gas injection pump or gas assist pump.

—For glycol dehydrators with a throughput less than 0.4 million standard cubic feet per day, use daily flow rate of wet natural gas together with an emission factor to calculate CO_2 and CH_4 emissions. There are separate emission factors for dehydrator units with a gas assist pump.

—For desiccant dehydrators, calculate the amount of gas vented from the vessel every time it is depressurized for desiccant replacement. This involves knowing the dimensions of the dehydrator and percent of the vessel that is packed with desiccant, and the time between desiccant refilling.

• *Well venting for liquids unloading:* Calculate CO_2 and CH_4 emissions using either of the following calculation methodologies (the same methodology must be used for the entire duration of the calendar year).

—Determine the average gas flow for the duration of the liquids unloading using a meter on the vent line. A new average flow rate must be calculated every other year starting in the first calendar year of reporting. Use the total venting time during the year together with the gas flow rate to determine the gas vented during liquid unloading.

—Determine the casing dimension, the shut-in pressure, sales flow rate and hours that the well was left open to the atmosphere to calculate the volume of gas emitted during liquid unloading.

• *Gas well venting during well completions and workovers from hydraulic fracturing:* Calculate CO_2 and CH_4 emissions using the cumulative vent time during the year and the flow rate of gas vented, separately for both completions and workovers. Use either of the following methodologies to determine the flow rate of the gas.

—Determine the flow rate of vented gas from one well during a well completion, and also one well workover event, using a meter installed on the vent line. A flow rate determined from a well during a well completion can be applied to all wells in

the same field that undergo a completion. A flow rate determined from a well during a well workover can be applied to all wells in the same field that undergo a workover. A field-level emissions factor must be developed every 2 years starting in the first calendar year of reporting.

—Measure the pressure before and after the well choke for both one well during a well completion, and also one well workover event. A flow rate determined from a well during a well completion can be applied to all wells in the same field that undergo a completion. A flow rate determined from a well during a well workover can be applied to all wells in the same field that undergo a workover. The flow rate must be determined in the first year of every 2-year period. Separate equations are provided for sonic and sub-sonic flow.

• *Gas well venting during well completions and workovers without hydraulic fracturing:* Calculate CO_2 and CH_4 emissions using the cumulative vent time during the year and average daily gas production for each well.

• *Blowdown vent stacks.* Calculate CH_4 and CO_2 emissions from blowdown vent stacks by calculating the total volume of equipment and vessels blown down between isolation valves. This includes the volume of all piping, compressor cases or cylinders, manifolds, suction and discharge bottles or any other gas-containing volume contained between the isolation valves. Total physical volume of less than 50 cubic feet between isolation valves of process vessels, piping, and equipment do not have to be reported. The total volume contained between isolation valves, which can be determined using an engineering equation based on best available data, for each process vessel and the number of times it was blowndown in the calendar year equals the actual volume of emissions, which are then converted to GHG volumes at standard conditions and GHG emissions using the concentration of CH_4 and CO_2 in the applicable stream. Reporters may use the same calculated volumes in subsequent years if the hardware has not changed. For process vessels blowndown to a flare, calculate the volume of emissions the same as if they were not flared, then use that volume as an input parameter in the flare stacks section to estimate combustion emissions.

• *Onshore production storage tanks:* Calculate CH_4 and CO_2 emissions using one of the following calculation methodologies:

—For tanks with separator throughput greater than or equal to 10 barrels per day, use a software program, such as AspenTECH® or API 4697 E&P Tank for example, that uses the Peng-Robinson equation of state, models flashing emissions, and speciates CH_4 and CO_2 emissions from tanks. The low pressure separator oil composition and Reid vapor pressure can be determined using the default values within the software program, or using a representative sample analysis.

—Alternatively, for tanks with separator throughput greater than or equal to 10 barrels per day, you may assume all of the CH_4 and CO_2 in the low pressure separator oil is emitted. The low pressure separator oil composition shall be determined using an appropriate sample analysis, or default oil compositions in software programs.

—For wells with oil production greater than or equal to 10 barrels per day that flow directly to a tank without going through a separator, calculate emissions by using an appropriate sample analysis and assuming all of the CH_4 and CO_2 are emitted.

—For separator throughput or wells flowing directly to tanks with throughput less than 10 barrels per day, use a population emission factor together with the flow rate.

—Account for occurrences when the separator dump valve is improperly open and bypassing gas to the tank through the liquid, by determining the number of hours the dump valve is open and scaling the emissions upwards using the correction factor. The number of hours the dump valve is open can be determined using the maintenance or operations records as follows: (1) Assume that if a dump valve is found open, that it was open from either the beginning of the calendar year, or since the most recent maintenance or operations record confirming proper closure of the dump valve and (2) Assume that a dump valve is improperly open until there is a maintenance or operations record showing that the dump valve is closed or to the end of the calendar year.

• *Transmission storage tanks.* For transmission storage tanks, once per calendar year reporters must monitor the tank vapor vent stack using an optical gas imaging instrument, to view the emissions for 5 minutes. Alternatively, the scrubber dump valves can be monitored with an acoustic leak detector. If the vent stack emits continuously over that time period, then the reporter must use either a meter or an acoustic leak detection device to measure the flow rate of the vent to determine emissions. This will quantify tank emissions resulting from malfunctioning scrubber dump valves. If a tank is vented to a flare, then use the onshore petroleum and natural gas production storage tanks methodology option 1 (simulation) to estimate the volume and composition of vapors flared. Then use the flare stacks methodology to estimate the emissions.

• *Well testing venting and flaring.* Calculate CH_4, CO_2, and N_2O emissions from well testing venting and flaring by multiplying available data from production records on the gas-to-oil ratio for produced hydrocarbon liquids, by the flow rate (in barrels of oil per day) of the well being tested, by the number of days in the calendar year the well is tested. If gas-to-oil ratios are not available, use a sample analysis to determine gas-to-oil ratios. For the calculated testing gas volume that is flared, use the method set forth for flare stacks to estimate the emissions.

• *Associated gas venting and flaring.* Calculate CH_4, CO_2, and N_2O emissions from associated gas venting and flaring by multiplying available data from production records on the gas-to-oil ratio for produced hydrocarbon liquids, by the volume of liquids produced in the calendar year. The gas-to-oil ratios can be determined by the use of a representative gas-to-oil ratio of wells in the same field. If gas-to-oil ratios are not readily available, use a sample analysis to determine gas-oil ratios. For the calculated associated gas volume that is flared, use the method set forth for flare stacks to estimate the emissions.

• *Flare stacks.* Calculate CH_4, CO_2, and N_2O emissions from flare stacks by metering or using engineering estimation to determine the volume of gas sent to the flare, and the gas composition to then estimate the portion that is combusted and the portion that is not combusted, using the flare efficiency. Where methodologies for other sources in subpart W refer to this methodology in order to estimate flaring emissions, use the estimated volume of flared gas from those sources as the gas to flare volume in this methodology, and report those emissions under those sources. Calculate N_2O from flare stacks using the methodology set forth for in 40 CFR 98.233(z).

• *Centrifugal compressor venting.*

—Calculate CH_4 and CO_2 emissions from wet seal oil degassing vents in onshore petroleum and natural gas production by counting the total population of centrifugal compressors and multiplying it by the appropriate emission factors.

—Calculate CH_4 and CO_2 emissions from wet seal and dry seal centrifugal compressor blowdown vents, wet seal degassing, and unit isolation valves for wet seal and dry seal compressors (see Table 4 of this preamble) found in onshore natural gas processing, onshore natural gas transmission compression, underground natural gas storage, LNG storage, and LNG import and export equipment by:

—Measuring venting from blowdown vents when the compressor is found in the operating mode using a meter.

– Measuring wet seal degassing venting when the compressor is found in the operating mode using a meter.

—Measuring venting from unit isolation valves when the compressor is found in not operating, depressurized mode using a meter. If these sources are vented through a common manifold, you must measure each vent source separately. Determine average emissions from each mode of operation by summing the emissions from each source in each mode and dividing it by the total population measured. The result will be an emission factor per compressor per hour for each mode of operation. Multiply each emission factor by the total number of compressor-hours in each mode of operation. Reporters are not required to shutdown compressors to conduct measurements. The owner or operator must schedule an annual measurement of each compressor and the owner or operator can take the measurement in the mode in which the compressor is found during the annual measurement. However, the owner or operator must conduct a measurement of each compressor in the not operating, depressurized mode at least once every three calendar years. Please see Compressor Modes and Threshold, Docket EPA–HQ–OAR–2009–0923.

TABLE 4—SUMMARY OF EMISSION FACTOR CATEGORIES FOR CENTRIFUGAL COMPRESSOR VENTING

Component	Operating mode	
	Operating	Not operating—depressurized
Blowdown Vent	Individual Factor	Not Applicable.
Wet Seal Oil Degassing Vent	Individual Factor	Not Applicable.
Unit Isolation Valve	Not Applicable	Individual Factor.

• *Reciprocating compressor rod packing venting.* Calculate CH_4 and CO_2 emissions from reciprocating compressor rod packing venting in onshore petroleum and natural gas production by counting the total population of reciprocating compressors and multiplying it by the emission factors provided in 40 CFR 98.233(p)(10). Calculate CH_4 and CO_2 emissions for reciprocating compressor blowdown valves, rod packing, and unit isolation valves (*see* Table 5 of this preamble) from onshore natural gas processing, onshore natural gas transmission compression, underground natural gas storage, LNG storage, and LNG import and export equipment by:

—Measuring venting from blowdown vents when the compressor is found in operating and standby pressurized modes using a meter.

—Measuring rod packing vents when the compressor is found in operating and standby pressurized modes using a meter. If there is not a vent line, a rigorous approach of scanning for all potential leakage paths for the gas must be used and quantified with a meter, high volume sampler, or calibrated bag as appropriate.

—Measuring venting from unit isolation valves using a meter when the compressor is found in not operating, depressurized mode. For through-valve leakage to open ended vents, such as unit isolation valves on not operating depressurized compressors, acoustic leak detection devices may also be used.

If these sources are vented through a common manifold, you must measure each vent source separately. Determine average emissions from each mode of operation by summing the emissions from each source in each mode and dividing it by the total population measured. The result will be an emission factor per compressor per hour for each mode of operation. Multiply each emission factor by the total number of compressor-hours in each mode of operation. Reporters are not required to shut down compressors to conduct measurements. The owner or operator must conduct a measurement of each compressor, and measure the compressor in the mode as it is found during the annual measurement. However, the owner or operator must conduct at least one measurement of each compressor in the not operating, depressurized mode at least one time every 3 calendar years. Please see "Compressor Modes and Threshold" Docket EPA–HQ–OAR–2009–0923.

TABLE 5—SUMMARY OF EMISSION FACTOR CATEGORIES FOR RECIPROCATING COMPRESSOR VENTING

Component	Operating mode		
	Operating	Standby pressurized	Not operating—depressurized
Blowdown Vent	Use measurements in either mode to develop combined factor.		Not Applicable.
Rod Packing Seals	Individual Factor	Individual Factor	Not Applicable.
Unit Isolation Valve	Not Applicable	Not Applicable	Individual Factor.

• *Leak detection and leaker factors* (onshore natural gas processing, onshore natural gas transmission compression, underground natural gas storage, LNG storage, LNG import export, natural gas distribution). Perform a leak detection survey using one of the three following methods:

—Use an optical gas imaging instrument. The method must be used for all sources that cannot be monitored without elevating personnel more than 2 meters above a support surface.

—Use an infrared laser beam illuminated instrument.

—Use Method 21.

—Multiply the count of each type of leaking component by the appropriate leaker factors in Tables W–2, W–3, W–4, W–5, W–6, and W–7 of subpart W. Tubing systems less than 0.5 inch are exempt from reporting.

—For natural gas distribution, leak detection is required only for above ground metering and regulating stations (also called "gate stations") at which custody transfer occurs. The leak detection and monitoring requirements prescribed in subpart W do not include customer meters. All facilities under this source must conduct at least one leak survey each calendar year. Multiple leak surveys may be conducted in order to account for leak repairs. If multiple surveys are chosen by the owner or operator and performed, each survey must be facility wide.

—If only one leak survey is conducted in the calendar year, assume that all leaks found emit for the entire year.

—If multiple leak surveys are conducted, assume that each leak that is found has been emitting since the last survey; or since the beginning of the calendar year. Assume that each leak found during the last leak survey in a calendar year continues to emit until the end of the calendar year.

• *Population count and emission factor.* Calculate CH_4 and CO_2 emissions from the sources listed in 40 CFR 98.233(r).

—For onshore petroleum and natural gas production, each component must either be counted individually; or major equipment pieces must be counted and then the appropriate average component counts should be applied using Tables W–1B, W–1C, and W–1D of subpart W. The most recent gas composition that is representative of the field must be used to determine the percent of the leaked gas that is CH_4 and CO_2.

—For underground natural gas storage, the emission factors in Table W–4 of subpart W must be applied to population counts of components on storage wellheads.

—For LNG storage, the emission factor for vapor recovery compressors, must be applied to the total population count.

—For LNG import and export equipment, the emission factor for vapor recovery compressors must be applied to the total population count.

—For natural gas distribution, all emissions from above ground custody transfer metering and regulating stations as determined by leak detection surveys must be totaled and then divided by the total number of surveyed meter runs to develop an average emission factor for above grade metering and regulating stations. This average emission factor will be multiplied by the total number of above ground metering and regulating stations meter runs at which custody transfer does not occur to estimate emissions from those stations. Emission factors in Table W–7 of subpart W will be used to account for equipment leaks in underground meter and regulation stations, pipelines, and service lines.

• *Offshore production.* Calculate CO_2 and CH_4 emissions from offshore petroleum and

natural gas production facilities using the methods outlined by BOEMRE [3] Gulfwide Emissions Inventory Study, herein after referred to as "GOADS." Offshore production facilities are not required to report portable emissions to EPA.

—Offshore production facilities reporting under the BOEMRE GOADS program must report where available the same annual emissions as calculated by BOEMRE using activity data submitted by platform operators in the latest GOADS study calculated by BOEMRE's data base management system. For the 2011 calendar year, offshore production facilities currently under the GOADS program must report the latest published emissions from the GOADS study for platforms in service in the GOADS study year. In subsequent calendar years when BOEMRE publishes an updated GOADS study, reporters shall report emissions based on that latest GOADS study. For each calendar year that does not overlap with the GOADS publication of a new study, reports for platforms operating in the current year that were also operating in the last published GOADS study should be adjusted based on the operating time for each platform relative to the operating time in the previous reporting period.

—For offshore production facilities that do not report under the BOEMRE GOADS program (non-GOADS reporters), monthly activity data from applicable offshore production facilities must be collected for the first calendar year in accordance with the latest GOADS program instructions. Calculation of GHG emissions must be performed using the latest GOADS program emission factors and methodologies as outlined in the latest published GOADS study. In subsequent calendar years, facilities not under GOADS jurisdiction must follow the data collection cycle as required in the GOADS program by collecting new monthly activity data, estimating GHG emissions using the latest GOADS program emission factors and methodologies and report those emissions to EPA. For each calendar year that does not overlap with a new GOADS study publication, offshore production facilities not reporting under the BOEMRE GOADS program must report the last reported emissions data with emissions adjusted based on the operating time for each platform relative to operating time in the previous reporting period. Thus, these facilities will gather data and estimate updated emissions on the same cycle as facilities reporting to the GOADS program.

—For either first or subsequent year reporting, platforms either within or outside of GOADS jurisdiction that were not covered in the previous GOADS data collection cycle shall collect monthly activity data from platform sources in accordance with the latest GOADS program instructions and calculate GHG emissions using the latest GOADS program emission factors and methodologies.

—If BOEMRE discontinues or delays their GOADS survey by more than 4 years, then offshore production facilities shall collect monthly activity data every 4 years from platform sources in accordance with the latest published version of the GOADS program instructions, and annual GHG emissions shall be calculated using latest GOADS program emission factors and methodologies.

—Offshore production facilities subject to subpart W must report stationary combustion emissions under subpart C of part 98.

—All Offshore production facilities, whether out of or under the jurisdiction of BOEMRE GOADS program are to adhere to the monitoring and QA/QC requirements in the applicable BOEMRE regulations.

• *EOR Hydrocarbon liquids dissolved* CO_2. Calculate CO_2 emissions downstream of storage tanks from hydrocarbon liquids produced as a result of enhanced oil recovery operations by conducting annual composition sampling of the produced hydrocarbon liquids by taking samples downstream of the storage tank. Use the mass of CO_2 from the sample to determine the mass of CO_2 dissolved in hydrocarbons beyond storage per barrel of produced liquid hydrocarbons.

• *EOR injection pump blowdown.* Calculate CO_2 emissions from enhanced oil recovery critical phase CO_2 injection pump blowdowns by calculating the volume of gas-containing structures between isolation valves, including piping. Use engineering estimates and best available data to determine the volume of gas-containing structures between isolation valves. The volumes calculated may be used in subsequent years if the hardware has not changed. Maintain logs of the number of blowdowns in the calendar year for each EOR pump. Using an appropriate standard method published by a consensus-based standards organization or, if no such standard exists, an industry standard practice, determine the density of the supercritical EOR injection gas. Calculate emissions using the number of blowdowns, the volume of the blown down equipment, the mass fraction of CO_2 in the injection gas, the density of the injection gas, and a conversion factor.

• *Onshore petroleum and natural gas production and natural gas distribution combustion emissions.* Calculate CO_2, CH_4 and N_2O combustion emissions from stationary and portable combustion equipment in onshore petroleum and natural gas production and stationary combustion equipment in natural gas distribution using the following methods:

—If the fuel combusted is listed in Table C–1 of subpart C, or any blend of the fuels listed, use the Tier 1 methodology of subpart C.

—Following the methodologies in 40 CFR 98.233(z), if the fuel combusted is field gas or a combination of field gas or process vent gas and one or more fuels listed in Table C–1 of subpart C, then use the volume of fuel and the composition of the fuel to calculate CO_2 emissions. If meters are installed on the fuel stream, the meter must be used to determine the volume of fuel combusted; otherwise the reporter can estimate that volume by installing a permanent flow meter or use engineering calculations. If a continuous gas analyzer is installed on the fuel stream, the composition reading must be used; otherwise another accepted method to estimate the composition may be used.

—Emissions from external fuel combustion sources with a rated heat capacity less than or equal to 5 mmBtu/hour do not have to be reported. Only activity data (unit count by type of unit) for such sources is to be reported.

—Calculate N_2O emissions from combustion equipment using emission factors and the fuel volume consumed. The high heat value of the fuel can be estimated using Table C–1 of subpart C if possible. If the fuel is field gas or process vent gas, a default high heat value is provided. If another fuel, not covered by Table C–1 of subpart C or field gas or process vent gas, is used; then the appropriate methodology from subpart C to estimate high heat value must be used.

Data Reporting Requirements. In addition to the information required to be reported by the General Provisions (40 CFR 98.3(c)), reporters must submit additional data that are needed for EPA verification of the reported GHG emissions from petroleum and natural gas systems. The specific data to be reported are found in 40 CFR part 98, subpart W.

Recordkeeping. In addition to the records required by the General Provisions (40 CFR 98.3(g)), reporters must keep records of additional data used to calculate GHG emissions. These records are described in 40 CFR part 98, subpart W.

Definitions. EPA added definitions that are specific to subpart W to 40 CFR 98.238 to avoid any confusion with the definitions found in 40 CFR 98.6. For compliance with subpart W, the subpart W specific definitions apply instead of any of the same definitions also found in subpart A.

We are including a definition of the term "Offshore" in 40 CFR 98.238 to fully identify those petroleum and natural gas production platforms, secondary platforms and associated storage tanks covered by this rule.

We are also including two distinctive definitions of facility for onshore petroleum and natural gas production and for natural gas distribution. Defining a facility in these cases is not as straightforward as other industry segments covered under subpart W. For some segments of the industry (*e.g.,* onshore natural gas processing, onshore natural gas transmission compression, and offshore petroleum and natural gas production), identifying the facility is clear since there are physical boundaries and ownership structures

[3] The Bureau of Ocean Energy Management, Regulation, and Enforcement (BOEMRE) was formerly known as Minerals Management Service (MMS).

that lend themselves to identifying the scope of reporting and responsible reporting entities. However, in onshore petroleum and natural gas production and natural gas distribution such distinctions are more challenging. As explained in the April 2010 proposal, EPA evaluated existing definitions used under current regulations and determined that it was necessary to provide a unique definition of facility for each of these two segments in order to ensure that the reporting delineation is clear, avoid double counting, and ensure appropriate emissions coverage. For more information please see the preamble for the April 2010 proposal (75 FR 18608) and the Greenhouse Gas Emissions from Petroleum and Natural Gas Industry: Background Technical Support Document (EPA–HQ–OAR–2009–0923).

These definitions are intended only for purposes of subpart W and are not intended to affect to definition of a facility as it might be applied in any other context of the Clean Air Act.

First, as proposed in April 2010, the definition of natural gas distribution facility for this subpart is the distribution pipelines, metering stations, and regulating stations that are operated by a Local Distribution Company (LDC) that is regulated as a separate operating company by a public utility commission or that are operated as an independent municipally-owned distribution system. This facility definition provides clear reporting delineation because the equipment that they operate is clearly known, the ownership is clear to one company, and reporting at this level is consistent with 40 CFR part 98. In this action, EPA is finalizing this definition for the natural gas distribution industry segment. This facility definition for natural gas distribution will result in 90 percent GHG emissions coverage of this industry segment.

Second, as proposed in April 2010, the definition of an onshore petroleum and natural gas production facility for this subpart is all petroleum or natural gas equipment associated with all petroleum or natural gas production wells and CO_2 EOR operations that are under common ownership or common control including leased, rented, and contracted activities by an onshore petroleum and natural gas production owner or operator and that are located in a single hydrocarbon basin as defined in 40 CFR 98.238. Where a person or entity owns or operates more than one well in a basin, then all onshore petroleum and natural gas production equipment associated with all wells that the person or entity owns or operates in the basin would be considered one facility. In the April 2010 proposal, EPA evaluated at least two available industry recognized definitions that identify hydrocarbon basins: One from the United States Geological Survey (USGS) and the other from the American Association of Petroleum Geologists. Basins are mapped to county boundaries only to give a surface manifestation to the underground geologic boundaries. EPA decided to use the AAPG geologic definition of basin because it is referenced to county boundaries and hence likely to be familiar to the industry, *i.e.,* if the owner or operator knows in which county their well is located, then they know to which basin they belong. Hence, in this action, EPA is finalizing the facility definition at the basin level for the onshore petroleum and natural gas production industry segment because the operational boundaries and basin demarcations are clearly defined and are widely known, and reporting at this level would provide the necessary coverage of GHG emissions to inform policy. In addition, EPA has clarified its intent by stating that onshore petroleum and natural gas production equipment associated with all petroleum or natural gas production wells and CO_2 EOR operations continue to include any leased, rented or contracted activities by the owner or operator of those wells in that basin. This facility definition for onshore petroleum and natural gas production will result in 85 percent GHG emissions coverage of this industry segment.

Finally, in this final action, EPA has replaced the term "fugitive emissions" with "equipment leaks." This change was made to ensure consistency with the terminology in the Alternative Work Practice to Detect Leaks from Equipment for 40 CFR parts 60, 63, and 65.

E. Summary of Major Changes and Clarifications Since Proposal

The major changes and clarifications in subpart W since the April 2010 proposal are identified in the following list. For a full description of the rationale for these and any other significant changes to 40 CFR part 98, subpart W, see the Mandatory Greenhouse Gas Reporting Rule: EPA's Response to Public Comments, Subpart W: Petroleum and Natural Gas Systems. The changes are organized following the different sections of the subpart W regulatory text.

1. Definition of the Source Category

- EPA revised the definition for onshore natural gas processing and onshore petroleum and natural gas production to exclude gathering lines and boosting stations from the source category.
- EPA revised the definition of onshore petroleum and natural gas production to include equipment on a well pad or associated with a well pad, due to the growing industry practice of multi-well pads, where equipment may serve one well on a pad or several wells on a pad.
- EPA has revised the definition of natural gas processing to clarify that this industry segment includes (1) all processing facilities that fractionate and (2) those that do not fractionate with throughput of 25 MMscf per day or greater.
- EPA has revised the definition for the natural gas processing industry segment by removing the term "plant" from the segment name to ensure consistency with terminology used by other industry segment definitions.
- EPA clarified that meters and regulators in the natural gas distribution industry segment do not include customer meters.

2. Reporting Threshold

- EPA is amending the reporting threshold language in subpart W to clarify that onshore petroleum and natural gas production facilities and onshore natural gas distribution facilities must report emissions only from sources specified in subpart W. This amendment was necessary to clearly define what emissions sources are to be included for considering the threshold in determining applicability for these two industry segments because they each have a different definition of the term "facility" than what is defined in the general provisions of part 98.

3. GHGs To Report

- EPA removed the reporting requirements for produced water from coal bed methane (CBM) and enhanced oil recovery (EOR) operations.

4. Monitoring, QA/QC, and Calculating Emissions

- For industry segments where equipment leak detection is required (onshore natural gas processing, onshore natural gas transmission compression, underground natural gas storage, LNG storage and LNG import and export equipment, and natural gas distribution facilities) EPA is including the option to use Method 21 and infrared laser beam illuminated instruments to detect leaks for sources that are accessible. Inaccessible equipment leaks and vented emissions are still required to be monitored using an optical gas imaging instrument.

• For applicable industry segments (onshore natural gas processing, onshore natural gas transmission compression, underground natural gas storage, LNG storage and LNG import and export equipment), EPA clarified the monitoring and reporting requirements for centrifugal and reciprocating compressors. Reporters are required to conduct an annual measurement of each compressor in the mode in which it is found at the time of the annual measurement. However, EPA requires reporters to conduct at least one measurement of each compressor in the not operating, depressurized mode during every 3-year period. Commenters suggested to EPA that based on their operational experience, 3 years is an appropriate maximum time period during which compressors will be shutdown at least once for routine maintenance, such that operators would not need to shutdown compressors specifically for the purposes of monitoring. For more detail, please see EPA–HQ–OAR–2009–0923–1011 excerpt 44. Also see "Compressor Modes and Threshold" Docket EPA–HQ–OAR–2009–0923.

• EPA clarified reporting requirements and in some cases included alternative data collection methodologies for certain sources to balance burden with data quality and emissions coverage:

—For onshore petroleum and natural gas production, EPA is allowing the use of major equipment counts and default average counts for associated components rather than requiring individual counts for all components to determine populations to which to apply component emission factors.

—As compressors in onshore petroleum and natural gas production are small in size, EPA is allowing the use of emission factors for calculating GHG emissions from centrifugal and reciprocating compressors in onshore petroleum and natural gas production rather than conducting an annual measurement of each compressor in the mode in which it is found.

—EPA is allowing onshore petroleum and natural gas production reporters to complete a total count of pneumatic devices any time within the first three calendar years. A reporter must report pneumatic device emissions annually. For any years where activity data (count of pneumatic devices) is incomplete, use best available data or engineering estimates to calculate pneumatic device emissions.

—For collecting gas composition data for produced natural gas, EPA is allowing reporters to use existing sampling data (*e.g.,* composition analysis of gas sold) if reporters do not have a continuous gas composition analyzer already installed.

—EPA is including emission factors for calculating GHG emissions from the following sources: vented GHG emissions from onshore petroleum and natural gas production tanks receiving oil from separators or directly from wells with less than 10 barrels per day throughput; onshore petroleum and natural gas production and onshore natural gas processing dehydrators with less than 0.4 million standard cubic feet per day throughput; vented GHG emissions from all onshore petroleum and natural gas production pneumatic devices and pneumatic pumps, and pneumatic devices in onshore natural gas transmission compression facilities and underground natural gas storage facilities.

—For both the onshore petroleum and natural gas production industry segment and the natural gas distribution industry segment, external fuel combustion emissions from portable or stationary equipment with rated heat capacity less than or equal to 5 mmBtu/hr, only activity data must be reported.

—Blowdown emissions from equipment vessel chambers totaling less than 50 cubic feet are not required to be reported.

—For reciprocating and centrifugal compressor measurement requirements, EPA clarified that the installation of permanent meters is an option but is not required; temporary meters are acceptable. In addition, through-valve leakage to open ended vents, such as unit isolation valves on not operating depressurized compressors and blowdown valves on pressurized compressors, may be measured using acoustic leak detection devices.

• EPA is allowing Best Available Monitoring Methods for certain sources and time periods (for more detailed information, refer to Section II.F of this preamble).

• For transmission storage tanks, EPA is allowing reporters to use an acoustic leak detection device to monitor leakage through compressor scrubber dump valves into the tank.

5. Applicability

To assist reporters in determining applicability, EPA is planning to develop screening tools to assist in the determination of which entities may potentially be required to report under subpart W of 40 CFR part 98.

F. Summary of Comments and Responses

This section contains a brief summary of major comments and responses. EPA received many comments on this subpart covering numerous topics. EPA's responses to all comments, including those below, can be found in the comment response document for petroleum and natural gas systems in Mandatory Greenhouse Gas Reporting Rule: EPA's Response to Public Comments, Subpart W: Petroleum and Natural Gas Systems. Additional comments and responses related to cost issues on the proposed rule can be located in Section III.B.2 of this preamble.

1. Definition of the Source Category

Comment: Numerous commenters objected to the inclusion of gathering lines and booster stations in the natural gas processing industry segment definition. Commenters specifically stated that including gathering lines and booster stations would result in undue burden on reporters stemming from (1) The additional cost to include gathering lines and boosting stations that typically are associated with a single natural gas processing facility, and (2) the numerous complexities and variations of ownership that currently exist with gathering lines and boosting stations. One commenter further detailed that there are at least three different owner/operator variations that exist ranging from a scenario where a single company owns and/or operates the wells, gathering lines, and natural gas processing facility, to a scenario where a single company owns the wells, a second distinct company (or multiple companies) own the gathering lines, and a third distinct company may own the natural gas processing facility. The commenter further explained that these scenarios are further complicated because the variations in gas flow fluctuate daily due to the need to balance production demands for natural gas against the capacity of the gathering lines and the natural gas processing facility.

Finally, a number of commenters requested that the gathering lines and boosting stations be excluded from the natural gas processing industry segment definition or be defined as a separate industry segment.

Response: EPA has decided not to include gathering lines and boosting stations as an emissions source in subpart W at this time. The primary reason for excluding gathering lines and boosting stations at this time is that emissions coverage from gathering lines and boosting stations within the natural gas processing industry segment requires further analysis to ensure an effective coverage of emissions from this source in order to appropriately inform

future policy decisions. As a result, EPA is continuing to review the comments received and similar comments raised to ensure an effective coverage of emissions from this source, and is considering the most appropriate mechanism for future actions to address the collection of appropriate data on gathering lines and boosting stations while minimizing industry burden.

Comment: Several commenters stated that meters and regulators (M&R) were not clearly defined and could result in the inclusion of customer meters in the reporting requirements for the natural gas distribution industry segment.

Response: EPA did not intend to require reporting of GHG emissions from customer meters in subpart W. In this final action, EPA has clarified its intent to not require reporting of GHG emissions from customer meters. The definition of the natural gas distribution industry segment and the listing of GHGs to report under this industry segment have been refined to make clear what emissions are to be reported for this industry segment.

Comment: Commenters noted that many facilities would fall under more than one industry segment in a calendar year and requested clarification as to which industry segment such a facility would be required to report under. In addition some commenters noted that they have equipment from multiple industry segments located in the same physical space.

Response: EPA has reviewed these comments and has addressed them. Please see response to comment EPA–HQ–OAR–2009–0923–1024–14 in the Mandatory Greenhouse Gas Reporting Rule: EPA's Response to Public Comments.

2. GHGs To Report

Comment: Numerous commenters argued against the reporting of emissions, specifically combustion emissions, from portable equipment for the onshore petroleum and natural gas industry segment. Commenters noted that tracking emissions from portable non-self propelled equipment would result in heavy burden due to the fact that the majority of portable equipment are operated by an entity that is separate from the owner. Further, commenters stated that the reporting of emissions from portable equipment will only marginally increase coverage of the proposed rule. Some commenters argued that subpart C excludes portable equipment from combustion emissions reporting, and questioned why it was required for subpart W.

Response: EPA disagrees with commenters and has finalized the reporting requirements for GHG emissions from portable non-self propelled equipment in subpart W, including emissions from drilling rigs, dehydrators, compressors, electrical generators, steam boilers, and heaters with external combustion rated heat capacity above 5 mmBtu/hour.

In order to manage the burden, the emissions estimation methods for portable equipment require the use of existing data, for the most part. Moreover, the allowance of Best Available Monitoring Methods (described later in this preamble) would provide reporters additional time to modify contractual arrangements with service providers. The decision to retain the reporting requirements for portable equipment GHG emissions was based on EPA's analysis of the contribution to GHG emissions, both combustion and process, from portable equipment in onshore production. It is estimated that portable non self-propelled equipment is responsible for over 45 percent of total emissions from onshore petroleum and natural gas production. Please see "Portable Combustion Emissions" Docket EPA–HQ–OAR–2009–0923 for the complete analysis. While EPA is not excluding portable equipment, for certain emissions sources, EPA agrees with comments that alternative methodologies are appropriate and viable for collecting these data. EPA has conducted an extensive review of the emissions contribution relative to reporting burden and modified the final rule to simplify the requirements for external combustion equipment that fall below a rated heat capacity of 5 mmBtu/hr for the onshore petroleum and natural gas industry segment and the natural gas distribution industry segment. Please see "Portable Combustion Emissions" Docket EPA–HQ–OAR–2009–0923 and "Equipment Threshold for Small Combustion Units" Docket EPA–HQ–OAR–2009–0923 for the analysis. Equipment that fall below the specified mmBtu level for the applicable industry segments would not have to conduct monitoring for combustion emissions, and would only be required to report activity data which would be total number of external fuel combustion units with a rated heat capacity of equal to or less than 5 mmBtu/hr by type of unit.

3. Monitoring, QA/QC, and Calculating Emissions

Comment: EPA received numerous comments on the use of the optical gas imaging instrument for detecting GHG emissions from equipment leaks. Several commenters expressed support for the use of optical gas imaging instruments prescribed in the rule, stating that using this equipment would result in cost savings to industry as it would reduce burden and time by quick survey of all emissions sources at one time. In addition, several commenters specifically requested that EPA also allow the use of organic vapor analyzers (OVA), toxic vapor analyzers (TVA) and infrared laser beam illuminated instruments as alternative technologies to the optical gas imaging instruments proposed for emissions detection.

Response: EPA has evaluated alternative methods for detection of equipment leaks for their viability and comparative accuracy to the optical gas imaging instrument in the proposed rule. EPA agrees with commenters and has modified the final rule to include the options to use OVA/TVA devices or infrared laser beam illuminated instruments for leak detection for all emissions sources across all industry segments with the exception of inaccessible sources. EPA is still requiring that reporters use optical gas imaging instruments for inaccessible sources due to potential safety and cost concerns related to leak detection of sources that cannot be physically accessed from a fixed, supportive surface with a hand held leak detection device such as OVA/TVA, or which do not have a reflective background for an IR laser detection device. While EPA has determined that the methodologies in this rule are viable and appropriate for collecting this type of GHG data, EPA will continue to evaluate other potential methods for detecting methane emissions in the petroleum and natural gas sector.[4]

Comment: Numerous commenters disagreed with EPA's assessment of the feasibility of conducting one measurement for each reciprocating or centrifugal compressor in each of the operational modes (operating, standby pressurized, not operating/depressurized) that would occur during a calendar year. Commenters specifically stated that common industry practice is to have a compressor in operating mode for several years before it is taken offline for routine maintenance and servicing, thereby taking a compressor offline for the sole purpose of measurement as

[4] While this activity is in a nascent stage, EPA is conducting ongoing research on experimental mobile monitoring methods to locate and quantify equipment leak emissions from petroleum and natural gas fields. In addition to increasing our knowledge about emissions from equipment leaks from petroleum and natural gas fields, if this proves to be a robust approach, it could be one viable alternative for measuring emissions and EPA would consider a rulemaking to add it as an acceptable method to this subpart.

prescribed in the rule would result in undue burden to the industry and result in additional GHG emissions.

Response: EPA did not intend for compressors to be taken offline in order for reporters to collect the data required under subpart W and has clarified the final rule to allow reporters to conduct an annual measurement of each compressor in the mode as it exists at the time the annual measurement is taken. EPA requires the development of emission factors from these measurements that reporters must apply appropriately to all compressors for the total time each compressor is operated in each mode. However, EPA requires that each compressor must be measured at least once during every 3-year period in the "not operating and depressurized" mode without blind flanges in place. Blind flanges are flat plates inserted between flanges on a valve or piping connection to assure absolute isolation of the equipment from process fluids, and hence, compromise through valve leakage measurement. Isolation valve leakage through the compressor blowdown vent, when the compressor is in the not operating and depressurized mode, must be measured before blind flanges are installed.

Commenters suggested to EPA that based on their operational experience, 3 years is an appropriate maximum operational time period during which compressors will be shutdown for maintenance at least once, and therefore operators would not need to shutdown compressors specifically for the purposes of monitoring to gather measurements at this frequency. Accordingly, EPA is requiring reporters to schedule the measurement of compressors in the not operating and depressurized mode at least once during each consecutive 3-year time period.

Comment: EPA received a broad range of comments that the methodologies for calculating GHG emissions in subpart W for specific emissions sources were too burdensome. Some commenters stated that quarterly sampling of produced natural gas to determine gas composition was overly burdensome and not necessary since produced gas composition does not change significantly from one quarter to the next. Other commenters suggested that requiring component counts for calculating equipment leaks for the onshore petroleum and natural gas industry segment was too onerous and time intensive since a reporter may have hundreds of wells across a large geographical area, and they currently do not have an inventory of all the components, such as valves, connectors and flanges, associated with their equipment. Several commenters stated that the number of tanks and dehydrators in the onshore petroleum and natural gas industry segment would be very burdensome to estimate emissions from using engineering equations. For example each tank would be required to obtain a sample analysis of low pressure separator oil for doing the engineering calculations. Finally, several commenters stated that the number of pneumatic devices and pneumatic pumps would require extensive time to determine the manufacturer model of each device in their facilities, and then estimate emissions based on manufacturer data.

Lastly, commenters noted that compressor emissions measurement and compressor throughput flow was too burdensome, since many compressors would require the installation of expensive permanent meters.

Response: EPA considered all of these comments, and performed extensive evaluation of the methodologies for calculating GHG emissions for each emissions source under each industry segment. EPA compared alternative methodologies that, when performed, would result in reduced burden on industry while maintaining the necessary quality of data to inform policy. Please see "Alternative Methodologies" Docket EPA–HQ–OAR–2009–0923 for a full report of the analysis. Specifically, certain methodologies for specific emissions sources allowed for alternative methods that would reduce burden and maintain data quality. As a result, EPA determined that the following rule modifications would reduce burden while sustaining the necessary quality of data:

- Individual component counts and population based emissions factors for onshore petroleum and natural gas production have been replaced with major equipment counts and default average component counts per primary equipment. Identification of primary equipment (dehydrators, compressors, heaters, *etc.*) will result in significantly less burden to reporters than counting each component (valve, flange, open-ended line, *etc.*).
- Quarterly sampling of gas composition has been replaced with using your most recent representative gas analysis. Most onshore petroleum and natural gas producers would have this information already for transaction processing.
- For onshore petroleum and natural gas production, for separators and well production with less than 10 barrels per day throughput and glycol dehydrators with less than 0.4 million standard cubic feet per day throughput, reporters will use emissions factors to determine emissions. Blowdown emissions from equipment vessel chambers totaling less than 50 cubic feet are not required to be reported. For more information, the following documents; "Equipment Threshold for Tanks," "Equipment Threshold for Dehydrators," and "Equipment Threshold for Blowdowns" can be found in docket EPA–HQ–OAR–2009–0923.
- For all pneumatic devices and pneumatic pumps in onshore petroleum and natural gas production and all pneumatic devices in onshore natural gas transmission compression facilities and underground natural gas storage facilities, reporters will utilize component counts and population emissions factors instead of engineering estimates. Note that onshore petroleum and natural gas production reporters must complete a total count of pneumatic devices any time within the first three calendar years. A reporter must report pneumatic device emissions annually. For any years where activity data (count of pneumatic devices) is incomplete, use best available data or engineering estimates to calculate pneumatic device emissions.
- The final rule has clarified that emissions from centrifugal and reciprocating compressors do not require the installation of a permanent flow meter; use of a portable meter and port are acceptable. In addition, through-valve leakage to open ended vents, such as unit isolation valves on not operating depressurized compressors and blowdown valves on pressurized compressors, may be measured using acoustic leak detection devices. In addition, compressor throughput flow meters are not required; estimates of compressor flow will be sufficient for EPA's requirements.

4. Data Reporting Requirements

Comment: Numerous commenters stated that there would be insufficient time, leak detection and measurement equipment, or service providers available to fully comply with subpart W reporting requirements. In particular, numerous onshore petroleum and natural gas production commenters expressed concern with the ability to gather data from geographically dispersed emissions sources starting January 1, 2011. Also numerous commenters from the onshore natural gas processing and onshore natural gas transmission industry segments expressed their concern with their ability to comply with monitoring requirements, such as installing necessary measurement ports or meters for measurement.

Response: As described below, EPA determined that for specified emissions sources for certain industry segments, some reporters may need more time to comply with the monitoring and QA/QC requirements of this subpart than by January 1, 2011. EPA carefully considered each source and the reporting compliance requirements and determined for which monitoring requirements it is appropriate to allow the use of best available monitoring

methods, for how long the use of best available monitoring methods will be applicable, and under what circumstances these methods are reasonable. EPA has extensively detailed when and how reporters may use best available monitoring methods specified in the following sections and in 40 CFR 98.234(f) of the rule.

Best available monitoring methods are any of the following methods: monitoring methods currently used by the facility that do not meet the specifications of a relevant subpart; supplier data; engineering calculations; or other company records. Best available monitoring methods are available for three specific instances as well as providing a catch-all provision in the case of unanticipated issues or circumstances. In each category EPA determined the affected sources, reporting requirements and the time period necessary for owners or operators to implement the requirements of the rule. In all cases, the owner or operator must use the equations and calculation methods set forth in 40 CFR 98.233, but may use best available monitoring methods to estimate the parameters in the equations as specified in the following sections.

EPA also carefully considered the timing for allowing application of best available monitoring methods. EPA determined the time duration for specified sources for which reporting entities may apply best available monitoring methods without a petition, and those for which reporting entities must request the use of best available monitoring methods. If the reporter anticipates the potential need for best available monitoring for sources for which they need to petition EPA and the situation is unresolved at the time of the deadline, reporters should submit written notice of this potential situation to EPA by the specified deadline for requests to be considered. EPA reserves the right to review petitions after the deadline but will only consider and approve late petitions which demonstrate extreme or unusual circumstances. Based on EPA's experience in implementing the 2009 final rule and those BAMM provisions, EPA made the source specific determinations for subpart W as outlined in the following sections.

Well-Related Emissions Reporting. Subpart W requires the monitoring of well-related emissions sources for which the owner or operator must collect data during the actual event (for example, a well completion or workover conducted on a specific day in January 2011) and for which it may not be possible to collect or reproduce data after the event is over. EPA recognizes that a significant portion of well-drilling activities are conducted by third-party service providers and that in these cases, owners or operators may need to coordinate and possibly modify contracts, leases or other arrangements with service providers in order to gather data and thus it may not be possible for owners or operators to begin gathering well-related emissions data as of January 1, 2011. For these sources EPA will allow the use of best available monitoring methods through June 30, 2011 to allow reporters sufficient time to meet the requirements of the rule.

• *Eligible Sources.* There are three well-related sources for which subpart W requires emissions data collection at the time of the emissions event rather than at the reporter's discretion during a calendar year and for which use of best available monitoring methods will be allowed. These sources are as follows:

—Gas well workovers using hydraulic fracture in paragraph 40 CFR 98.233(g)
—Gas well completions using hydraulic fracture in paragraph 40 CFR 98.233(g)
—Well testing/flaring in paragraph 40 CFR 98.233(l)

• *Reporting Requirements.* For the eligible sources listed, an owner or operator must use the equations prescribed in 40 CFR 98.233(g) and 40 CFR 98.233(l) but may use best available monitoring methods to estimate any of the parameters. Best available monitoring methods may be:

—Monitoring methods currently used by the facility that do not meet the specifications of this subpart.
—Supplier data.
—Engineering calculations.
—Other owner or operator records.

• *Authorization to Use Best Available Monitoring Methods.* All owners or operators may use best available monitoring methods for these sources between January 1, 2011 and June 30, 2011. Owners or operators do not have to submit a request to EPA for the initial six months. Owners or operators will have from the time this rule is signed by the Administrator until June 30, 2011 to make any necessary arrangements with service providers and other relevant organizations in order for the owner or operator to gather all necessary data to comply with subpart W. As this is approximately eight months time, starting July 1, 2011, EPA expects that owners or operators will have made arrangements or modified contracts with service providers, such as drilling companies, as necessary to comply fully with subpart W for these sources.

• *Requests for Extension in 2011.* If additional time is necessary beyond June 30, 2011, an owner or operator must request an extension for use of best available monitoring methods by April 30, 2011. In order to receive an extension for a time period between July 1, 2011 and December 31, 2011, owners and operators must provide the following information for each source covered under 40 CFR 98.232(c)(6), 40 CFR 98.232(c)(8), and 40 CFR 98.232(c)(12):

—A list of the specific emissions sources within the owner or operator's facility for which the owner or operator is requesting an extension of best available monitoring methods.
—A description of the specific requirements in 40 CFR 98.233(g) and 40 CFR 98.233(l) that the owner or operator cannot meet in 2011, including a detailed explanation as to why the requirements cannot be met.
—Supporting documentation such as the date of and copies of correspondence to service providers or other relevant entities whereby the owner or operator clearly requests that said service providers or other relevant entities provide required data.
—Demonstrate that it is not possible to obtain the necessary information, service or hardware which may include providing correspondence from specific service providers or other relevant entities to the owner or operator, whereby the service provider states that it is unable to provide the necessary data or services requested by the owner or operator that would enable the owner or operator to comply with subpart W reporting requirements.
—A detailed explanation and supporting documentation of how and when the owner or operator will receive the required data and/or services to comply with subpart W reporting requirements.

The Administrator reserves the right to require additional documentation.

EPA does not anticipate extending the use of best available monitoring methods beyond 2011 as approximately fourteen months will have passed since the Administrator's signature; however, under extreme and unique circumstances, which include safety, or a requirement being technically infeasible or counter to other local, State or Federal regulations, EPA may consider granting a further extension. Any such request must be received by September 30, 2011. The owner or operator must provide the following information in a request for the use of best available monitoring methods beyond 2011 for sources covered under 40 CFR 98.232(c)(6), 40 CFR 98.232(c)(8), and 40 CFR 98.232(c)(12) for beyond 2011:

—A list of the specific emissions sources within the owner or operator's facility for which the owner or operator is requesting an extension of best available monitoring methods.
—A description of the specific requirements in 40 CFR 98.233(g) and 40 CFR 98.233(l) that the owner or operator cannot meet, including a detailed explanation as to why the requirements cannot be met.
—Detailed outline of the unique circumstances necessitating an extension, including specific data collection issues that do not meet safety regulations, technical

infeasibility or specific laws or regulations that conflict with data collection for 40 CFR 98.232(c)(6), 40 CFR 98.232(c)(8), and 40 CFR 98.232(c)(12). The owner or operator must consider all data collection options as outlined in the rule for a specific emissions source before claiming that a specific safety, technical or legal barrier exists. For example, if measuring an open-ended line on a rooftop does not meet safety regulations, companies must consider the use of portable meters using a port at ground-level.

—A detailed explanation and supporting documentation of how and when the owner or operator will receive the required data and/or services to comply with subpart W reporting requirements in the future.

The Administrator reserves the right to require additional documentation.

• It is the responsibility of the owner or operator to meet the reporting requirements of this rule. Accordingly, it is up to the owner or operator to best determine how they can obtain the necessary data to timely and fully comply.

Stipulated Activity Data Collection. Several sources require the collection of activity data such as cumulative run time or a cumulative throughput volume to a piece of equipment starting January 1, 2011. Based on industry comments, EPA recognizes that it may not be feasible for an owner or operator to gather these data across all of their facilities as data collection in some cases must begin on January 1, 2011. EPA has decided to allow reporters to use best available monitoring methods to estimate specific activity parameters used in the equations and methods outlined in 40 CFR 98.233 for the first six months of 2011. EPA will allow the use of best available monitoring methods for emissions sources for which the owner or operator must collect activity data sometime between January 1, 2011 and June 30, 2011 and the owner or operator cannot reproduce or replicate the data after this time period. As owners or operators will have approximately eight months from the time of Administrator signature to June 30, 2011 to develop systems to collect these data, EPA does not anticipate approving best available monitoring methods for collecting activity data after June 30, 2011.

• Eligible Sources. Owners and operators may use best available monitoring methods only for the sources listed below:

—Cumulative hours of venting, days, or times of operation in paragraphs § 98.233(e), (f), (g), (h), (l), (o), (p), (q), (r) of 40 CFR part 98.

—Number of blowdowns, completions, workovers, or other events in paragraphs § 98.233(f), (g), (h), (i), and (w) of 40 CFR part 98.

—Cumulative volume produced, volume input or output, or volume of fuel used in paragraphs § 98.233(d), (e), (j), (k), (l), (m), (n), (x), (y), and (z) of 40 CFR part 98.

• Reporting Requirements. For the sources eligible for best available monitoring methods applicable to stipulated activity data,, owners and operators must use the equations prescribed in 40 CFR 98.233 but may use best available monitoring methods to estimate the stipulated activity parameters. Best available monitoring methods are:

—Monitoring methods currently used by the facility that do not meet the specifications of this subpart.

—Supplier data.

—Engineering calculations.

—Other owner or operator records.

• Authorization to Use Best Available Monitoring Methods. All owners and operators may use best available monitoring methods for the sources eligible for best available monitoring methods applicable to stipulated activity data between January 1, 2011 and June 30, 2011. Owners or operators do not have to submit a request to EPA for the initial six months. As owners and operators will have approximately eight months from Administrator signature to June 30, 2011, to prepare for the data collection requirements for the eligible sources, EPA expects that all owners or operators should have had adequate time to comply with the data collection requirements outlined in this subpart and therefore not need the use of best available monitoring methods for this information after June 30, 2011.

• Requests for Extension in 2011. Only under extreme circumstances, which include safety, or a requirement being technically infeasible or counter to other local, State, or Federal regulations, will EPA consider extending the use of best available monitoring methods for the collection of activity data through the end of 2011.

• Owners or operators may submit a request for an extension through the end of 2011. These requests must be received by April 30, 2011 and include the following:

—A list of specific source categories and parameters for which the owner or operator is seeking use of best available monitoring methods.

—A description of the specific requirements in paragraphs § 98.233(e), (f), (g), (h), (i), (j), (k), (l), (m), (n), (o), (p), (q), (r), (w), (x), (y), and (z) of 40 CFR Part 98 that the owner or operator cannot meet, including a detailed explanation as to why the requirements cannot be met.

—Detailed outline of the unique circumstances necessitating an extension, including data collection methods that do not meet safety regulations, technical infeasibility or specific laws or regulations that conflict with the specific sources in this section of the preamble. The owner or operator must consider all data collection options as outlined in the rule for a specific emissions source before claiming that a specific safety, technical or legal barrier exists.

—A detailed explanation and supporting documentation of how and when the owner or operator will receive, for example, the services or equipment to comply with subpart W reporting requirements.

The Administrator reserves the right to require additional documentation.

• Requests for Extension beyond 2011. As approximately fourteen months will have passed between the Administrator's signature and December 31, 2011, EPA does not anticipate approving requests for best available monitoring methods beyond 2011 for applicable stipulated activity data sources eligible for best available monitoring methods; however, under extreme and unique circumstances, which include safety, a requirement being technically infeasible or counter to other local, State, or Federal regulations, it may consider granting a further extension. Any such requests for extensions beyond 2011 must be received by September 30, 2011 and include the following:

—A list of specific source categories and parameters for which the owner or operator is seeking use of best available monitoring methods.

—A description of the specific requirements in paragraphs § 98.233(e), (f), (g), (h), (i), (j), (k), (l), (m), (n), (o), (p), (q), (r), (w), (x), (y), and (z) of 40 CFR Part 98 that the owner or operator cannot meet, including a detailed explanation as to why the requirements cannot be met.

—Detailed outline of the unique circumstances necessitating an extension, including data collection methodologies that do not meet safety regulations, technical infeasibility or specific laws or regulations that conflict with sources outlined in this section of the preamble. The owner or operator must consider all data collection options as outlined in the rule for a specific emissions source before claiming that a specific safety, technical or legal barrier exists.

—A detailed explanation and supporting documentation of how and when the owner or operator will receive, for example, the services or equipment to comply with subpart W reporting requirements.

The Administrator reserves the right to require additional documentation.

Acquisition and implementation of leak detection and monitoring equipment or services. Based on industry comments, EPA understands that it may not be feasible for all owners or operators to acquire required leak detection and/or measurement equipment or hire a service provider in time to conduct the activities necessary

to complete leak detection and measurement requirements under subpart W within the 2011 calendar year. EPA will consider the use of best available monitoring methods for sources requiring leak detection and/or measurement based on evidence provided by the owners or operators demonstrating that they have made all efforts but cannot obtain the necessary equipment or services in time to complete subpart W reporting in 2011.

• Eligible Sources. With application approval from the Administrator, owners and operators may use best available monitoring methods only for the sources listed below:
—Reciprocating compressor rod packing vents for facilities downstream of onshore petroleum and natural gas production (*i.e.,* onshore natural gas processing, onshore natural gas transmission compression, underground natural gas storage, LNG storage, and LNG import and export equipment) in 40 CFR 98.233(p).
—Centrifugal compressor wet seal oil degassing venting for facilities downstream of petroleum and natural gas production in 40 CFR 98.233(o).
—Acid gas removal vents in 40 CFR 98.233(d).
—Equipment leaks in facilities downstream of onshore petroleum and natural gas production in 40 CFR 98.233(q).
—Transmission storage tanks in 40 CFR 98.233(k).

• Reporting Requirements. For the sources eligible for best available monitoring methods applicable to acquisition and implementation of leak detection and monitoring equipment or services,, if approved by the Administrator, the owner or operator may use best available monitoring methods to estimate emissions and/or the number of leaking components, and any throughputs, volumes, or maintenance records in place of the required monitoring methods outlined for parameters in 40 CFR 98.233. These best available monitoring methods are:
—Monitoring methods currently used by the facility that do not meet the specifications of this subpart.
—Supplier data.
—Engineering calculations.
—Other owner or operator records.

• Authorization to Use Best Available Monitoring Methods. Because leak detection and/or measurement surveys are one-time actions that can be conducted at any time during the year, by April 30, 2011, reporters must submit an application seeking approval for the use of best available monitoring methods. Upon approval by the Administrator, EPA may allow the use of best available monitoring methods for up to the entire 2011 calendar year. An owner or operator must submit this request no later than April 30, 2011 and include, at a minimum:
—A list of specific source categories and parameters for which the owner or operator is seeking use of best available monitoring methods.
—A description of the specific requirements in 40 CFR 98.233(d), 98.233(k), 98.233(o), 98.233(p), and 98.233(q) that the owner or operator cannot meet and an explanation of how the owner or operator has diligently tried and why it cannot meet the requirements.
—Certification that the owner or operator does not already own relevant detection or measurement equipment.
—Documentation which demonstrates that the owner or operator made all reasonable efforts to obtain the service necessary to comply with subpart W reporting requirements in 2011, including evidence of specific service or equipment providers contacted and why services could not be obtained during 2011. EPA recognizes that some owners or operators may choose to conduct their own leak detection and measurement activities and therefore purchase equipment for that purpose. It is the owner or operator's responsibility to purchase all necessary equipment in time to meet 2011 reporting requirements. If relevant equipment vendors cannot deliver hardware in time for an owner or operator to meet subpart W requirements, the owner or operator must attempt to use outside service providers, prior to seeking a request for best available monitoring methodology extension.
—A detailed explanation and supporting documentation of how and when the owner or operator will receive the services or equipment to comply with subpart W reporting requirements in 2012.

The Administrator reserves the right to require additional documentation.

• Requests for Extension. As owners and operators will have had approximately fourteen months since the date of the Administrator's signature and December 31, 2011, EPA does not anticipate extending best available monitoring methods beyond 2011; however, under extreme and unique circumstances, which include safety, or a requirement being technically infeasible or counter to other local, State, or Federal regulations, EPA may consider granting a further extension. Any such request for extensions beyond 2011 must be received by September 30, 2011 and include the following:
—A list of specific source categories and parameters for which the owner or operator is seeking use of best available monitoring methods.
—A description of the specific requirements in 40 CFR 98.233(d), 98.233(k), 98.233(o), 98.233(p), and 98.233(q) for which extension is being requested and of the unique circumstances necessitating an extension, including specific data collection methodologies that do not meet safety regulations, technical infeasibility or specific laws or regulations that conflict with sources outlined in this section of the preamble. The owner or operator must consider all data collection options as outlined in the rule for a specific emissions source before claiming that a specific safety, technical or legal barrier exists.
—Detailed explanation and supporting documentation of how and when the owner or operator will receive the services or equipment to comply with subpart W reporting requirements.

The Administrator reserves the right to require additional documentation.

Unique or Extreme Circumstances

• Requests for 2011: Emissions sources not covered under the previous three categories of BAMM are under operational control of the owner or operator, require one time data collection at any point during the calendar year and do not require leak detection or measurement equipment. For these reasons, for the sources not covered under the previous three categories of BAMM, EPA does not anticipate the need for best available monitoring methods; however, EPA will review all requests submitted by April 30, 2011 and consider approval of the use of best available monitoring methods for 2011 under unique and extreme circumstances, which include safety, or requirement being technically infeasible or counter to other local, State, or Federal regulations. Requests for the use of best available monitoring methods for sources not covered under the previous three categories of BAMM must include:
—A list of specific source categories and parameters for which the owner or operator is seeking use of best available monitoring methods.
—Detailed outline of the unique circumstances necessitating an extension, which must include data collection methodologies that do not meet safety regulations, technical infeasibility or specific laws or regulations that conflict with specific sources for which owners or operators are requesting best available monitoring methods. The owner or operator must consider all data collection options as outlined in the rule for a specific emissions source before claiming that a specific safety, technical or legal barrier exists.
—A detailed explanation and supporting documentation of how and when the owner or operator will receive the services or equipment to comply with subpart W reporting requirements in 2012.

The Administrator reserves the right to require additional documentation.

• Requests beyond 2011: For sources not covered in the previous three categories of BAMM, EPA does not anticipate the need for best available monitoring methods beyond 2011;

however, EPA will review such requests submitted by September 30, 2011 and consider approval of the use of best available monitoring methods for 2012 under unique and extreme circumstances, which include safety, or a requirement being technically infeasible or counter to other local, State, or Federal regulations. Requests for the use of best available monitoring methods for sources not covered in the previous three categories of BAMM, must include:

—A list of specific source categories and parameters for which the owner or operator is seeking use of best available monitoring methods.

—Detailed outline of the unique circumstances necessitating an extension, which must include data collection methodologies that do not meet safety regulations, technical infeasibility or specific laws or regulations that conflict with specific sources for which owners or operators are requesting best available monitoring methods. The owner or operator must consider all data collection options as outlined in the rule for a specific emissions source before claiming that a specific safety, technical or legal barrier exists.

—A detailed explanation and supporting documentation of how and when the owner or operator will receive the services or equipment to comply with subpart W reporting requirements.

The Administrator reserves the right to require additional documentation.

5. Legal Authority

Comment: Several commenters asserted that EPA is over-reaching its CAA 114 authority. These commenters specifically stated that CAA section 114 does not authorize EPA to require indefinite and sweeping monitoring, recordkeeping, and reporting from the facilities covered by proposed subpart W. On the other hand, several commenters asserted that the proposal was within EPA's authority under the CAA.

Response: As explained in Section I.C. of this preamble, Section I.C and Q of the 2009 final Part 98 preamble (74 FR 56260), and the document Mandatory Greenhouse Gas Reporting Rule: EPA's Response to Public Comments, Volume 9, Legal Issues (EPA–HQ–OAR–2008–0508), EPA is promulgating subpart W under its existing CAA authority provided in CAA section 114. EPA disagrees with the commenters that it does not have statutory authority to require monitoring, reporting and recordkeeping from facilities in the petroleum and natural gas systems source category. The Administrator may gather information under CAA section 114, as long as that information is for purposes of carrying out any provision of the CAA. For example, CAA section 103 authorizes EPA to establish a national research and development program, including non-regulatory approaches and technologies, for the prevention and control of air pollution, including GHGs. The data collected under this rule will also inform EPA's implementation of CAA section 103(g) regarding improvement in sector based non-regulatory strategies and technologies for preventing or reducing air pollutants. For more information about EPA's legal authority please see the related sections and documents in the preamble for subpart W.

6. Designated Representative

Comment: Several commenters stated that EPA lacked the authority to require facilities to collect data on equipment and activities that may be operated or provided by a third party service provider and then require a designated representative to certify those emissions data. Other commenters supported the inclusion of emissions data from equipment operated by third party service providers by stating that these emissions are critical to ensuring that facilities with different operational structures have equitable coverage in a reporting program and that a complete profile of emissions from the production sector is obtained.

Response: As explained in Section V of the preamble of the 2009 final part 98 (74 FR 56355), all reporters must select a designated representative (DR) who is responsible for certifying, signing, and submitting all submissions to EPA. This provision provides flexibility to the owners and operators to choose any individual, employee or non-employee, to represent them, while ensuring EPA has one accountable point of contact. As explained in the preamble to the final part 98, the high level of public interest in the data collected, as well as its importance to future policy, warrants establishment of a high standard for data quality and consistency and high level of accountability for reported data. The DR provisions and certification requirements help ensure the standard for high quality data and consistency is met. The DR provisions are crafted similarly to the provisions of the Acid Rain Program (ARP), 40 CFR part 72 and EPA has found that this approach provides a high degree of both data quality and consistency and accountability.

Similar comments were made about the data coming from multiple owners and operators and the concerns about the certification of those data upon promulgation of the ARP and the 2009 final GHG reporting rule to which we responded, and for which responses are summarized. We have attempted to provide maximum flexibility while ensuring accountability. For integrity of the program, one representative of the owners and operators must report for important reasons. Doing so ensures the accountability of owners or operators by, *inter alia,* reducing the likelihood of inconsistent submissions by a facility. Interposing another person or party between the facility and the Agency would dilute the DR's responsibility and in effect create multiple DRs for the facility. Additionally, leaving the ultimate responsibility of submission with the designated representative has the salutary effect of clarifying that the DR should be aware of all submissions and should inquire of the persons with personal knowledge of the information in those submissions. The DR has the flexibility to delegate duties, such as the preparation of submissions, but retains the ultimate responsibility to sign and certify all submissions. (*See,* 58 FR 3590, 3598, January 11, 1993.)

Furthermore, while the DR or his delegatee may need to acquire necessary reporting information from a third party, the DR must make the appropriate inquiries and certification when reporting; ultimate responsibility rests and must necessarily rest on him or her. The DR may provide in contracts, leases, or other agreements with third parties that true, accurate, and correct reporting information must be provided to the DR in a timely fashion. If the third party fails to provide timely, true, accurate, or correct information to the DR, then the DR has recourse contractually, or otherwise, on the third party. Finally, in recognition of their potential need to adjust contracts, leases, or agreements accordingly, additional flexibility has been provided in the rule to allow facilities to utilize best available monitoring methods for a limited period. For more information, see Section V of the preamble to the 2009 final Part 98 (74 FR 56260) and the document Mandatory Greenhouse Gas Reporting Rule: EPA's Response to Public Comments, Volume 11, Designated Representative and Data Collection, Reporting, Management and Dissemination (EPA–HQ–OAR–2008–0508).

7. Applicability

Comment: Multiple commenters requested that EPA develop a set of

screening tools to assist in the determination of which entities would be required to report under subpart W of 40 CFR part 98.

Response: Similar to what EPA has already provided for other subparts of the Greenhouse Gas Reporting Program to help reporters assess the applicability of the Greenhouse Gas Reporting Program [5] to their facilities, EPA plans to develop voluntary screening tools for the petroleum and natural gas source category. EPA anticipates that such tools would be based on easily determined inputs such as major equipment or operational counts. While the tools would be designed to provide help to potential reporters for complying with the rule, compliance with all Federal, State, and local laws and regulations remain the sole responsibility of each facility owner or operator subject to those laws and regulations. The tools would be a guide to determine those facilities that are clearly well below the reporting threshold, those clearly above, and those close to the threshold who will need to collect further data to make a proper determination.

III. Economic Impacts of the Rule

This section of the preamble summarizes the costs and economic impacts of the final subpart W rulemaking, including the estimated costs and benefits of subpart W, and the estimated economic impacts on affected facilities, including estimated impacts on small entities. Complete details of the economic impacts of the final subpart W rule can be found in the Economic Impact Analysis (EIA) in the rulemaking docket (EPA–HQ–OAR–2009–0923).

This section also contains a brief summary of major comments and responses on the economic impacts of the rule. EPA received a number of comments on the estimated compliance costs as well as other comments covering a variety of topics. Responses to significant comments can be found in Mandatory Greenhouse Gas Reporting Program: EPA's Response to Public Comments, Cost and Economic Impacts of the Rule, Docket EPA–HQ–OAR–2008–0508.

A. How were compliance costs estimated?

1. Summary of Method Used To Estimate Compliance Costs of the Final Rule

EPA estimated costs for each affected petroleum and natural gas industry facility to comply with subpart W. These estimates capture the costs associated with monitoring and reporting both equipment leaks and vented emissions and incremental combustion-related emissions.[6] EPA based the estimates on the number of labor hours to perform specific activities, the cost of labor, and the cost of monitoring equipment.

The costs of complying with the rule will vary from one petroleum and gas industry segment and facility to another, depending on factors such as the types of emissions, the number of affected sources at the facility and existing maintenance practices, monitoring, recordkeeping, and reporting activities at the facility. The costs include expenditures related to monitoring, recording, and reporting process emissions and, as relevant, emissions from stationary combustion.

Staff activities and associated labor costs may also vary over time. In particular, start-up activities, such as the installation of ports for compressors to allow for spot measurements, result in notably higher costs in the first year. Costs would also vary over time when site-specific emissions factors are developed every 2 or 3 years. Thus, EPA developed cost estimates for year one, which include start-up and first-time reporting, and for subsequent year reporting.

EPA estimated annual costs in 2006 dollars using the 2006 population of emitting sources. In addition, the agency estimated costs on a per entity basis and weighted them by the number of entities affected at the 25,000 metric tons CO_2e threshold.

To develop compliance cost estimates, EPA gathered existing data from EPA studies and publications, industry trade associations and publicly available data sources (*e.g.,* labor rates from the Bureau of Labor Statistics) to characterize the processes, sources, segments, facilities, and companies/entities affected. EPA also considered cost data submitted in public comments on the proposed rule.

Next, EPA estimated the number of affected facilities in each source category, the number and types of process equipment at each facility, the number and types of processes that emit GHGs, process inputs and outputs (especially for monitoring procedures that involve a carbon mass balance), and data that are already being collected for reasons not associated with the rule (to allow only the incremental costs to be estimated).

Labor Costs. The costs of complying with and administering this rule include time of managers, and of technical, operational and administrative staff in the private sector. Staff hours were estimated for activities, including:

- Developing a plan: Reporting entity management, legal, and technical staff hours to determine applicability of the rule, organize training on rule requirements, identify staffing assignments, train staff, and schedule activities as required below.
- Setting up records: Technical and field staff hours to develop data collection sheets and analytical model equations or linkages to input data into software programs.
- Collecting field data: Technical and field staff hours to collect necessary site-specific data and input that data into the analytical input tables.
- Monitoring: Staff hours to procure, install, operate and maintain emissions monitoring equipment, instruments and engineering analysis systems.
- Engineering models: Technical staff hours to link and execute engineering emissions estimation models and analytical procedures and to organize output data as required for reporting emissions.
- Recordkeeping: Staff hours required to organize, file and secure critical data and emissions quantification results as required for reporting and for documenting determinations of facilities exceeding and not exceeding reporting thresholds.
- Reporting: Management and staff hours to organize data, perform quality assurance/quality control, inform key management personnel, and report it to EPA through electronic systems.

Estimates of labor hours were based on economic analyses of monitoring, reporting, and recordkeeping for other rules; information from the industry characterization on the number of units or process inputs and outputs to be monitored; and engineering judgment by industry and EPA industry experts and engineers. See the Economic Impact Analysis for the Mandatory Reporting of Greenhouse Gas Emissions Under Subpart W Final Rule (EPA–HQ–OAR–2009–0923) for a detailed discussion about the engineering analysis used to develop these estimates. In addition, the Greenhouse Gas Emissions from the Petroleum and Natural Gas Industry: Background TSD (EPA–HQ–OAR–2009–0923) provides a discussion of the applicable engineering estimating and measurement technologies and any existing programs and practices.

EPA monetized the labor hours using wage rates from the Bureau of Labor Statistics (BLS). The agency also adjusted the wage rates to account for overhead.

[5] *http://www.epa.gov/climatechange/emissions/GHG-calculator/index.html.*

[6] Reporting entities that equal or exceed the subpart W threshold for equipment leak and vented emissions must report combustion emissions under subpart C, except for onshore production and LDCs, which must report combustion emissions under subpart W. Incremental combustion emissions refer to those from entities that did not trigger the subpart C threshold in the absence of subpart W.

Equipment Costs. Equipment costs include both the initial purchase price of monitoring equipment and installation cost. For example, the cost estimation method for large compressor seal emissions includes both purchase of a flow measurement instrument and installation of a measurement port in the vent piping where the end of the vent is inaccessible. Based on expert judgment, the engineering cost analyses annualized capital equipment costs with appropriate lifetime and interest rate assumptions. Cost recovery periods and interest rates vary by industry, but typically, one-time capital costs are amortized over a 5-year cost recovery period at a rate of seven percent. Not all segments require monitoring equipment capital expenditures but those that do are clearly documented in the Economic Impact Analysis.

Incremental Combustion Costs. EPA estimated the costs to monitor and report incremental combustion emissions, which are combustion-related emissions from entities that did not trigger the subpart C threshold in the absence of subpart W. As discussed earlier in this section, reporting entities that equal or exceed the subpart W threshold must report combustion emissions following the methods under subpart C, except for onshore production entities that consume field gas or process vent gas and LDCs, which must report combustion emissions following the methods under subpart W.

For purposes of cost estimation, EPA determined that under the final rule, entities that need to report incremental combustion-related emissions, as previously defined, would likely use either the Tier 1 calculation methodology as set forth in subpart C or the calculation methodology as set forth in subpart W (40 CFR 98.233(z)). EPA determined that the entities reporting incremental emissions under subpart C would likely not meet the requirements for Tier 2 or higher methods. However, as these entities will be reporting combustion emissions under subpart C (except onshore production and LDCs), if a facility did meet the requirements for a tier other than Tier 1, the facility would have to use the required method, as specified in subpart C.

Given that the combustion methodology in 40 CFR 98.233(z) is similar to the Tier 1 calculation methodology, EPA estimated the costs to monitor and report incremental combustion-related emissions based on the approach used under 40 CFR part 98, subpart C.[7] Specifically, EPA applied the Tier 1 calculation methodology to estimate the costs to monitor combustion emissions that became subject to reporting as a result of this final action. The Tier 1 approach bases estimates on a fuel-specific default CO_2 emission factor, a default high heating value of the fuel, and the annual fuel consumption from company records.

EPA based its conclusion that entities would likely report incremental combustion emissions using the Tier 1 method on three considerations for applicability of the Tier 2 calculation methodology and higher, as specified in subpart C, to the petroleum and natural gas industry: (1) Availability of high heating values (HHVs) for the fuels combusted at the frequency required by the Tier 2 calculation methodology, (2) the maximum rated heat capacity of the equipment, and (3) the type of fuel being combusted. First, in order to be allowed to use a Tier 2 analysis, units must have a rated heat capacity less than or equal to 250 mmBtu/hr, combust a fuel found in Table C–1 of subpart C, and sample the HHV of the fuel consumed at the required frequency in 40 CFR 98.34(a). It was determined that this minimum required sampling frequency is not currently carried out at these smaller units and therefore these units would not be required to use Tier 2 methodology. These units will generally follow Tier 1 methodology.

Second, Tier 3 and Tier 4 calculation methodologies generally apply to equipment with a maximum rated heat capacity greater than 250 mmBtu/hr. A 250 mmBtu/hr rating means that the emissions from that individual unit alone will be greater than 25,000 metric tons CO_2e; these emissions would be subject to reporting under subpart C even in the absence of subpart W and therefore would not fall in the category of incremental combustion emissions considered in this analysis.

Third, the predominant fuels used in the petroleum and natural gas industry are produced natural gas, pipeline quality natural gas, distillate fuel, and any products recovered from equipment leaks and vents. The use of produced natural gas is predominant in onshore petroleum and natural gas production. Under the final rule for subpart W, reporters in this segment are allowed to use methods similar to Tier 1 for all combustion emissions sources that use produced natural gas.

In the remaining segments, equipment using produced natural gas or products recovered from equipment leaks and vents are normally required to use Tier 2 methodology or higher. However, as described previously, if the unit has a rated heat capacity less than or equal to 250 mmBtu/hr, then the unit probably does not currently receive HHV at the required frequency for a Tier 2 analysis and could use a Tier 1 analysis instead. If the unit has a maximum rated heat capacity greater than 250 mmBtu/hr, then as just noted, emissions from a unit of this size would already be subject to reporting under subpart C and would not be included in the incremental combustion emissions category considered in this analysis. In sum, the use of Tier 1 methodology for incremental combustion is a reasonable assumption for costing the subpart W rule.

Reporting Determination Costs. Facilities will have to estimate their emissions to determine whether they exceed the reporting threshold. The costs for making a reporting determination includes primarily the use of screening tools, which EPA plans to develop. The costs also account for cases in which preliminary monitoring is also required to make a reporting determination.

2. Summary of Comments and Responses

EPA received many comments on the method used to estimate the rule's compliance costs. Nearly all of these comments focused on both the methodology and the resulting cost estimates. Therefore, a summary of these comments and EPA's response is presented in the next section of this preamble, Section III.B.2, What are the costs of the rule? For the detailed responses to all comments received, see Mandatory Greenhouse Gas Reporting Rule: EPA's Response to Public Comments, Subpart W: Petroleum and Natural Gas Systems (EPA–HQ–OAR–2009–0923).

B. What are the costs of the rule?

1. Summary of Costs

Table 6 of this preamble presents for each segment the total costs and costs per ton in the first year and subsequent years as well as the annualized costs. EPA estimates that the total private sector cost in the first year is about $62 million and about $19 million for subsequent years; the annualized cost over a 20-year time period is about $21 million (3 percent discount rate) and $22 million (7 percent discount rate) (2006$). Of these costs, EPA estimates

[7] 40 CFR part 98 uses the IPCC Tier concept to estimate combustions emissions (74 FR 56260, October 30, 2009). See EPA–HQ–OAR–2008–0508–0004, U.S. EPA, Technical Support Document for Stationary Fuel Combustion Emissions: Proposed Rule for Mandatory Reporting of Greenhouse Gases, January 30, 2009, for more information about the IPCC Tier methodology (pgs 10–15).

roughly $40 million to report process emissions in the first year and about $15 million in subsequent years. In addition, EPA estimates approximately $3 million to report incremental combustion related emissions in both the first year and in the subsequent years.

The reporting threshold determines the number of entities required to report GHG emissions and hence the costs of the rule. The number of entities excluded increases with higher thresholds. Table 7a and Table 7b of this preamble provide the cost-effectiveness analysis for various thresholds examined. Two metrics are used to evaluate the cost-effectiveness of the emissions threshold. The first is the average cost per metric ton of emissions reported ($/metric ton CO_2e). The second metric for evaluating the threshold option is the incremental cost per metric ton of emissions reported. The incremental cost is calculated as the additional (incremental) cost per metric ton using 25,000 metric tons CO_2 equivalent as the baseline. For more information about the first year capital costs (unamortized), project lifetime and the amortized (annualized) costs for each petroleum and gas industry segment please refer to Section 4 of the Economic Impact Analysis for the final subpart W.

TABLE 6—NATIONAL COST ESTIMATES FOR PETROLEUM AND NATURAL GAS SYSTEMS

[2006$] [1]

Segment	First year		Subsequent year		Annualized cost (3%) [2] ($million)	Annualized cost (7%) [3] ($million)
	National cost ($million)	Cost ($/metric ton)	National cost ($million)	Cost ($/metric ton)		
Processing	8.13	0.26	2.10	0.07	2.43	2.57
Transmission	16.87	0.40	6.49	0.15	7.02	7.26
Underground Storage	2.73	0.35	1.02	0.13	1.10	1.14
LNG Storage	0.70	0.41	0.26	0.15	0.28	0.29
LNG import/export	0.14	0.44	0.03	0.09	0.04	0.04
LDC	3.31	0.15	1.35	0.06	1.47	1.52
Onshore Production	26.58	0.12	7.54	0.03	8.61	9.05
Offshore Production	3.33	0.65	0.24	0.05	0.42	0.49
Total (8 Segments)	61.78	0.18	19.01	0.06	21.36	22.34

[1] Includes determination costs for non-reporters. These estimates are conservative and should be viewed as an upper-bound because the determination costs were applied at the facility-level rather than the company-level. For example, for offshore production, determination costs were applied to each of the approximately 3,000 platforms in the Gulf of Mexico rather than the 86 operators in that region. See the memo, "Estimates of Determination Costs," in the docket for complete details and additional determination cost estimates (EPA–HQ–OAR–2009–0923).

[2] The cost to report annualized over 20 years at 3 percent (see additional details in section 5 of the EIA for the final rule).

[3] The cost to report annualized over 20 years at 7 percent (see additional details in section 5 of the EIA for the final rule).

TABLE 7A—THRESHOLD COST-EFFECTIVENESS ANALYSIS

[First Year, 2006$]

Threshold (metric tons CO_2e)	Facilities required to report	Total costs [1] (million 2006$)	Downstream emissions reported ($MtCO_2e$/year)	Percentage of total downstream emissions reported	Average reporting cost ($/Mt) [1]	Incremental cost ($/Mt) [1,2]
1,000	12,622	$148.67	391	99%	$0.38	$1.62
10,000	4,400	79.01	362	91%	0.22	0.69
25,000	2,786	61.78	337	85%	0.18	0.00
100,000	1,062	44.32	273	69%	0.16	(0.27)

[1] Includes determination costs for non-reporters. The upper-bound first-year determination cost estimates for each threshold are as follows: 1,000 metric tons CO_2e = $12.3 million; 10,000 metric tons CO_2e = $17.4 million; 25,000 metric tons CO_2e = $18.4 million; and 100,000 metric tons CO_2e = $19.3 million. As noted in previous table, these estimates are conservative. See the memo, "Estimates of Determination Costs," in the docket for complete details and additional determination cost estimates (EPA–HQ–OAR–2009–0923).

[2] Cost per metric ton relative to the selected option (25,000 MT threshold).

TABLE 7B—THRESHOLD COST-EFFECTIVENESS ANALYSIS

[Subsequent Year, 2006$]

Threshold (metric tons CO_2e)	Facilities required to report	Total costs [1] (million $2006)	Downstream emissions reported ($MtCO_2e$/year)	Percentage of total downstream emissions reported	Average reporting cost ($/Mt) [1]	Incremental cost ($/Mt) [1, 2]
1,000	12,622	$73.44	391	99%	$0.19	$1.02
10,000	4,400	30.51	362	91%	0.08	0.46
25,000	2,786	19.01	337	85%	0.06	0.00

TABLE 7B—THRESHOLD COST-EFFECTIVENESS ANALYSIS—Continued

[Subsequent Year, 2006$]

Threshold (metric tons CO_2e)	Facilities required to report	Total costs [1] (million $2006)	Downstream emissions reported ($MtCO_2e$/year)	Percentage of total downstream emissions reported	Average reporting cost ($/Mt) [1]	Incremental cost ($/Mt) [1, 2]
100,000	1,062	9.77	273	69%	0.04	(0.14)

[1] Includes determination costs for non-reporters. The upper-bound determination costs in subsequent years for each threshold are as follows: 1,000 metric tons CO_2e = $1.8 million; 10,000 metric tons CO_2e = $1.0 million; 25,000 metric tons CO_2e = $0.6 million; and 100,000 metric tons CO_2e = $0.2 million. As noted in previous table, these estimates are conservative. See the memo, "Estimates of Determination Costs," in the docket for complete details and additional determination cost estimates (EPA–HQ–OAR–2009–0923).

[2] Cost per metric ton relative to the selected option (25,000 MT threshold).

2. Summary of Comments and Responses

Overview. EPA received extensive comments on the methodology and cost data presented in the Economic Impact Analysis for the proposed subpart W (EPA–HQ–OAR–2009–0923–0020). The comments can be sorted into two major categories: (1) Comments on the costs for facilities to make a reporting determination, and (2) comments on cost estimates of labor and equipment for certain industry segments to monitor and report emissions.

Reporting Determination. Commenters stated that EPA's analysis underestimated the true compliance burden by omitting the costs for facilities to make a reporting determination—*i.e.,* estimate annual emissions to determine whether they meet the reporting threshold. These commenters recommended that EPA account for reporting determination costs incurred by both facilities that report as well as non-reporters, *i.e.,* those that monitor emissions but do not meet the reporting threshold. As discussed in Section II.F.6 of this preamble, the commenters also recommended that EPA develop screening tools to reduce the burden for facilities to make a reporting determination.

EPA agrees with commenters that the EIA would better reflect the rule's total economic burden by including all reporting determination costs. While EPA's compliance cost estimates accounted for the reporting determination burden in the proposal, it did not include the determination burden for non-reporters. Therefore, EPA has estimated the burden for reporting determinations made by non-reporters and included it in the EIA for the final rule. EPA based this estimate on the assumption that non-reporters will use a screening tool, which EPA intends to provide to facilitate reporting determinations. The estimated total cost for all non-reporters to make a reporting determination is about $18.4 million, which accounts for use of the screening tool and, if required, the cost to conduct further screening; Section 4 of the EIA provides a complete discussion of the basis for this estimate.[8] EPA expects use of the screening tool to minimize burden by allowing facilities to enter basic activity data, such as well count and drilling activity, into the tool to roughly assess whether they meet the threshold. Facilities for which the tool estimates emissions well below the threshold will generally not need to conduct further screening. Facilities for which the tool estimates emissions near the threshold will generally conduct additional screening, and this is reflected in the cost estimates.

Labor and Equipment Costs. Many commenters disagreed with EPA's cost estimates in particular segments and presented alternative estimates that in some cases differed from the agency's estimates by orders of magnitude. Many of the comments suggested that EPA's estimates of labor costs (*e.g.,* number of labor hours required to collect field data, to use equipment and engineering analysis systems to measure emissions, and to manage the emissions data) and equipment costs (*e.g.,* purchase of flow meters) were too low.

In development of this rule and in response to comments, EPA collected and evaluated cost data from multiple sources, closely reviewed the input received through public comments, and weighed the analysis prepared against this input. EPA also carefully weighed the burden of incrementally more comprehensive methods of measuring and calculating emissions against the increase in coverage and accuracy, and in some cases revised or clarified the measurement and calculation requirements. EPA has thus adjusted both the rule requirements and its cost estimates in response to comments, and concludes that its methodology and final cost estimates appropriately account for the compliance burden under this final rule. EPA determined that the commenters' alternative estimates are much higher than the agency's because of assumptions and interpretations that were either inconsistent with EPA's original intent (and which EPA has now clarified) or requirements that have been revised; in some cases, the alternative estimates were also based on higher-cost, optional monitoring methods.

EPA summarizes below the key assumptions, revisions, misinterpretations, and use of higher-cost, optional methods and the resulting costs estimates that differed most from EPA's estimates. These comments were concentrated in three industry segments: (1) Onshore production, (2) natural gas processing, and (3) natural gas distribution segments.

3. Onshore Production

Comment: Commenters stated that EPA's estimated compliance costs for the onshore petroleum and natural gas production segment were too low. Overall, the commenters concluded that EPA should reassess the analysis of entities covered by the rule, the assumptions underlying the cost estimates, and reduce the monitoring and reporting burden.

One commenter provided detailed, alternative cost estimates and concluded that costs could be as high as $1.8 billion for the onshore production segment in the first year, which is notably higher than EPA's proposal estimate of $30.4 million for this segment. The commenter made various assumptions that differed from EPA's analysis and accounted for the difference in the cost estimates. One

[8] These estimates are conservative and should be viewed as an upper-bound because the determination costs were applied at the facility-level rather than the company-level. For example, for offshore production, determination costs were applied to each of the approximately 3,000 platforms in the Gulf of Mexico rather than the 86 operators in that region. See the memo, "Estimates of Determination Costs," in the docket for complete details and additional determination cost estimates (EPA–HQ–OAR–2009–0923).

source of the difference stemmed from the estimate of the number of sources in the onshore production segment subject to monitoring. Specifically, the commenter assumed that because the proposed rule would cover about 80 percent of emissions from the petroleum and gas industry, approximately 80 percent of the sites and equipment at each onshore production facility would be subject to the rule. The commenter therefore concluded that the rule would cover 80 percent of the 823,000 wells in the nation, or about 667,000 wells, which exceeds EPA's estimated coverage of about 467,000 wells, plus sources at non-well sites.[9] In particular, the commenter said that counting components to estimate emissions from equipment leaks would be onerous.

Additional differences in the commenter's and EPA's estimates resulted from differences in the assumptions about labor wages and time spent sampling. For example, the commenter presented a breakdown of the labor and equipment costs, such as labor wages and time spent on sampling activities. Sampling activities accounted for a notable fraction of the commenter's estimates. For example, the commenter estimated costs for sampling activity to determine the composition of produced natural gas and low pressure separator oil and to analyze all tanks for hydrocarbon liquids and produced water.

In addition, data management software constituted a substantial fraction of the commenter's total cost estimate. The commenter stated that individual reporters would spend between $100,000 and $850,000 for data management software, which totals to approximately $123 million to $1 billion for the entire segment.

EPA has carefully reviewed these comments and disagrees that the true costs will be substantially higher than those estimated by the agency.

First, EPA disagrees with the commenter's estimate of the number of sources subject to reporting because it incorrectly assumed that the proposed rule covered 80 percent of all wells in the United States. The commenter's assumption that each reporter would need to monitor 80 percent of its wells in order to report about 80 percent of its emissions implies that the type and quantity of emissions from each well are identical. This assumption, which resulted in much more labor and complex monitoring than required under the proposal, is incorrect. The quantity and type of emissions from wells are variable; in fact, it is not necessary to monitor 80 percent of wells to account for 80 percent of emissions and neither the proposed nor final rules would require such a large percentage of wells to be covered. Because the final rule tends to target those wells that have the higher emissions, based on its threshold analysis, EPA estimates that approximately 60 percent of the wells are subject to the monitoring requirements, and that these wells will account for about 85 percent of total GHG emissions from this segment.

EPA conducted the threshold analysis using actual data available through the commercial database from HPDI LLC, which collects these data primarily from individual petroleum and natural gas producing States that require petroleum and natural gas producing companies to report field data. The HPDI database includes operator well count. In most cases, HPDI provides data for each well on the production of petroleum and natural gas by operator and basin; some data are listed by property, which is a collection of wells. EPA developed a reasonable estimate of the emissions per well by apportioning the national emissions from each emissions source type to each of the wells based on the contribution of petroleum and natural gas production from each well to the national total. This analysis suggests that approximately 60 percent of the wells are owned or operated by entities that would trigger the reporting threshold, not 80 percent.

The commenter's analysis of the onshore production burden also incorrectly assumed that the rule required all onshore production reporters to spend up to $1 billion on data management software. EPA disagrees with this assumption. EPA notes that the rule does not require reporters to purchase data collection software. It is at the reporters' discretion to do so.

Although the commenter did not provide any information about the software represented in its analysis (except for cost), a system in the price range assumed by the commenter is usually customized to accommodate data needs that extend far beyond the scope of this rule. For example, such systems are typically tailored to an individual facility and used to simultaneously manage, among other things, criteria pollutants under the CAA, water discharge and permit data under the Clean Water Act, employee accident and injury reporting under Occupational Safety and Health Administration requirements, and onsite hazardous and non-hazardous solid waste information for the Resource Conservation and Recovery Act. In contrast, even the largest of reporters under this final action will be able to use standard spreadsheets or databases to collect the emissions data and perform calculations at a facility level. Spreadsheet software can store and manipulate tens of thousands of data points, and database software can store hundreds of thousands of data points. In short, spreadsheet and database software systems are capable of managing far more data than will be necessary for even the largest onshore production reporter under subpart W. Accordingly, EPA accounted for data management costs by factoring in estimates of labor to set up spreadsheets and other archiving and recordkeeping activities, as well as equipment costs like file cabinets and external hard drives; see the EIA for a complete discussion.

Another assumption contributing to the commenters' high cost estimates concerned the extent of sampling required. For example, commenters assumed that reporters would need to sample produced natural gas. EPA disagrees in part because it expects reporters to already have this information and would therefore not need to sample. In particular, producers conduct composition analysis of produced natural gas in order to pay royalties and taxes; they could use these data to estimate the percentage of GHGs instead of analyzing additional samples.

The commenters also assumed that sampling would be required for tanks and dehydrators, which resulted in cost estimates significantly higher than EPA's. Although not explicitly stated in the proposed subpart W, EPA did not intend for reporters to sample either the low pressure separator oil associated with tanks or natural gas going to dehydrators. Therefore, EPA has clarified the final rule to allow reporters that use the engineering modeling software to rely on the software's default values.

In addition, commenters also assumed that produced water and hydrocarbon liquids produced from all reporting wells in the country would have to be sampled to determine and report CO_2 content; this assumption resulted in a large sampling cost. However, EPA never intended for reporters to sample produced water and hydrocarbon liquids from all wells but instead targeted EOR operations. Therefore, EPA clarified in this final action that the sampling requirement for hydrocarbon liquids applies only to EOR operations; EPA also clarified in the final rule that

[9] Commenter estimated 823,000 wells based on a "US Energy Information Administration's 2008 report," but did not provide any other citation information.

reporting from produced water emissions sources is not required.

Finally, in response to comments about the costs to count all components to determine equipment leaks, EPA has revised the rule to require reporters to count only major equipment (*see* Section II.E of this preamble). EPA expects this revision to reduce the reporters' burden because in many cases they already have an inventory of the major equipment at each well site.

For the detailed responses to all of the comments received about the costs for onshore production, see Mandatory Greenhouse Gas Reporting Rule: EPA's Response to Public Comments, Subpart W: Petroleum and Natural Gas Systems (EPA–HQ–OAR–2009–0923).

4. Natural Gas Processing

Comment: Commenters stated that EPA's estimated compliance costs for the natural gas processing segment were too low. They recommended that EPA reassess the costs for the processing segment and simplify the reporting requirements. In particular, one commenter estimated compliance costs at $4.5 billion for the processing segment. Of the $4.5 billion, the commenter attributed $3.9 billion to monitoring activities at gathering lines and boosting stations. The commenter attributed the remainder of its estimate to processing facilities.

Response: Based on its thorough review of the comments, EPA determined that the commenter's estimates for processing facilities were higher in part because it made assumptions that were inconsistent with EPA's intent. Specifically, it assumed higher-cost, optional monitoring methods for processing facilities in its analysis. However, EPA agrees with the commenter that the agency's analysis partly underestimated the costs at processing facilities to place meters on acid gas removal units. Likewise, EPA agrees that the agency's analysis did not accurately account for the compliance costs for gathering lines and boosting stations in the processing segment.

In the case of processing facilities, the commenter assumed that the rule would require reporters to install permanent flow meters, at an assumed cost of $100,000 per meter, to measure emissions from compressor venting. However, the rule does not require this and allows installation of a port for using a temporary insertion flow meter for an annual one-time estimate of vented emissions. Temporary flow meters are a significantly cheaper option than permanent meters. Based on current market data, EPA estimated approximately $1,000 for each installation of a temporary meter port for reciprocating compressors; about $5,000 for centrifugal compressors; and about $800 in capital costs for a reporter's hotwire anemometer.[10] Reporters will only need to purchase one hotwire anemometer per facility; the hotwire anemometer can be used to measure the flow rate at multiple compressors at the facility.

In addition, EPA considered and responded to the commenter's assumption about the burden to install permanent outflow meters at acid gas removal (AGR) vents. EPA incorrectly assumed that outlet meters were already installed at most sites. Specifically, EPA determined upon further analysis that the flow rates at the inlet and outlet streams for an acid gas removal unit are roughly similar. EPA therefore adjusted the calculation method in the final rule to allow the use of flow rate at the inlet or outlet, where available, based on its assumption that the outlet flow is the same as the inlet flow. In addition, if equipment to measure the flow rate, such as CEMS or a meter on the vent stack of the acid gas removal unit, is not available, the final rule allows reporters to use engineering estimates of flow rate of natural gas into the AGR. These revised requirements are reflected in the cost analysis in the final EIA.

Finally, EPA used data about the number of gathering lines and boosting stations presented by the commenter as a basis to modify the rule requirements. EPA agrees that its EIA for the proposed rule did not accurately reflect the number of gathering lines and boosting stations that would have been subject to the rule. EPA has dropped the requirement for reporting on gathering lines and boosting stations from the final rule, so these costs are not included in the analysis. Instead, EPA will continue to evaluate options for obtaining emissions data from gathering lines and boosting stations in a way that maximizes data quality while balancing industry burden; see Section II.F.1 of this preamble for further discussion.

5. Natural Gas Distribution

Comment: Commenters stated that EPA's estimated compliance costs for the natural gas distribution segment were too low by orders of magnitude. For example, one commenter estimated approximately $11.3 billion for all reporters in the natural gas distribution segment to comply with the rule. A large fraction of this estimate was based on the commenter's assumption that the leak detection requirements applied to customer meters, *i.e.,* industrial, commercial, and residential meters. The commenter did not, however, provide adequate information about the basis for the remainder of its cost estimate. In particular, the commenter stated that in addition to the costs of using an optical gas imaging instrument, each LDC would spend on average about $41 million annually to comply with the rule, but did not specify any compliance activities that accounted for the $41 million.

Response: EPA has carefully reviewed these comments and disagrees that the agency's cost estimates should be orders of magnitude higher. EPA has determined that commenters' interpretations of the proposed rule were inconsistent with the Agency's intent and this likely accounted for the discrepancies between the estimates.

EPA disagrees with the commenter's cost estimate because it is based on the assumption that customer meters are subject to leak detection requirements. The commenter assumed that the proposed rule required leak detection and emissions estimates for all customer meters, *i.e.,* industrial, commercial, and residential meters; the commenter estimated reporters would spend approximately $5.4 billion to monitor these meters. EPA never intended to require reporting for customer meters, which would involve a major cost and have minimal effect on the quality of emissions estimates. EPA has therefore clarified the final rule to note that sources subject to reporting in the natural gas distribution segment do not include customer meters for natural gas.

In addition, EPA has responded to the commenter's recommendation to reduce the compliance costs by simplifying the requirements for optical gas imaging instrument equipment, *e.g.,* allowing alternatives to infrared cameras in some situations. As discussed previously in Section II.E of this preamble, this final action provides more flexibility and further reduces the compliance cost by allowing facilities to use alternative leak detection equipment.

The commenter did not identify the monitoring activities and assumptions underlying its estimate of $5.9 billion to comply with leak detection requirements. The commenter noted that it obtained the estimate from an informal survey of its members but did not provide sufficient information or documentation substantiating what was included in this estimate. Because EPA has accounted for the two primary issues raised by the commenter (monitoring of customer meters and allowable leak detection equipment),

[10] For example, see *Global Water Instrumentation Inc.,* at *http://www.globalw.com/products/407119.html.*

EPA did not change its cost estimate to reflect the much higher costs estimated by the commenter.

C. What are the economic impacts of the rule?

1. Summary of Economic Impacts

EPA prepared an economic impact analysis to evaluate the impacts of the rule on affected small and large reporting entities.

To estimate the economic impacts of the rule, EPA first conducted a screening assessment, comparing the estimated total annualized compliance costs for the petroleum and gas industry, where industry is defined in terms of North American Industry Classification System (NAICS) code, with industry average revenues.[11] The national costs of the rule are notable because there are a large number of affected entities, but per-entity costs are low. Average cost-to-sales ratios for establishments in the affected NAICS codes for all segments is less than 1 percent, except in the 1–20 employee range for the onshore petroleum and natural gas segment.

These low average cost-to-sales ratios indicate that the final rule is unlikely to result in significant changes in firms' production decisions or other behavioral changes that would result in significant changes in prices or quantities in affected markets. Given that prices and quantities are unlikely to change significantly, and consistent with the agency's guidelines for economic analyses, EPA used the engineering cost estimates to measure the social cost of the rule, rather than modeling market responses and using the resulting measures of social cost.[12] Table 8 of this preamble summarizes cost-to-sales ratios for affected industries.

TABLE 8—ESTIMATED COST-TO-SALES RATIOS FOR AFFECTED ENTITIES

(Year 1)

NAICS	NAICS Description	MRR Segments included	Average cost per entity ($1,000/entity)	Average entity cost-to-sales ratio [a] (percent)
211	Crude Petroleum and Natural Gas Extraction.	Onshore Production, Offshore Production, Processing.	$17.1	0.08
486210	Pipeline Transportation of Natural Gas	Transmission, Underground Storage, LNG Storage, and LNG Import Terminals.	15.7	0.08
221210	Natural Gas Distribution	Distribution	13.9	0.06

[a] This ratio reflects first year costs. Subsequent year costs will be lower because they do not include initial start-up activities.

2. Summary of Comments and Responses

While EPA received a substantial number of comments on the estimated costs for reporters to comply with the rule, there were minimal additional comments on the economic impacts, such as changes in production or effects on small entities in particular. As discussed in the previous section of this preamble, commenters said that EPA underestimated the compliance costs and recommended that EPA carefully review the economic impact analysis. See the previous section of this preamble for a summary; the response to comments document, Mandatory Greenhouse Gas Reporting Rule: EPA's Response to Public Comments, Subpart W: Petroleum and Natural Gas Systems, provides detailed comments.

As discussed in Section III.B.2 of this preamble, EPA collected and evaluated cost data from multiple sources, thoroughly reviewed the input received through public comments, and weighed the analysis prepared for the proposal against this input. EPA has determined that this analysis provides a reasonable characterization of costs and economic impacts and that the documentation provides adequate explanation of how the costs and impacts were estimated.

D. What are the impacts of the rule on small businesses?

1. Summary of Impacts on Small Businesses

As required by the RFA and Small Business Regulatory Enforcement and Fairness ACT (SBREFA), EPA assessed the potential impacts of the rule on small entities (small businesses, governments, and non-profit organizations). (*See* Section IV.C of this preamble for definitions of small entities.)

EPA has determined the selected threshold maximizes the rule coverage with 85 percent of U.S. GHG emissions from the industry segments reported by approximately 2,786 reporters, while keeping reporting burden to a minimum. Furthermore, many industry stakeholders that EPA met with expressed support for a 25,000 metric ton CO_2e threshold because it sufficiently captures the majority of GHG emissions in the United States, while excluding many of the smaller facilities and sources. In response to the comments EPA received about the monitoring and reporting requirements in specific source categories, EPA incorporated changes that reduce burden on reporters while maintaining a high level of emissions coverage. For information on these issues, refer to the discussion of each segment in this preamble.

EPA conducted a screening assessment comparing compliance costs to onshore petroleum and natural gas industry specific receipts data for establishments owned by small businesses. This ratio constitutes a "sales" test that computes the annualized compliance costs of this rule as a percentage of sales and determines whether the ratio exceeds one percent.[13] The cost-to-sales ratios were constructed at the establishment level (average reporting program costs per establishment/average establishment receipts) for several business size ranges. This allowed EPA to account for receipt differences between establishments owned by large and small businesses and differences in small business definitions across affected industries. The results of the screening assessment are shown in Table 9 of this preamble.

[11] **Note:** Before totaling the industry compliance costs, EPA estimated costs for each of the industry segments. EPA then summed the costs for each segment at the NAICS level for this screening assessment.

[12] Guidelines for Preparing Economic Analyses (EPA, 2002, p. 124–125).

[13] EPA's RFA guidance for rule writers suggests the "sales" test continues to be the preferred quantitative metric for economic impact screening analysis.

TABLE 9—ESTIMATED COST-TO-SALES RATIOS, SALES RECEIPTS ($MILLION), AND NUMBER OF ESTABLISHMENTS FOR FIRST YEAR COSTS BY INDUSTRY AND ENTERPRISE SIZE[a]

Industry	NAICS	NAICS Description	SBA Size standard in num of employees (effective March 11, 2008)	Average cost per entity ($1,000/entity)	All enterprises	Owned by enterprises with:						
						1 to 20 Employees	20 to 99 Employees	100 to 499 Employees	<500 Employees	500 to 749 Employees	750 to 999 Employees	1,000 to 1,499 Employees
Onshore petroleum and natural gas production; offshore petroleum and natural gas production; LNG storage; LNG import and export.	211	Crude Petroleum and Natural Gas Extraction.	500	$17.1	0.08% [d]$160,879 [e]7,629	1.32% $7,573 5,836	0.11% $6,790 456	0.05% $9,609 292	0.47% $23,972 6,584	0.47% $4,609 60	0.03% $3,991 64	0.02% $2,805 31
Onshore natural gas processing; onshore natural gas transmission; underground natural gas storage.	486210	Pipeline Transportation of Natural Gas.	[b]	$15.7	0.08% [d]$35,897 [e]1,936	0.12% $1,035 81	0.40% [c]$106 27	0.24% [c]$394 61	0.10% $2,566 36	[c] [c] 169	[c] [c] 2	[c] [c] 20
Natural gas distribution	221210	Natural Gas Distribution	500	$13.9	0.06% [d]$67,275 [e]2,897	0.27% $2,524 483	0.03% $4,642 86	0.06% $2,878 131	0.11% $13,127 700	0.07% $865 68	0.02% $2,116 33	0.03% $3,757 73

[a] The Census Bureau defines an enterprise as a business organization consisting of one or more domestic establishments that were specified under common ownership or control. The enterprise and the establishment are the same for single-establishment firms. Each multi-establishment company forms one enterprise—the enterprise employment and annual payroll are summed from the associated establishments. Enterprise size designations are determined by the summed employment of all associated establishments.

Since the SBA's business size definitions (*http://www.sba.gov/size*) apply to an establishment's ultimate parent company, EPA assumes in this analysis that the enterprise definition above is consistent with the concept of ultimate parent company that is typically used for Small Business Regulatory Enforcement Fairness Act (SBREFA) screening analyses.

[b] The SBA size standard for NAICS 486210 is $7 million in average annual receipts.

[c] The U.S. Census Bureau has missing data for this employee range; some estimates were possible using partial data. The receipts for these categories underestimate true value.

[d] This row presents total annual sales receipts ($Million)for establishments in each enterprise category. Source: U.S. Census Bureau.

[e] This row presents total number of establishments in each enterprise category. Source: U.S. Census Bureau.

As shown, the cost-to-sales ratios are less than one percent for establishments owned by small businesses that EPA considers most likely to be covered by the reporting program. The only exception is the ratio for enterprises with 1–20 employees for crude petroleum and natural gas extraction, which is greater than 1 percent but less than 2 percent. It is important to note that this analysis does not screen out entities that would be below the reporting threshold. Based on further analysis of production data in HPDI, EPA estimates that in most cases, the smaller enterprises have very small operations (such as a single family owning a few production wells) that are unlikely to cross the 25,000 metric tons CO_2e reporting threshold.

In other cases, a small enterprise (less than 20 employees) may own large operations but conduct nearly all of its operations through service providers, so that it has few employees of its own. Such enterprises, however, tend to have higher annual revenues than those with small operations and therefore have lower cost-to-sales ratios. The review of production data by operator in HPDI shows a ratio of less than one percent for the operators expected to meet the reporting threshold.

EPA took a conservative approach with the model entity analysis. Although the appropriate SBA size definition should be applied at the parent company (enterprise) level, data limitations allowed us only to compute and compare ratios for a model establishment within several enterprise size ranges. That is, the analysis assumes that each establishment is a unique enterprise. To the extent that a single parent may own multiple establishments, the small entity impacts could be lower.

Although this rule will not have a significant economic impact on a substantial number of small entities, the Agency nonetheless tried to reduce the impact of this rule on small entities, including seeking input from a wide range of private- and public-sector stakeholders. When developing the rule, the Agency took special steps to ensure that the burdens imposed on small entities were minimal. The Agency conducted several meetings with industry trade associations to discuss regulatory options and the corresponding burden on industry, such as recordkeeping and reporting. The Agency investigated alternative thresholds and analyzed the marginal costs associated with requiring smaller entities with lower emissions to report. The Agency also established a reasonable balance of direct measurement, engineering estimation, and emission factors based monitoring methods to quantify emissions, which provides flexibility to entities and helps minimize reporting costs.

2. Summary of Comments and Responses

Comment: Some commenters noted concerns about the rule's impact on small businesses, in particular that small businesses would have to apply the monitoring methods specified in the rule to determine whether they have to report under the rule. One commenter recommended that EPA redo its analysis of the rule's impacts on small businesses using "more accurate economic impact data," but did not include or identify alternative data sources for such an analysis. See the response to comments document, Mandatory Greenhouse Gas Reporting Rule: EPA's Response to Public Comments, Subpart W: Petroleum and Natural Gas Systems, for the detailed comments.

Response: EPA has assessed the economic impact of the final rule on small entities and concluded that this action will not have a significant economic impact on a substantial number of small entities. While the commenter did not provide details in its recommendation that EPA redo the small business analysis using "more accurate economic impact data," EPA acknowledges the importance of using the best available economic data. Accordingly, EPA analyzed the economic impact on small entities using the revised cost estimates discussed in this section of the preamble and in the EIA. These cost estimates were the same order of magnitude as those estimated under the proposal; the estimates also reflected improvements made in response to comments as well as changes to the monitoring requirements in the final rule.

In addition, EPA's assessment of the economic impacts on small entities continued to rely on data from the Statistics of U.S. Businesses, a well-known database that provides national information on the distribution of economic variables by the size of entity. As noted in the EIA, these data were developed in cooperation with, and partially funded by, the Office of Advocacy of the Small Business Administration. Complete documentation of this analysis can be found in Section 5.2 of the EIA for the final rule.

Finally, in response to concerns about the cost to make a reporting determination, EPA intends to provide screening tools. As discussed above, these tools will aid small businesses and other potential reporters in determining whether or not they have to report.

The response to comments document, Mandatory Greenhouse Gas Reporting Rule: EPA's Response to Public Comments, Subpart W: Petroleum and Natural Gas Systems, presents the detailed comments and responses related to the rule's impact on small businesses.

E. What are the benefits of the rule for society?

EPA examined the potential benefits of the final subpart W. The benefits of a reporting system are based on their relevance to policy making, transparency, and market efficiency. Benefits are very difficult to quantify and monetize. Instead of a quantitative analysis of the benefits, EPA conducted a systematic literature review of existing studies including government, consulting, and scholarly reports.

A mandatory reporting system for petroleum and natural gas systems will benefit policymakers and the public by increased availability of facility emissions data. Public data on emissions allows for accountability of emitters to the public. Citizens, community groups, and labor unions have made use of data from Pollutant Release and Transfer Registers to negotiate directly with emitters to lower emissions, circumventing greater government regulation. Publicly available emissions data also will allow individuals to alter their consumption habits based on the GHG emissions of producers. Facility-specific emissions data will also aid local, State, and national policymakers as they evaluate and consider future climate change policy decisions.

The benefits of mandatory reporting of petroleum and natural gas systems GHG emissions to government also include enhancing existing programs, such as the Natural Gas STAR Program, and that provide significant benefits. Through the Natural Gas STAR Program, EPA has identified over 120 proven, cost effective technologies and practices to reduce emissions of methane—the primary constituent of natural gas—from operations in all of the major industry sectors—production, gathering and processing, transmission, and distribution. The final subpart W will increase knowledge of the location and magnitude of significant methane emissions sources in the petroleum and natural gas industry, which can result in improvements in these technologies and the identification of new emissions reducing technologies.

Benefits to industry of GHG emissions monitoring include the value of having verifiable data to present to the public to demonstrate appropriate environmental stewardship, and a better understanding of their emission levels and sources to identify opportunities to reduce emissions. Such monitoring allows for inclusion of standardized GHG data into environmental management systems, providing the necessary information to achieve and disseminate their environmental achievements.

Standardization will also be a benefit to industry. Once facilities invest in the institutional knowledge and systems to report emissions, the cost of monitoring should fall and the accuracy of the accounting should improve. A standardized reporting program will also allow for facilities to benchmark themselves against similar facilities to understand better their relative standing within their industry.

The EIA for this final rule as well as the RIA for 40 CFR part 98 summarize the anticipated benefits, which include providing the government with sound data on which to base future policies and providing industry and the public independently verified information documenting firms' environmental performance. While EPA has not quantified the benefits of the mandatory reporting rule, EPA believes that they are substantial and justify the estimated costs.

IV. Statutory and Executive Order Review

A. Executive Order 12866: Regulatory Planning and Review

Under Executive Order (EO) 12866 (58 FR 51735, October 4, 1993), this action is a "significant regulatory action" because it raises novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the EO. Accordingly, EPA submitted this action to the Office of Management and Budget (OMB) for review under EO 12866.

B. Paperwork Reduction Act

The information collection requirements in this final rule have been submitted for approval to the Office of Management and Budget (OMB) under the *Paperwork Reduction Act,* 44 U.S.C. 3501 *et seq.* The Information Collection Request (ICR) document prepared by EPA has been assigned EPA ICR number 2376.02.

EPA plans to collect complete and accurate facility-level GHG emissions from the petroleum and natural gas industry. Accurate and timely information on GHG emissions is essential for informing future climate change policy decisions. Through data collected under this rule, EPA will gain a better understanding of the relative emissions of different segments of the petroleum and natural gas industry and the distribution of emissions from individual facilities within those industries. The facility-specific data will also improve our understanding of the factors that influence GHG emission rates and actions that facilities are already taking to reduce emissions. Additionally, EPA will be able to track the trend of emissions from facilities within the petroleum and natural gas industry over time, particularly in response to policies and potential regulations. The data collected by this rule will improve EPA's ability to formulate climate change policy options and to assess which segments of the petroleum and gas industry would be affected, and how these segments would be affected by the options.

This information collection is mandatory and will be carried out under CAA section 114. Information identified and marked as CBI will not be disclosed except in accordance with procedures set forth in 40 CFR part 2. However, emissions data collected under CAA section 114 cannot generally be claimed as CBI and will be made public.

The projected cost and hour burden for non-Federal respondents is $27.7 million and 396,474 hours per year. The estimated average burden per response is 90.71 hours; the frequency of response is annual for all respondents that must comply with the final rule's reporting requirements; and the estimated average number of likely respondents per year is 2,786. The cost burden to respondents resulting from the collection of information includes the total capital cost annualized over the equipment's expected useful life (averaging $0.74 million), a total operation and maintenance component (averaging $1.7 million per year), and a labor cost component (averaging $25.3 million per year).[14]

Burden is defined at 5 CFR 1320.3(b). These cost numbers differ from those shown elsewhere in the EIA for these subparts because the information collection request (ICR) costs represent the average cost over the first three years of the rule, but costs are reported elsewhere in the EIA for the subparts for the first year of the rule and for subsequent years of the rule. In addition, the ICR focuses on respondent burden, while the EIA includes both national compliance costs and the burden for EPA to implement the rule.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations in 40 CFR are listed in 40 CFR part 9. When this ICR is approved by OMB, the Agency will publish a technical amendment to 40 CFR part 9 in the **Federal Register** to display the OMB control number for the approved information collection requirements contained in this final rule.

C. Regulatory Flexibility Act (RFA)

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

For purposes of assessing the impacts of this final rule on small entities, small entity is defined as: (1) A small business as defined by the Small Business Administration's regulations at 13 CFR 121.201; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise that is independently owned and operated and is not dominant in its field.

After considering the economic impacts of this final action on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities.

The small entities directly regulated by this final rule include small businesses in the petroleum and gas industry, small governmental jurisdictions and small non-profits. EPA has determined that some small businesses will be affected because their production processes emit GHGs exceeding the reporting threshold.

For affected small entities, EPA conducted a screening assessment comparing compliance costs for affected industry segments to petroleum and gas-specific data on revenues for small

[14] Burden is defined at 5 CFR 1320.3(b). These cost numbers differ from those shown elsewhere in the Economic Analysis because the ICR costs represent the average cost over the first three years of the proposed rule, but costs are reported elsewhere in the Economic Analysis for the first year of the proposed rule and for subsequent years of the proposed rule. In addition, the ICR focuses on respondent burden, while the Economic Analysis includes EPA Agency costs.

businesses. This ratio constitutes a "sales" test that computes the annualized compliance costs of this final rule as a percentage of sales and determines whether the ratio exceeds some level (*e.g.,* 1 percent or 3 percent). The cost-to-sales ratios were constructed at the establishment level (average compliance cost for the establishment/ average establishment revenues).

As shown in Table 9 of this preamble, the average ratio of annualized reporting program costs to receipts of establishments owned by model small enterprises was less than 1 percent for industries presumed likely to have small businesses covered by the reporting program. It is important to note that this analysis does not screen out entities that would be below the reporting threshold. Although the costs to receipts for entities in onshore production with 1–20 employees is slightly over 1 percent, most of these facilities would likely not exceed the 25,000 $mtCO_2e$ threshold, a threshold supported by many stakeholders as one that sufficiently captures the majority of GHG emissions while excluding small facilities.

EPA also concluded that the final rulemaking would not affect a small organization that is any not-for-profit enterprise that is independently owned and operated and is not dominant in its field. Specifically, the data listing entities in each segment of the petroleum and natural gas industry did not include any non-profit entities.

In addition, EPA determined that the final rulemaking would not have a significant impact on small governmental jurisdictions. EPA determined that one segment of the petroleum and natural gas industry might include small governments affected by the final rulemaking. A comparison of the compliance costs to the revenue of potentially affected small governmental jurisdictions revealed that the costs of the rule are less than 1 percent of revenues.

Although this final rule will not have a significant economic impact on a substantial number of small entities, EPA nonetheless took several steps to reduce the impact of this final rule on small entities. For example, EPA determined appropriate thresholds that reduce the number of small businesses reporting. In addition, EPA allows different monitoring methods for different emissions sources, requiring direct measurement only for selected sources. Also, EPA intends to provide a screening tool that will help small businesses make a reporting determination (*see* Section II.F.6 of this preamble). Finally, EPA is establishing annual instead of more frequent reporting.

Through comprehensive outreach activities prior to proposal of the initial rule, EPA held approximately 100 meetings and/or conference calls with representatives of the primary audience groups, including numerous trade associations and industries in the petroleum and gas industry that include small business members. EPA's outreach activities prior to proposal of the initial rule are documented in the memorandum, Summary of EPA Outreach Activities for Developing the Greenhouse Gas Reporting Rule, located in Docket No. EPA–HQ–OAR–2008–0508–053. After the initial proposal, EPA posted a guide for small businesses on the EPA GHG reporting rule website, along with a general fact sheet for the rule, information sheets for every source category, and an FAQ document. EPA also operated a hotline to answer questions about the final rule. EPA continued to meet with stakeholders and entered documentation of all meetings into the docket.

During rule implementation, EPA would maintain an "open door" policy for stakeholders to ask questions about the final rule or provide suggestions to EPA about the types of compliance assistance that would be useful to small businesses. EPA intends to develop a range of compliance assistance tools and materials and conduct extensive outreach for the final rule.

EPA has therefore concluded that this final action will not have a significant economic impact on a substantial number of small entities.

D. Unfunded Mandates Reform Act (UMRA)

This rule does not contain a Federal mandate that may result in expenditures of $100 million or more for State, local, and Tribal governments, in the aggregate, or the private sector in any one year. EPA estimated the cost to individual facilities that may have to report to this final rule using actual facility characteristics such as throughput and size. EPA also determined the costs to non-reporters for determination to report. The sum of these costs for the entire industry has been estimated to be less than $100 million. Thus, this rule is not subject to the requirements of sections 202 or 205 of UMRA.

This rule is also not subject to the requirements of section 203 of UMRA because it contains no regulatory requirements that might significantly or uniquely affect small governments. Based on EPA's analysis of the rule's impact on small entities, the Agency determined that natural gas distribution is the only industry segment that would potentially have small governments affected by the rule. In this segment, however, the facilities owned or operated by small governments are expected to be too small to trigger the 25,000 metric tons CO_2e reporting threshold.

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, as specified in EO 13132. This regulation applies directly to petroleum and natural gas facilities that emit greenhouse gases. Few, if any, State or local government facilities would be affected. This regulation also does not limit the power of States or localities to collect GHG data and/or regulate GHG emissions. Thus, EO 13132 does not apply to this action.

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

EPA has concluded that this action may have tribal implications. However, it will neither impose substantial direct compliance costs on tribal governments, nor preempt Tribal law. EPA conducted an analysis to determine potential impact of this action on tribes that own or operate petroleum and natural gas systems (EPA–HQ–OAR–2009–0923–XXX). First, EPA analyzed a comprehensive listing of all operators of petroleum and natural gas systems in the United States in conducting the threshold analysis. In a separate analysis, EPA researched additional available data to determine which tribal entities may own or operate petroleum and natural gas systems that could be impacted by this final action. As a result of those analyses, EPA found one tribe that may potentially be impacted by this final action. Finally, during the comment period for the April 2010 proposal, EPA received comment from one tribe, Southern Ute, which were specific to the proposed reporting methodologies.

As further discussed in the 2009 final rule that established the Greenhouse Gas reporting program, EPA believes that there are minimal impacts to tribes. Tribes could be required to submit an annual GHG report for any facility they own or operate that is subject to the rule. Specifically, tribes that own or operate oil and gas operations could be required to report emissions under this

rulemaking. It should be noted that the owner or operator of any privately owned sources located on a reservation would be required to report for any applicable facility. EPA sought opportunities to provide information to tribal governments and representatives during rule development. As stated in IV.F of this preamble, Executive Order 13175: Consultation and Coordination with Indian Tribal Governments of 40 CFR part 98, and in consultation with EPA's American Indian Environment Office, EPA's outreach plan for the Greenhouse Gas Reporting Rule included tribes. EPA conducted several conference calls with Tribal organizations during the proposal phase of part 98. For example, EPA staff provided information to tribes through conference calls with multiple Indian working groups and organizations at EPA that interact with tribes and through individual calls with two Tribal board members of The Climate Registry (TCR).

In addition, EPA prepared a short article on the Greenhouse Gas Reporting Program that appeared on the front page of a Tribal newsletter—Tribal Air News—that was distributed to EPA/OAQPS's network of Tribal organizations. EPA gave a presentation on various climate efforts, including the Greenhouse Gas Reporting Program, at the National Tribal Conference on Environmental Management on June 24–26, 2008. In addition, EPA distributed copies of a short information sheet at a meeting of the National Tribal Caucus. See the Summary of EPA Outreach Activities for Developing the GHG reporting rule, in Docket No. EPA–HQ–OAR–2008–0508–055 for a complete list of Tribal contacts. EPA participated in a conference call with Tribal air coordinators in April 2009 and prepared a guidance sheet for Tribal governments on the final Part 98. It was posted on the Greenhouse Gas Reporting Program Web site and published in the Tribal Air Newsletter.

As required by section 7(a), EPA's Tribal Consultation Official has certified that the requirements of the Executive Order have been met in a meaningful and timely manner. A copy of the certification is included in the docket for this action.

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

This action is not subject to EO 13045 because it does not establish an environmental standard intended to mitigate health or safety risks. Also, this is not an economically significant rule under EO 12866, and thus EO 13045 does not apply.

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

This final rule is not a "significant energy action" as defined in EO 13211 (66 FR 28355, May 22, 2001) because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. Further, EPA has concluded that this final rule is not likely to have any adverse energy effects. This final rule relates to monitoring, reporting and recordkeeping at petroleum and gas facilities that emit over 25,000 $mtCO_2e$ and does not impact energy supply, distribution or use. Therefore, EPA concludes that this final rule is not likely to have any adverse effects on energy supply, distribution, or use.

I. National Technology Transfer and Advancement Act

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

This rulemaking involves technical standards. EPA provides the flexibility to use any one of the voluntary consensus standards from at least seven different voluntary consensus standards bodies, including the following: ASTM, ASME, ISO, Gas Processors Association, and American Gas Association. These voluntary consensus standards will help facilities monitor, report, and keep records of greenhouse gas emissions. No new test methods were developed for this final rule. Instead, EPA reviewed existing rules for source categories and voluntary greenhouse gas programs and identified existing means of monitoring, reporting, and keeping records of greenhouse gas emissions. The existing methods (voluntary consensus standards) include a broad range of measurement techniques, including many for combustion sources such as methods to analyze fuel and measure its heating value; methods to measure gas or liquid flow; and methods to gauge and measure petroleum and petroleum products.

By incorporating voluntary consensus standards into this final rule, EPA is both meeting the requirements of the NTTAA and presenting multiple options and flexibility for measuring greenhouse gas emissions.

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

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

EPA has determined that this final rule will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it does not affect the level of protection provided to human health or the environment because it is a rule addressing information collection and reporting procedures.

K. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 *et seq.,* as added by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the U.S. prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a "major rule" as defined by 5 U.S.C. 804(2). This rule will be effective December 30, 2010.

List of Subjects in 40 CFR Part 98

Environmental protection, Administrative practice and procedure, Greenhouse gases, Incorporation by reference, Suppliers, Reporting and recordkeeping requirements.

Dated: November 8, 2010.

Lisa P. Jackson,

Administrator.

■ For the reasons stated in the preamble, title 40, chapter I, of the Code of Federal Regulations is amended as follows:

PART 98—[AMENDED]

■ 1. The authority citation for part 98 continues to read as follows:

Authority: 42 U.S.C. 7401–7671q.

Subpart A—[Amended]

■ 2. Section 98.2 is amended by revising the introductory text to paragraph (a) to read as follows:

§ 98.2 Who must report?

(a) The GHG reporting requirements and related monitoring, recordkeeping, and reporting requirements of this part apply to the owners and operators of any facility that is located in the United States or under or attached to the Outer Continental Shelf (as defined in 43 U.S.C. 1331) and that meets the requirements of either paragraph (a)(1), (a)(2), or (a)(3) of this section; and any supplier that meets the requirements of paragraph (a)(4) of this section:

* * * * *

■ 3. Section 98.6 is amended by adding the following definitions in alphabetical order and revising the definition of "United States" to read as follows:

§ 98.6 Definitions.

* * * * *

Absorbent circulation pump means a pump commonly powered by natural gas pressure that circulates the absorbent liquid between the absorbent regenerator and natural gas contactor.

* * * * *

Air injected flare means a flare in which air is blown into the base of a flare stack to induce complete combustion of gas.

* * * * *

Blowdown vent stack emissions mean natural gas and/or CO_2 released due to maintenance and/or blowdown operations including compressor blowdown and emergency shut-down (ESD) system testing.

* * * * *

Calibrated bag means a flexible, non-elastic, anti-static bag of a calibrated volume that can be affixed to an emitting source such that the emissions inflate the bag to its calibrated volume.

* * * * *

Centrifugal compressor means any equipment that increases the pressure of a process natural gas or CO_2 by centrifugal action, employing rotating movement of the driven shaft.

Centrifugal compressor dry seals mean a series of rings around the compressor shaft where it exits the compressor case that operates mechanically under the opposing forces to prevent natural gas or CO_2 from escaping to the atmosphere.

Centrifugal compressor dry seal emissions mean natural gas or CO_2 released from a dry seal vent pipe and/or the seal face around the rotating shaft where it exits one or both ends of the compressor case.

Centrifugal compressor wet seal degassing vent emissions means emissions that occur when the high-pressure oil barriers for centrifugal compressors are depressurized to release absorbed natural gas or CO_2. High-pressure oil is used as a barrier against escaping gas in centrifugal compressor shafts. Very little gas escapes through the oil barrier, but under high pressure, considerably more gas is absorbed by the oil. The seal oil is purged of the absorbed gas (using heaters, flash tanks, and degassing techniques) and recirculated. The separated gas is commonly vented to the atmosphere.

* * * * *

Continuous bleed means a continuous flow of pneumatic supply gas to the process measurement device (*e.g.* level control, temperature control, pressure control) where the supply gas pressure is modulated by the process condition, and then flows to the valve controller where the signal is compared with the process set-point to adjust gas pressure in the valve actuator.

* * * * *

Dehydrator means a device in which a liquid absorbent (including desiccant, ethylene glycol, diethylene glycol, or triethylene glycol) directly contacts a natural gas stream to absorb water vapor.

Dehydrator vent emissions means natural gas and CO_2 released from a natural gas dehydrator system absorbent (typically glycol) reboiler or regenerator to the atmosphere or a flare, including stripping natural gas and motive natural gas used in absorbent circulation pumps.

* * * * *

De-methanizer means the natural gas processing unit that separates methane rich residue gas from the heavier hydrocarbons (*e.g.,* ethane, propane, butane, pentane-plus) in feed natural gas stream.

* * * * *

Desiccant means a material used in solid-bed dehydrators to remove water from raw natural gas by adsorption or absorption. Desiccants include activated alumina, pelletized calcium chloride, lithium chloride and granular silica gel material. Wet natural gas is passed through a bed of the granular or pelletized solid adsorbent or absorbent in these dehydrators. As the wet gas contacts the surface of the particles of desiccant material, water is adsorbed on the surface or absorbed and dissolves the surface of these desiccant particles. Passing through the entire desiccant bed, almost all of the water is adsorbed onto or absorbed into the desiccant material, leaving the dry gas to exit the contactor.

* * * * *

Gas conditions mean the actual temperature, volume, and pressure of a gas sample.

* * * * *

Gas to oil ratio (GOR) means the ratio of the volume of gas at standard temperature and pressure that is produced from a volume of oil when depressurized to standard temperature and pressure.

* * * * *

High-bleed pneumatic devices are automated, continuous bleed flow control devices powered by pressurized natural gas and used for maintaining a process condition such as liquid level, pressure, delta-pressure and temperature. Part of the gas power stream that is regulated by the process condition flows to a valve actuator controller where it vents continuously (bleeds) to the atmosphere at a rate in excess of 6 standard cubic feet per hour.

* * * * *

Intermittent bleed pneumatic devices mean automated flow control devices powered by pressurized natural gas and used for maintaining a process condition such as liquid level, pressure, delta-pressure and temperature. These are snap-acting or throttling devices that discharge the full volume of the actuator intermittently when control action is necessary, but does not bleed continuously.

* * * * *

Low-bleed pneumatic devices mean automated flow control devices powered by pressurized natural gas and used for maintaining a process condition such as liquid level, pressure, delta-pressure and temperature. Part of the gas power stream that is regulated by the process condition flows to a valve actuator controller where it vents continuously (bleeds) to the atmosphere at a rate equal to or less than six standard cubic feet per hour.

* * * * *

Natural gas driven pneumatic pump means a pump that uses pressurized

natural gas to move a piston or diaphragm, which pumps liquids on the opposite side of the piston or diaphragm.

* * * * *

Outer Continental Shelf means all submerged lands lying seaward and outside of the area of lands beneath navigable waters as defined in 43 U.S.C. 1331, and of which the subsoil and seabed appertain to the United States and are subject to its jurisdiction and control.

* * * * *

Reciprocating compressor means a piece of equipment that increases the pressure of a process natural gas or CO_2 by positive displacement, employing linear movement of a shaft driving a piston in a cylinder.

Reciprocating compressor rod packing means a series of flexible rings in machined metal cups that fit around the reciprocating compressor piston rod to create a seal limiting the amount of compressed natural gas or CO_2 that escapes to the atmosphere.

Re-condenser means heat exchangers that cool compressed boil-off gas to a temperature that will condense natural gas to a liquid.

* * * * *

Sales oil means produced crude oil or condensate measured at the production lease automatic custody transfer (LACT) meter or custody transfer tank gauge.

* * * * *

Sour natural gas means natural gas that contains significant concentrations of hydrogen sulfide (H_2S)and/or carbon dioxide (CO_2) that exceed the concentrations specified for commercially saleable natural gas delivered from transmission and distribution pipelines.

* * * * *

Sweet gas is natural gas with low concentrations of hydrogen sulfide (H_2S) and/or carbon dioxide (CO_2) that does not require (or has already had) acid gas treatment to meet pipeline corrosion-prevention specifications for transmission and distribution.

* * * * *

United States means the 50 States, the District of Columbia, the Commonwealth of Puerto Rico, American Samoa, the Virgin Islands, Guam, and any other Commonwealth, territory or possession of the United States, as well as the territorial sea as defined by Presidential Proclamation No. 5928.

* * * * *

Vapor recovery system means any equipment located at the source of potential gas emissions to the atmosphere or to a flare, that is composed of piping, connections, and, if necessary, flow-inducing devices, and that is used for routing the gas back into the process as a product and/or fuel.

Vaporization unit means a process unit that performs controlled heat input to vaporize LNG to supply transmission and distribution pipelines or consumers with natural gas.

* * * * *

Well completions means the process that allows for the flow of petroleum or natural gas from newly drilled wells to expel drilling and reservoir fluids and test the reservoir flow characteristics, steps which may vent produced gas to the atmosphere via an open pit or tank. Well completion also involves connecting the well bore to the reservoir, which may include treating the formation or installing tubing, packer(s), or lifting equipment, steps that do not significantly vent natural gas to the atmosphere. This process may also include high-rate flowback of injected gas, water, oil, and proppant used to fracture or re-fracture and prop open new fractures in existing lower permeability gas reservoirs, steps that may vent large quantities of produced gas to the atmosphere.

Well workover means the process(es) of performing one or more of a variety of remedial operations on producing petroleum and natural gas wells to try to increase production. This process also includes high-rate flowback of injected gas, water, oil, and proppant used to re-fracture and prop-open new fractures in existing low permeability gas reservoirs, steps that may vent large quantities of produced gas to the atmosphere.

Wellhead means the piping, casing, tubing and connected valves protruding above the earth's surface for an oil and/or natural gas well. The wellhead ends where the flow line connects to a wellhead valve. Wellhead equipment includes all equipment, permanent and portable, located on the improved land area (*i.e.* well pad) surrounding one or multiple wellheads.

Wet natural gas means natural gas in which water vapor exceeds the concentration specified for commercially saleable natural gas delivered from transmission and distribution pipelines. This input stream to a natural gas dehydrator is referred to as "wet gas."

* * * * *

■ 4. Section 98.7 is amended by adding and reserving paragraphs (n) and (o), and by adding paragraphs (p) and (q) to read as follows:

§ 98.7 What standardized methods are incorporated by reference into this part?

* * * * *

(n) [Reserved]

(o) [Reserved]

(p) The following material is available for purchase from the American Association of Petroleum Geologists, 1444 South Boulder Avenue, Tulsa, Oklahoma 74119, (918) 584–2555, *http://www.aapg.org.*

(1) Geologic Note: AAPG–CSD Geologic Provinces Code Map: AAPG Bulletin, Prepared by Richard F. Meyer, Laure G. Wallace, and Fred J. Wagner, Jr., Volume 75, Number 10 (October 1991), pages 1644–1651, IBR approved for § 98.238.

(2) Alaska Geological Province Boundary Map, Compiled by the American Association of Petroleum Geologists Committee on Statistics of Drilling in cooperation with the USGS, 1978, IBR approved for § 98.238.

(q) The following material is available from the Energy Information Administration (EIA), 1000 Independence Ave., SW., Washington, DC 20585, (202) 586–8800, *http://www.eia.doe.gov/pub/oil_gas/natural_gas/data_publications/field_code_master_list/current/pdf/fcml_all.pdf.*

(1) Oil and Gas Field Code Master List 2008, DOE/EIA0370(08), January 2009, IBR approved for § 98.238.

(2) [Reserved]

■ 5. Table A–4 to subpart A is amended by adding an entry for "Petroleum and Natural Gas Systems (subpart W)" at the end of the table to read as follows:

TABLE A–4 TO SUBPART A—SOURCE CATEGORY LIST FOR § 98.2(A)(2)

Source Categories[a] Applicable in 2010 and Future Years
* * * * * * *
Additional Source Categories[a] Applicable in 2011 and Future Years
* * * * * * *
Petroleum and Natural Gas Systems (subpart W)

[a] Source categories are defined in each applicable subpart.

■ 6. Add Subpart W—Petroleum and Natural Gas Systems to read as follows:

Subpart W—Petroleum and Natural Gas Systems

Sec.

98.230 Definition of the source category.

98.231 Reporting threshold.
98.232 GHGs to report.
98.233 Calculating GHG emissions.
98.234 Monitoring and QA/QC requirements.
98.235 Procedures for estimating missing data.
98.236 Data reporting requirements.
98.237 Records that must be retained.
98.238 Definitions.
Table W–1A to Subpart W of Part 98—Default Whole Gas Emission Factors for Onshore Petroleum and Natural Gas Production
Table W–1B to Subpart W of Part 98—Default Average Component Counts for Major Onshore Natural Gas Production Equipment
Table W–1C to Subpart W of Part 98—Default Average Component Counts For Major Crude Oil Production Equipment
Table W–1D of Subpart W of Part 98—Designation Of Eastern And Western U.S.
Table W–2 to Subpart W of Part 98—Default Total Hydrocarbon Emission Factors for Onshore Natural Gas Processing
Table W–3 to Subpart W of Part 98—Default Total Hydrocarbon Emission Factors for Onshore Natural Gas Transmission Compression
Table W–4 to Subpart W of Part 98—Default Total Hydrocarbon Emission Factors for Underground Natural Gas Storage
Table W–5 to Subpart W of Part 98—Default Methane Emission Factors for Liquefied Natural Gas (LNG) Storage
Table W–6 to Subpart W of Part 98—Default Methane Emission Factors for LNG Import and Export Equipment
Table W–7 to Subpart W of Part 98—Default Methane Emission Factors for Natural Gas Distribution

§ 98.230 Definition of the source category.

(a) This source category consists of the following industry segments:

(1) *Offshore petroleum and natural gas production.* Offshore petroleum and natural gas production is any platform structure, affixed temporarily or permanently to offshore submerged lands, that houses equipment to extract hydrocarbons from the ocean or lake floor and that processes and/or transfers such hydrocarbons to storage, transport vessels, or onshore. In addition, offshore production includes secondary platform structures connected to the platform structure via walkways, storage tanks associated with the platform structure and floating production and storage offloading equipment (FPSO). This source category does not include reporting of emissions from offshore drilling and exploration that is not conducted on production platforms.

(2) *Onshore petroleum and natural gas production.* Onshore petroleum and natural gas production means all equipment on a well pad or associated with a well pad (including compressors, generators, or storage facilities), and portable non-self-propelled equipment on a well pad or associated with a well pad (including well drilling and completion equipment, workover equipment, gravity separation equipment, auxiliary non-transportation-related equipment, and leased, rented or contracted equipment) used in the production, extraction, recovery, lifting, stabilization, separation or treating of petroleum and/or natural gas (including condensate). This equipment also includes associated storage or measurement vessels and all enhanced oil recovery (EOR) operations using CO_2, and all petroleum and natural gas production located on islands, artificial islands, or structures connected by a causeway to land, an island, or artificial island.

(3) *Onshore natural gas processing.* Natural gas processing separates and recovers natural gas liquids (NGLs) and/or other non-methane gases and liquids from a stream of produced natural gas using equipment performing one or more of the following processes: oil and condensate removal, water removal, separation of natural gas liquids, sulfur and carbon dioxide removal, fractionation of NGLs, or other processes, and also the capture of CO_2 separated from natural gas streams. This segment also includes all residue gas compression equipment owned or operated by the natural gas processing facility, whether inside or outside the processing facility fence. This source category does not include reporting of emissions from gathering lines and boosting stations. This source category includes:

(i) All processing facilities that fractionate.

(ii) All processing facilities that do not fractionate with throughput of 25 MMscf per day or greater.

(4) *Onshore natural gas transmission compression.* Onshore natural gas transmission compression means any stationary combination of compressors that move natural gas at elevated pressure from production fields or natural gas processing facilities in transmission pipelines to natural gas distribution pipelines or into storage. In addition, transmission compressor station may include equipment for liquids separation, natural gas dehydration, and tanks for the storage of water and hydrocarbon liquids. Residue (sales) gas compression operated by natural gas processing facilities are included in the onshore natural gas processing segment and are excluded from this segment. This source category also does not include reporting of emissions from gathering lines and boosting stations—these sources are currently not covered by subpart W.

(5) *Underground natural gas storage.* Underground natural gas storage means subsurface storage, including depleted gas or oil reservoirs and salt dome caverns that store natural gas that has been transferred from its original location for the primary purpose of load balancing (the process of equalizing the receipt and delivery of natural gas); natural gas underground storage processes and operations (including compression, dehydration and flow measurement, and excluding transmission pipelines); and all the wellheads connected to the compression units located at the facility that inject and recover natural gas into and from the underground reservoirs.

(6) *Liquefied natural gas (LNG) storage.* LNG storage means onshore LNG storage vessels located above ground, equipment for liquefying natural gas, compressors to capture and re-liquefy boil-off-gas, re-condensers, and vaporization units for re-gasification of the liquefied natural gas.

(7) *LNG import and export equipment.* LNG import equipment means all onshore or offshore equipment that receives imported LNG via ocean transport, stores LNG, re-gasifies LNG, and delivers re-gasified natural gas to a natural gas transmission or distribution system. LNG export equipment means all onshore or offshore equipment that receives natural gas, liquefies natural gas, stores LNG, and transfers the LNG via ocean transportation to any location, including locations in the United States.

(8) *Natural gas distribution.* Natural gas distribution means the distribution pipelines (not interstate transmission pipelines or intrastate transmission pipelines) and metering and regulating equipment at city gate stations, and excluding customer meters, that physically deliver natural gas to end users and is operated by a Local Distribution Company (LDC) that is regulated as a separate operating company by a public utility commission or that is operated as an independent municipally-owned distribution system. This segment excludes customer meters and infrastructure and pipelines (both interstate and intrastate) delivering natural gas directly to major industrial users and "farm taps" upstream of the local distribution company inlet.

(b) [Reserved]

§ 98.231 Reporting threshold.

(a) You must report GHG emissions under this subpart if your facility contains petroleum and natural gas systems and the facility meets the requirements of § 98.2(a)(2). Facilities must report emissions from the onshore petroleum and natural gas production

industry segment only if emission sources specified in paragraph § 98.232(c) emit 25,000 metric tons of CO_2 equivalent or more per year. Facilities must report emissions from the natural gas distribution industry segment only if emission sources specified in paragraph § 98.232(i) emit 25,000 metric tons of CO_2 equivalent or more per year.

(b) For applying the threshold defined in § 98.2(a)(2), natural gas processing facilities must also include owned or operated residue gas compression equipment.

§ 98.232 GHGs to report.

(a) You must report CO_2, CH_4, and N_2O emissions from each industry segment specified in paragraph (b) through (i) of this section, CO_2, CH_4, and N_2O emissions from each flare as specified in paragraph (j) of this section, and stationary and portable combustion emissions as applicable as specified in paragraph (k) of this section.

(b) For offshore petroleum and natural gas production, report CO_2, CH_4, and N_2O emissions from equipment leaks, vented emission, and flare emission source types as identified in the data collection and emissions estimation study conducted by BOEMRE in compliance with 30 CFR 250.302 through 304. Offshore platforms do not need to report portable emissions.

(c) For an onshore petroleum and natural gas production facility, report CO_2, CH_4, and N_2O emissions from only the following source types on a well pad or associated with a well pad:

(1) Natural gas pneumatic device venting.

(2) [Reserved]

(3) Natural gas driven pneumatic pump venting.

(4) Well venting for liquids unloading.

(5) Gas well venting during well completions without hydraulic fracturing.

(6) Gas well venting during well completions with hydraulic fracturing.

(7) Gas well venting during well workovers without hydraulic fracturing.

(8) Gas well venting during well workovers with hydraulic fracturing.

(9) Flare stack emissions.

(10) Storage tanks vented emissions from produced hydrocarbons.

(11) Reciprocating compressor rod packing venting.

(12) Well testing venting and flaring.

(13) Associated gas venting and flaring from produced hydrocarbons.

(14) Dehydrator vents.

(15) [Reserved]

(16) EOR injection pump blowdown.

(17) Acid gas removal vents.

(18) EOR hydrocarbon liquids dissolved CO_2.

(19) Centrifugal compressor venting.

(20) [Reserved]

(21) Equipment leaks from valves, connectors, open ended lines, pressure relief valves, pumps, flanges, and other equipment leak sources (such as instruments, loading arms, stuffing boxes, compressor seals, dump lever arms, and breather caps).

(22) You must use the methods in § 98.233(z) and report under this subpart the emissions of CO_2, CH_4, and N_2O from stationary or portable fuel combustion equipment that cannot move on roadways under its own power and drive train, and that are located at an onshore production well pad. Stationary or portable equipment are the following equipment which are integral to the extraction, processing or movement of oil or natural gas: Well drilling and completion equipment, workover equipment, natural gas dehydrators, natural gas compressors, electrical generators, steam boilers, and process heaters.

(d) For onshore natural gas processing, report CO_2 and CH_4 emissions from the following sources:

(1) Reciprocating compressor rod packing venting.

(2) Centrifugal compressor venting.

(3) Blowdown vent stacks.

(4) Dehydrator vents.

(5) Acid gas removal vents.

(6) Flare stack emissions.

(7) Equipment leaks from valves, connectors, open ended lines, pressure relief valves, and meters.

(e) For onshore natural gas transmission compression, report CO_2 and CH_4 emissions from the following sources:

(1) Reciprocating compressor rod packing venting.

(2) Centrifugal compressor venting.

(3) Transmission storage tanks.

(4) Blowdown vent stacks.

(5) Natural gas pneumatic device venting.

(6) [Reserved]

(7) Equipment leaks from valves, connectors, open ended lines, pressure relief valves, and meters.

(f) For underground natural gas storage, report CO_2 and CH_4 emissions from the following sources:

(1) Reciprocating compressor rod packing venting.

(2) Centrifugal compressor venting.

(3) Natural gas pneumatic device venting.

(4) [Reserved]

(5) Equipment leaks from valves, connectors, open ended lines, pressure relief valves, and meters.

(g) For LNG storage, report CO_2 and CH_4 emissions from the following sources:

(1) Reciprocating compressor rod packing venting.

(2) Centrifugal compressor venting.

(3) Equipment leaks from valves; pump seals; connectors; vapor recovery compressors, and other equipment leak sources.

(h) LNG import and export equipment, report CO_2 and CH_4 emissions from the following sources:

(1) Reciprocating compressor rod packing venting.

(2) Centrifugal compressor venting.

(3) Blowdown vent stacks.

(4) Equipment leaks from valves, pump seals, connectors, vapor recovery compressors, and other equipment leak sources.

(i) For natural gas distribution, report emissions from the following sources:

(1) Above ground meters and regulators at custody transfer city gate stations, including equipment leaks from connectors, block valves, control valves, pressure relief valves, orifice meters, regulators, and open ended lines. Customer meters are excluded.

(2) Above ground meters and regulators at non-custody transfer city gate stations, including station equipment leaks. Customer meters are excluded.

(3) Below ground meters and regulators and vault equipment leaks. Customer meters are excluded.

(4) Pipeline main equipment leaks.

(5) Service line equipment leaks.

(6) Report under subpart W of this part the emissions of CO_2, CH_4, and N_2O emissions from stationary fuel combustion sources following the methods in § 98.233(z).

(j) All applicable industry segments must report the CO_2, CH_4, and N_2O emissions from each flare.

(k) Report under subpart C of this part (General Stationary Fuel Combustion Sources) the emissions of CO_2, CH_4, and N_2O from each stationary fuel combustion unit by following the requirements of subpart C. Onshore petroleum and natural gas production facilities must report stationary and portable combustion emissions as specified in paragraph (c) of this section. Natural gas distribution facilities must report stationary combustion emissions as specified in paragraph (i) of this section.

(l) You must report under subpart PP of this part (Suppliers of Carbon Dioxide), CO_2 emissions captured and transferred off site by following the requirements of subpart PP.

§ 98.233 Calculating GHG emissions.

You must calculate and report the annual GHG emissions as prescribed in this section. For actual conditions,

reporters must use average atmospheric conditions or typical operating conditions as applicable to the respective monitoring methods in this section.

(a) *Natural gas pneumatic device venting.* Calculate CH_4 and CO_2 emissions from continuous high bleed, continuous low bleed, and intermittent bleed natural gas pneumatic devices using Equation W–1 of this section.

$$Mass_{s,i} = Count * EF * GHG_i * Conv_i * 24*365 \quad \text{(Eq. W-1)}$$

Where:

$Mass_{s,i}$ = Annual total mass GHG emissions in metric tons CO_2e per year at standard conditions from a natural gas pneumatic device vent, for GHG i.

Count = Total number of continuous high bleed, continuous low bleed, or intermittent bleed natural gas pneumatic devices of each type as determined in paragraph (a)(1) of this section.

EF = Population emission factors for natural gas pneumatic device venting listed in Tables W–1A, W–3, and W–4 of this subpart for onshore petroleum and natural gas production, onshore natural gas transmission compression, and underground natural gas storage facilities, respectively.

GHG_i = For onshore petroleum and natural gas production facilities, concentration of GHG i, CH_4 or CO_2, in produced natural gas; for facilities listed in § 98.230(a)(3) through (a)(8), GHG_i equals 1.

$Conv_i$ = Conversion from standard cubic feet to metric tons CO_2e; 0.000410 for CH_4, and 0.00005357 for CO_2.

24 * 365 = Conversion to yearly emissions estimate.

(1) For onshore petroleum and natural gas production, provide the total number of continuous high bleed, continuous low bleed, or intermittent bleed natural gas pneumatic devices of each type as follows:

(i) In the first calendar year, for the total number of each type, you may count the total of each type, or count any percentage number of each type plus an engineering estimate based on best available data of the number not counted.

(ii) In the second consecutive year, for the total number of each type, you may count the total of each type, or count any percentage number of each type plus an engineering estimate based on best available data of the number not counted.

(iii) In the third consecutive calendar year, complete the count of all pneumatic devices, including any changes to equipment counted in prior years.

(iv) For the calendar year immediately following the third consecutive calendar year, and for calendar years thereafter, facilities must update the total count of pneumatic devices and adjust accordingly to reflect any modifications due to changes in equipment.

(2) For onshore natural gas transmission compression and underground natural gas storage, all natural gas pneumatic devices must be counted in the first year and updated every calendar year.

(b) [Reserved]

(c) *Natural gas driven pneumatic pump venting.* Calculate CH_4 and CO_2 emissions from natural gas driven pneumatic pump venting using Equation W–2 of this section. Natural gas driven pneumatic pumps covered in paragraph (e) of this section do not have to report emissions under paragraph (c) of this section.

$$Mass_{s,i} = Count * EF * GHG_i * Conv_i * 24*365 \quad \text{(Eq. W-2)}$$

Where:

$Mass_{s,i}$ = Annual total mass GHG emissions in metric tons CO_2e per year at standard conditions from all natural gas pneumatic pump venting, for GHG i.

Count = Total number of natural gas pneumatic pumps.

EF = Population emission factors for natural gas pneumatic pump venting listed in Tables W–1A of this subpart for onshore petroleum and natural gas production.

GHG_i = Concentration of GHG i, CH_4 or CO_2, in produced natural gas.

$Conv_i$ = Conversion from standard cubic feet to metric tons CO_2e; 0.000410 for CH_4, and 0.00005357 for CO_2.

24 * 365 = Conversion to yearly emissions estimate.

(d) *Acid gas removal (AGR) vents.* For AGR vent (including processes such as amine, membrane, molecular sieve or other absorbents and adsorbents), calculate emissions for CO_2 only (not CH_4) vented directly to the atmosphere or through a flare, engine (*e.g.* permeate from a membrane or de-adsorbed gas from a pressure swing adsorber used as fuel supplement), or sulfur recovery plant using any of the calculation methodologies described in paragraph (d) of this section.

(1) *Calculation Methodology 1.* If you operate and maintain a CEMS that measures CO_2 emissions according to subpart C of this part, you must calculate CO_2 emissions under this subpart by following the Tier 4 Calculation Methodology and all associated requirements for Tier 4 in subpart C of this part (General Stationary Fuel Combustion Sources). If CEMS and/or volumetric flow rate monitor are not available, you may install a CEMS that complies with the Tier 4 Calculation Methodology in subpart C of this part (General Stationary Fuel Combustion).

(2) *Calculation Methodology 2.* If CEMS is not available, use the CO_2 composition and annual volume of vent gas to calculate emissions using Equation W–3 of this section.

$$E_{a,CO2} = V_S * Vol_{CO2} \quad \text{(Eq. W-3)}$$

Where:

$E_{a,CO2}$ = Annual volumetric CO_2 emissions at actual conditions, in cubic feet per year.

V_S = Total annual volume of vent gas flowing out of the AGR unit in cubic feet per year at actual conditions as determined by flow meter using methods set forth in § 98.234(b).

Vol_{CO2} = Volume fraction of CO_2 content in vent gas out of the AGR unit as determined in (d)(6) of this section.

(3) *Calculation Methodology 3.* If using CEMS or vent meter is not an option, use the inlet or outlet gas flow rate of the acid gas removal unit to calculate emissions for CO_2 using Equation W–4 of this section.

$$E_{a,CO2} = \left(V + \alpha * \left(V * \left(Vol_I - Vol_O\right)\right)\right) * \left(Vol_I - Vol_O\right) \qquad \text{(Eq. W-4)}$$

Where:

$E_{a,CO2}$ = Annual volumetric CO_2 emissions at actual condition, in cubic feet per year.

V = Total annual volume of natural gas flow into or out of the AGR unit in cubic feet per year at actual condition as determined using methods specified in paragraph (d)(5) of this section.

α = Factor is 1 if the outlet stream flow is measured. Factor is 0 if the inlet stream flow is measured.

Vol_I = Volume fraction of CO_2 content in natural gas into the AGR unit as determined in paragraph (d)(7) of this section.

Vol_O = Volume fraction of CO_2 content in natural gas out of the AGR unit as determined in paragraph (d)(8) of this section.

(4) *Calculation Methodology 4.* Calculate emissions using any standard simulation software packages, such as AspenTech HYSYS® and API 4679 AMINECalc, that uses the Peng-Robinson equation of state, and speciates CO_2 emissions. A minimum of the following determined for typical operating conditions over the calendar year by engineering estimate and process knowledge based on best available data must be used to characterize emissions:

(i) Natural gas feed temperature, pressure, and flow rate.

(ii) Acid gas content of feed natural gas.

(iii) Acid gas content of outlet natural gas.

(iv) Unit operating hours, excluding downtime for maintenance or standby.

(v) Exit temperature of natural gas.

(vi) Solvent pressure, temperature, circulation rate, and weight.

(5) Record the gas flow rate of the inlet and outlet natural gas stream of an AGR unit using a meter according to methods set forth in § 98.234(b). If you do not have a continuous flow meter, either install a continuous flow meter or use an engineering calculation to determine the flow rate.

(6) If continuous gas analyzer is not available on the vent stack, either install a continuous gas analyzer or take quarterly gas samples from the vent gas stream to determine Vol_{CO2} according to methods set forth in § 98.234(b).

(7) If a continuous gas analyzer is installed on the inlet gas stream, then the continuous gas analyzer results must be used. If continuous gas analyzer is not available, either install a continuous gas analyzer or take quarterly gas samples from the inlet gas stream to determine Vol_I according to methods set forth in § 98.234(b).

(8) Determine volume fraction of CO_2 content in natural gas out of the AGR unit using one of the methods specified in paragraph (d)(8) of this section.

(i) If a continuous gas analyzer is installed on the outlet gas stream, then the continuous gas analyzer results must be used. If a continuous gas analyzer is not available, you may install a continuous gas analyzer.

(ii) If a continuous gas analyzer is not available or installed, quarterly gas samples may be taken from the outlet gas stream to determine Vol_O according to methods set forth in § 98.234(b).

(iii) Use sales line quality specification for CO_2 in natural gas.

(9) Calculate CO_2 volumetric emissions at standard conditions using calculations in paragraph (t) of this section.

(10) Mass CO_2 emissions shall be calculated from volumetric CO_2 emissions using calculations in paragraph (v) of this section.

(11) Determine if emissions from the AGR unit are recovered and transferred outside the facility. Adjust the emission estimated in paragraphs (d)(1) through (d)(10) of this section downward by the magnitude of emission recovered and transferred outside the facility.

(e) *Dehydrator vents.* For dehydrator vents, calculate annual CH_4, CO_2 and N_2O (when flared) emissions using calculation methodologies described in paragraphs (e)(1) or (e)(2) of this section.

(1) *Calculation Methodology 1.* Calculate annual mass emissions from dehydrator vents with throughput greater than or equal to 0.4 million standard cubic feet per day using a software program, such as AspenTech HYSYS® or GRI–GLYCalc, that uses the Peng-Robinson equation of state to calculate the equilibrium coefficient, speciates CH_4 and CO_2 emissions from dehydrators, and has provisions to include regenerator control devices, a separator flash tank, stripping gas and a gas injection pump or gas assist pump. A minimum of the following parameters determined by engineering estimate based on best available data must be used to characterize emissions from dehydrators:

(i) Feed natural gas flow rate.

(ii) Feed natural gas water content.

(iii) Outlet natural gas water content.

(iv) Absorbent circulation pump type (natural gas pneumatic/air pneumatic/ electric).

(v) Absorbent circulation rate.

(vi) Absorbent type: including triethylene glycol (TEG), diethylene glycol (DEG) or ethylene glycol (EG).

(vii) Use of stripping natural gas.

(viii) Use of flash tank separator (and disposition of recovered gas).

(ix) Hours operated.

(x) Wet natural gas temperature and pressure.

(xi) Wet natural gas composition. Determine this parameter by selecting one of the methods described under paragraph (e)(2)(xi) of this section.

(A) Use the wet natural gas composition as defined in paragraph (u)(2)(i) of this section.

(B) If wet natural gas composition cannot be determined using paragraph (u)(2)(i) of this section, select a representative analysis.

(C) You may use an appropriate standard method published by a consensus-based standards organization if such a method exists or you may use an industry standard practice as specified in § 98.234(b)(1) to sample and analyze wet natural gas composition.

(D) If only composition data for dry natural gas is available, assume the wet natural gas is saturated.

(2) *Calculation Methodology 2.* Calculate annual CH_4 and CO_2 emissions from glycol dehydrators with throughput less than 0.4 million cubic feet per day using Equation W–5 of this section:

$$E_{s,i} = EF_i * Count * 1000 \qquad \text{(Eq. W-5)}$$

Where:

$E_{s,i}$ = Annual total volumetric GHG emissions (either CO_2 or CH_4) at standard conditions in cubic feet.

EF_i = Population emission factors for glycol dehydrators in thousand standard cubic feet per dehydrator per year. Use 74.5 for CH_4 and 3.26 for CO_2 at 68°F and 14.7 psia or 73.4 for CH_4 and 3.21 for CO_2 at 60°F and 14.7 psia.

Count = Total number of glycol dehydrators with throughput less than 0.4 million cubic feet.

1000 = Conversion of EF_i in thousand standard cubic to cubic feet.

(3) Determine if dehydrator unit has vapor recovery. Adjust the emissions estimated in paragraphs (e)(1) or (e)(2) of this section downward by the magnitude of emissions captured.

(4) Calculate annual emissions from dehydrator vents to flares or regenerator fire-box/fire tubes as follows:

(A) Use the dehydrator vent volume and gas composition as determined in paragraphs (e)(1) and (e)(2) of this section.

(B) Use the calculation methodology of flare stacks in paragraph (n) of this section to determine dehydrator vent emissions from the flare or regenerator combustion gas vent.

(5) Dehydrators that use desiccant shall calculate emissions from the amount of gas vented from the vessel every time it is depressurized for the desiccant refilling process using Equation W–6 of this section. Desiccant dehydrators covered in (e)(5) of this section do not have to report emissions under (i) of this section.

$$E_{s,n} = \frac{(H*D^2*P*P_2*\%G*365days/yr)}{(4*P_1*T*1{,}000cf/Mcf*100)} \quad \text{(Eq. W-6)}$$

Where:

$E_{s,n}$ = Annual natural gas emissions at standard conditions in cubic feet.
H = Height of the dehydrator vessel (ft).
D = Inside diameter of the vessel (ft).
P_1 = Atmospheric pressure (psia).
P_2 = Pressure of the gas (psia).
P = pi (3.14).
%G = Percent of packed vessel volume that is gas.
T = Time between refilling (days).
100 = Conversion of %G to fraction.

(6) Both CH_4 and CO_2 volumetric and mass emissions shall be calculated from volumetric natural gas emissions using calculations in paragraphs (u) and (v) of this section.

(f) *Well venting for liquids unloadings.* Calculate CO_2 and CH_4 emissions from well venting for liquids unloading using one of the calculation methodologies described in paragraphs (f)(1), (f)(2) or (f)(3) of this section.

(1) *Calculation Methodology 1.* For one well of each unique well tubing diameter and producing horizon/formation combination in each gas producing field (see § 98.238 for the definition of Field) where gas wells are vented to the atmosphere to expel liquids accumulated in the tubing, a recording flow meter shall be installed on the vent line used to vent gas from the well (*e.g.* on the vent line off the wellhead separator or atmospheric storage tank) according to methods set forth in § 98.234(b). Calculate emissions from well venting for liquids unloading using Equation W–7 of this section.

$$E_{a,n} = \sum_h \sum_t T_{h,t} * FR_{h,t} \quad \text{(Eq. W-7)}$$

Where:

$E_{a,n}$ = Annual natural gas emissions at actual conditions in cubic feet.
$T_{h,t}$ = Cumulative amount of time in hours of venting from all wells of the same tubing diameter (t) and producing horizon (h)/formation combination during the year.
$FR_{h,t}$ = Average flow rate in cubic feet per hour of the measured well venting for the duration of the liquids unloading, under actual conditions as determined in paragraph (f)(1)(i) of this section.

(i) Determine the well vent average flow rate as specified under paragraph (f)(1)(i) of this section.

(A) The average flow rate per hour of venting is calculated for each unique tubing diameter and producing horizon/formation combination in each producing field by averaging the recorded flow rates for the recorded time of one representative well venting to the atmosphere.

(B) This average flow rate is applied to all wells in the field that have the same tubing diameter and producing horizon/formation combination, for the number of hours of venting these wells.

(C) A new average flow rate is calculated every other calendar year for each reporting field and horizon starting the first calendar year of data collection.

(ii) Calculate natural gas volumetric emissions at standard conditions using calculations in paragraph (t) of this section.

(2) *Calculation Methodology 2.* Calculate emissions from each well venting for liquids unloading using Equation W–8 of this section.

$$E_{a,n} = \{(0.37\times10^{-3})*CD^2*WD*SP*N_V\}+\{SFR*(HR-1.0)*Z\} \quad \text{(Eq. W-8)}$$

Where:

$E_{a,n}$ = Annual natural gas emissions at actual conditions, in cubic feet/year.
0.37×10^{-3} = {3.14 (pi)/4}/{14.7*144} (psia converted to pounds per square feet).
CD = Casing diameter (inches).
WD = Well depth to first producing horizon (feet).
SP = Shut-in pressure (psia).
N_V = Number of vents per year.
SFR = Average sales flow rate of gas well in cubic feet per hour.
HR = Hours that the well was left open to the atmosphere during unloading.
1.0 = Hours for average well to blowdown casing volume at shut-in pressure.
Z = If HR is less than 1.0 then Z is equal to 0. If HR is greater than or equal to 1.0 then Z is equal to 1.

(i) Calculate natural gas volumetric emissions at standard conditions using calculations in paragraph (t) of this section.

(ii) [Reserved]

(3) *Calculation Methodology 3.* Calculate emissions from each well venting to the atmosphere for liquids unloading with plunger lift assist using Equation W–9 of this section.

$$E_{a,n} = \{(0.37\times10^{-3})*TD^2*WD*SP*N_V\}+\{SFR*(HR-0.5)*Z\} \quad \text{(Eq. W-9)}$$

Where:

$E_{a,n}$ = Annual natural gas emissions at actual conditions, in cubic feet/year.
0.37×10^{-3} = {3.14 (pi)/4}/{14.7*144} (psia converted to pounds per square feet).
TD = Tubing diameter (inches).
WD = Tubing depth to plunger bumper (feet).
SP = Sales line pressure (psia).
N_V = Number of vents per year.
SFR = Average sales flow rate of gas well in cubic feet per hour.
HR = Hours that the well was left open to the atmosphere during unloading.
0.5 = Hours for average well to blowdown tubing volume at sales line pressure.
Z = If HR is less than 0.5 then Z is equal to 0. If HR is greater than or equal to 0.5 then Z is equal to 1.

(i) Calculate natural gas volumetric emissions at standard conditions using calculations in paragraph (t) of this section.

(ii) [Reserved]

(4) Both CH_4 and CO_2 volumetric and mass emissions shall be calculated from volumetric natural gas emissions using calculations in paragraphs (u) and (v) of this section.

(g) *Gas well venting during completions and workovers from hydraulic fracturing.* Calculate CH_4, CO_2 and N_2O (when flared) annual emissions from gas well venting during completions involving hydraulic fracturing in wells and well workovers using Equation W–10 of this section. Both CH_4 and CO_2 volumetric and mass emissions shall be calculated from volumetric total gas emissions using calculations in paragraphs (u) and (v) of this section.

$$E_{a,n} = (T * FR) - EnF - SG \qquad \text{(Eq. W-10)}$$

Where:

$E_{a,n}$ = Annual volumetric total gas emissions in cubic feet at standard conditions from gas well venting during completions following hydraulic fracturing.
T = Cumulative amount of time in hours of all well completion venting in a field during the year reporting.
FR = Average flow rate in cubic feet per hour, under actual conditions, converted to standard conditions, as required in paragraph (g)(1) of this section.
EnF = Volume of CO_2 or N_2 injected gas in cubic feet at standard conditions that was injected into the reservoir during an energized fracture job. If the fracture process did not inject gas into the reservoir, then EnF is 0. If injected gas is CO_2 then EnF is 0.
SG = Volume of natural gas in cubic feet at standard conditions that was recovered into a sales pipeline. If no gas was recovered for sales, SG is 0.

(1) The average flow rate for gas well venting to the atmosphere or to a flare during well completions and workovers from hydraulic fracturing shall be determined using either of the calculation methodologies described in this paragraph (g)(1) of this section.

(i) *Calculation Methodology 1.* For one well completion in each gas producing field and for one well workover in each gas producing field, a recording flow meter (digital or analog) shall be installed on the vent line, ahead of a flare if used, to measure the backflow venting event according to methods set forth in § 98.234(b).

(A) The average flow rate in cubic feet per hour of venting to the atmosphere or routed to a flare is determined from the flow recording over the period of backflow venting.

(B) The respective flow rates are applied to all well completions in the producing field and to all well workovers in the producing field for the total number of hours of venting of each of these wells.

(C) New flow rates for completions and workovers are measured every other calendar year for each reporting gas producing field and gas producing geologic horizon in each gas producing field starting in the first calendar year of data collection.

(D) Calculate total volumetric flow rate at standard conditions using calculations in paragraph (t) of this section.

(ii) *Calculation Methodology 2.* For one well completion in each gas producing field and for one well workover in each gas producing field, record the well flowing pressure upstream (and downstream in subsonic flow) of a well choke according to methods set forth in § 98.234(b) to calculate intermittent well flow rate of gas during venting to the atmosphere or a flare. Calculate emissions using Equation W–11 of this section for subsonic flow or Equation W–12 of this section for sonic flow:

$$FR = 1.27 * 10^5 * A * \sqrt{3430 * T_u * \left[\left(\frac{P_2}{P_1} \right)^{1.515} - \left(\frac{P_2}{P_1} \right)^{1.758} \right]} \qquad \text{(Eq. W-11)}$$

Where:

FR = Average flow rate in cubic feet per hour, under subsonic flow conditions.
A = Cross sectional area of orifice (m^2).
P_1 = Upstream pressure (psia).
T_u = Upstream temperature (degrees Kelvin).
P_2 = Downstream pressure (psia).
3430 = Constant with units of $m^2/(sec^2 * K)$.
$1.27*10^5$ = Conversion from m^3/second to ft^3/hour.

$$FR = 1.27 * 10^5 * A * \sqrt{187.08 * T_u} \qquad \text{(Eq. W-12)}$$

Where:

FR = Average flow rate in cubic feet per hour, under sonic flow conditions.
A = Cross sectional area of orifice (m^2).
T_u = Upstream temperature (degrees Kelvin).
187.08 = Constant with units of $m^2/(sec^2 * K)$.
$1.27*10^5$ = Conversion from m^3/second to ft^3/hour.

(A) The average flow rate in cubic feet per hour of venting across the choke is calculated for one well completion in each gas producing field and for one well workover in each gas producing field by averaging the gas flow rates during venting to the atmosphere or routing to a flare.

(B) The respective flow rates are applied to all well completions in the gas producing field and to all well workovers in the gas producing field for the total number of hours of venting of each of these wells.

(C) Flow rates for completions and workovers in each field shall be calculated once every two years for each

reporting gas producing field and geologic horizon in each gas producing field starting in the first calendar year of data collection.

(D) Calculate total volumetric flow rate at standard conditions using calculations in paragraph (t) of this section.

(2) The volume of CO_2 or N_2 injected into the well reservoir during energized hydraulic fractures will be measured using an appropriate meter as described in 98.234(b) or using receipts of gas purchases that are used for the energized fracture job.

(i) Calculate gas volume at standard conditions using calculations in paragraph (t) of this section.

(ii) [Reserved]

(3) The volume of recovered completion gas sent to a sales line will be measured using existing company records. If data does not exist on sales gas, then an appropriate meter as described in 98.234(b) may be used.

(i) Calculate gas volume at standard conditions using calculations in paragraph (t) of this section.

(ii) [Reserved]

(4) Both CH_4 and CO_2 volumetric and mass emissions shall be calculated from volumetric total emissions using calculations in paragraphs (u) and (v) of this section.

(5) Determine if the well completion or workover from hydraulic fracturing recovered gas with purpose designed equipment that separates saleable gas from the backflow, and sent this gas to a sales line (*e.g.* reduced emissions completion).

(i) Use the factor SG in Equation W–10 of this section, to adjust the emissions estimated in paragraphs (g)(1) through (g)(4) of this section by the magnitude of emissions captured using reduced emission completions as determined by engineering estimate based on best available data.

(ii) [Reserved]

(6) Calculate annual emissions from gas well venting during well completions and workovers from hydraulic fracturing to flares as follows:

(i) Use the total gas well venting volume during well completions and workovers as determined in paragraph (g) of this section.

(ii) Use the calculation methodology of flare stacks in paragraph (n) of this section to determine gas well venting during well completions and workovers using hydraulic fracturing emissions from the flare. This adjustment to emissions from completions using flaring versus completions without flaring accounts for the conversion of CH_4 to CO_2 in the flare.

(h) *Gas well venting during completions and workovers without hydraulic fracturing.* Calculate CH_4, CO_2 and N_2O (when flared) emissions from each gas well venting during well completions and workovers not involving hydraulic fracturing and well workovers not involving hydraulic fracturing using Equation W–13 of this section:

$$E_{a,n} = N_{wo} * EF_{wo} + \sum_{f} V_f * T_f \qquad \text{(Eq. W-13)}$$

Where:

$E_{a,n}$ = Annual natural gas emissions in cubic feet at actual conditions from gas well venting during well completions and workovers without hydraulic fracturing.

N_{wo} = Number of workovers per field not involving hydraulic fracturing in the reporting year.

EF_{wo} = Emission Factor for non-hydraulic fracture well workover venting in actual cubic feet per workover. EF_{wo} = 2,454 standard cubic feet per well workover without hydraulic fracturing.

f = Total number of well completions without hydraulic fracturing in a field.

V_f = Average daily gas production rate in cubic feet per hour of each well completion without hydraulic fracturing. This is the total annual gas production volume divided by total number of hours the wells produced to the sales line. For completed wells that have not established a production rate, you may use the average flow rate from the first 30 days of production. In the event that the well is completed less than 30 days from the end of the calendar year, the first 30 days of the production straddling the current and following calendar years shall be used.

T_f = Time each well completion without hydraulic fracturing was venting in hours during the year.

(i) *Blowdown vent stacks.* Calculate CO_2 and CH_4 blowdown vent stack emissions from depressurizing equipment to the atmosphere (excluding depressurizing to a flare, over-pressure relief, operating pressure control venting and blowdown of non-GHG gases; desiccant dehydrator blowdown venting before reloading is covered in paragraph (e)(5) of this section) as follows:

(1) Calculate the total volume (including pipelines, compressor case or cylinders, manifolds, suction bottles, discharge bottles, and vessels) between isolation valves determined by engineering estimate based on best available data.

(2) If the total volume between isolation valves is greater than or equal to 50 standard cubic feet, retain logs of the number of blowdowns for each equipment type (including but not limited to compressors, vessels, pipelines, headers, fractionators, and tanks). Blowdown volumes smaller than 50 standard cubic feet are exempt from reporting under paragraph (i) of this section.

(3) Calculate the total annual venting emissions for each equipment type using Equation W–14 of this section:

$$E_{s,n} = N * \left(V_v \left(\frac{(459.67 + T_s)P_a}{(459.67 + T_a)P_s} \right) - V_v * C \right) \qquad \text{(Eq. W-14)}$$

Where:

$E_{s,n}$ = Annual natural gas venting emissions at standard conditions from blowdowns in cubic feet.
N = Number of repetitive blowdowns for each equipment type of a unique volume in calendar year.
V_v = Total volume of blowdown equipment chambers (including pipelines, compressors and vessels) between isolation valves in cubic feet.
C = Purge factor that is 1 if the equipment is not purged or zero if the equipment is purged using non-GHG gases.
T_s = Temperature at standard conditions (°F).
T_a = Temperature at actual conditions in the blowdown equipment chamber (°F).
P_s = Absolute pressure at standard conditions (psia).
P_a = Absolute pressure at actual conditions in the blowdown equipment chamber (psia).

(4) Calculate both CH_4 and CO_2 mass emissions from volumetric natural gas emissions using calculations in paragraph (v) of this section.

(5) Calculate total annual venting emissions for all blowdown vent stacks by adding all standard volumetric and mass emissions determined in Equation W–14 and paragraph (i)(4) of this section.

(j) *Onshore production storage tanks.* Calculate CH_4, CO_2 and N_2O (when flared) emissions from atmospheric pressure fixed roof storage tanks receiving hydrocarbon produced liquids from onshore petroleum and natural gas production facilities (including stationary liquid storage not owned or operated by the reporter), calculate annual CH_4 and CO_2 emissions using any of the calculation methodologies described in this paragraph (j).

(1) *Calculation Methodology 1.* For separators with oil throughput greater than or equal to 10 barrels per day. Calculate annual CH_4 and CO_2 emissions from onshore production storage tanks using operating conditions in the last wellhead gas-liquid separator before liquid transfer to storage tanks. Calculate flashing emissions with a software program, such as AspenTech HYSYS® or API 4697 E&P Tank, that uses the Peng-Robinson equation of state, models flashing emissions, and speciates CH_4 and CO_2 emissions that will result when the oil from the separator enters an atmospheric pressure storage tank. A minimum of the following parameters determined for typical operating conditions over the year by engineering estimate and process knowledge based on best available data must be used to characterize emissions from liquid transferred to tanks.

(i) Separator temperature.

(ii) Separator pressure.

(iii) Sales oil or stabilized oil API gravity.

(iv) Sales oil or stabilized oil production rate.

(v) Ambient air temperature.

(vi) Ambient air pressure.

(vii) Separator oil composition and Reid vapor pressure. If this data is not available, determine these parameters by selecting one of the methods described under paragraph (j)(1)(viii) of this section.

(A) If separator oil composition and Reid vapor pressure default data are provided with the software program, select the default values that most closely match your separator pressure first, and API gravity secondarily.

(B) If separator oil composition and Reid vapor pressure data are available through your previous analysis, select the latest available analysis that is representative of produced crude oil or condensate from the field.

(C) Analyze a representative sample of separator oil in each field for oil composition and Reid vapor pressure using an appropriate standard method published by a consensus-based standards organization.

(2) *Calculation Methodology 2.* Calculate annual CH_4 and CO_2 emissions from onshore production storage tanks for wellhead gas-liquid separators with oil throughput greater than or equal to 10 barrels per day by assuming that all of the CH_4 and CO_2 in solution at separator temperature and pressure is emitted from oil sent to storage tanks. You may use an appropriate standard method published by a consensus-based standards organization if such a method exists or you may use an industry standard practice as described in § 98.234(b)(1) to sample and analyze separator oil composition at separator pressure and temperature.

(3) *Calculation Methodology 3.* For wells with oil production greater than or equal to 10 barrels per day that flow directly to atmospheric storage tanks without passing through a wellhead separator, calculate CH_4 and CO_2 emissions by either of the methods in paragraph (j)(3) of this section:

(i) If well production oil and gas compositions are available through your previous analysis, select the latest available analysis that is representative of produced oil and gas from the field and assume all of the CH_4 and CO_2 in both oil and gas are emitted from the tank.

(ii) If well production oil and gas compositions are not available, use default oil and gas compositions in software programs, such as API 4697 E&P Tank, that most closely match your well production gas/oil ratio and API gravity and assume all of the CH_4 and CO_2 in both oil and gas are emitted from the tank.

(4) *Calculation Methodology 4.* For wells with oil production greater than or equal to 10 barrels per day that flow to a separator not at the well pad, calculate CH_4 and CO_2 emissions by either of the methods in paragraph (j)(4) of this section:

(i) If well production oil and gas compositions are available through your previous analysis, select the latest available analysis that is representative of oil at separator pressure determined by best available data and assume all of the CH_4 and CO_2 in the oil is emitted from the tank.

(ii) If well production oil composition is not available, use default oil composition in software programs, such as API 4697 E&P Tank, that most closely match your well production API gravity and pressure in the off-well pad separator determined by best available data. Assume all of the CH_4 and CO_2 in the oil phase is emitted from the tank.

(5) *Calculation Methodology 5.* For well pad gas-liquid separators and for wells flowing off a well pad without passing through a gas-liquid separator with throughput less than 10 barrels per day use Equation W–15 of this section:

$$E_{s,i} = EF_i * Count \quad \text{(Eq. W-15)}$$

Where:

$E_{s,i}$ = Annual total volumetric GHG emissions (either CO_2 or CH_4) at standard conditions in cubic feet.
EF_i = Populations emission factor for separators and wells in thousand standard cubic feet per separator or well per year, for crude oil use 4.3 for CH_4 and 2.9 for CO_2 at 68 °F and 14.7 psia, and for gas condensate use 17.8 for CH_4 and 2.9 for CO_2 at 68 °F and 14.7 psia.
Count = Total number of separators and wells with throughput less than 10 barrels per day.

(6) Determine if the storage tank receiving your separator oil has a vapor recovery system.

(i) Adjust the emissions estimated in paragraphs (j)(1) through (j)(5) of this section downward by the magnitude of emissions recovered using a vapor recovery system as determined by engineering estimate based on best available data.

(ii) [Reserved]

(7) Determine if the storage tank receiving your separator oil is sent to flare(s).

(i) Use your separator flash gas volume and gas composition as determined in this section.

(ii) Use the calculation methodology of flare stacks in paragraph (n) of this

section to determine your contribution to storage tank emissions from the flare.

(8) Calculate emissions from occurrences of well pad gas-liquid separator liquid dump valves not closing during the calendar year by using Equation W–16 of this section.

$$E_{s,i} = (CF_n * E_n * T_n) + (E_t * (8760 - T_n)) \quad \text{(Eq. W-16)}$$

Where:

$E_{s,i}$ = Annual total volumetric GHG emissions at standard conditions from each storage tank in cubic feet.

E_n = Storage tank emissions as determined in Calculation Methodologies 1, 2, or 5 in paragraphs (j)(1) through (j)(5) of this section (with wellhead separators) during time T_n in cubic feet per hour.

T_n = Total time the dump valve is not closing properly in the calendar year in hours. T_n is estimated by maintenance or operations records (records) such that when a record shows the valve to be open improperly, it is assumed the valve was open for the entire time period preceding the record starting at either the beginning of the calendar year or the previous record showing it closed properly within the calendar year. If a subsequent record shows it is closing properly, then assume from that time forward the valve closed properly until either the next record of it not closing properly or, if there is no subsequent record, the end of the calendar year.

CF_n = Correction factor for tank emissions for time period T_n is 3.87 for crude oil production. Correction factor for tank emissions for time period T_n is 5.37 for gas condensate production. Correction factor for tank emissions for time period T_n is 1.0 for periods when the dump valve is closed.

E_t = Storage tank emissions as determined in Calculation Methodologies 1, 2, or 3 in paragraphs (j)(1) through (j)(5) of this section at maintenance or operations during the time the dump valve is closing properly (ie. 8760–T_n) in cubic feet per hour.

(9) Calculate both CH_4 and CO_2 mass emissions from volumetric natural gas emissions using calculations in paragraph (v) of this section.

(k) *Transmission storage tanks.* For condensate storage tanks, either water or hydrocarbon, without vapor recovery or thermal control devices in onshore natural gas transmission compression facilities calculate CH_4, CO_2 and N_2O (when flared) annual emissions from compressor scrubber dump valve leakage as follows:

(1) Monitor the tank vapor vent stack annually for emissions using an optical gas imaging instrument according to methods set forth in § 98.234(a)(1) for a duration of 5 minutes. Or you may annually monitor leakage through compressor scrubber dump valve(s) into the tank using an acoustic leak detection device according to methods set forth in § 98.234(a)(5).

(2) If the tank vapors are continuous for 5 minutes, or the acoustic leak detection device detects a leak, then use one of the following two methods in paragraph (k)(2) of this section to quantify emissions:

(i) Use a meter, such as a turbine meter, to estimate tank vapor volumes according to methods set forth in § 98.234(b). If you do not have a continuous flow measurement device, you may install a flow measuring device on the tank vapor vent stack.

(ii) Use an acoustic leak detection device on each scrubber dump valve connected to the tank according to the method set forth in § 98.234(a)(5).

(iii) Use the appropriate gas composition in paragraph (u)(2)(iii) of this section.

(3) If the leaking dump valve(s) is fixed following leak detection, the annual emissions shall be calculated from the beginning of the calendar year to the time the valve(s) is repaired.

(4) Calculate emissions from storage tanks to flares as follows:

(i) Use the storage tank emissions volume and gas composition as determined in either paragraph (j)(1)of this section or with an acoustic leak detection device in paragraphs (k)(1) through (k)(3) of this section.

(ii) Use the calculation methodology of flare stacks in paragraph (n) of this section to determine storage tank emissions from the flare.

(l) *Well testing venting and flaring.* Calculate CH_4, CO_2 and N_2O (when flared) well testing venting and flaring emissions as follows:

(1) Determine the gas to oil ratio (GOR) of the hydrocarbon production from each well tested.

(2) If GOR cannot be determined from your available data, then you must measure quantities reported in this section according to one of the two procedures in paragraph (l)(2) of this section to determine GOR:

(i) You may use an appropriate standard method published by a consensus-based standards organization if such a method exists.

(ii) Or you may use an industry standard practice as described in § 98.234(b).

(3) Estimate venting emissions using Equation W–17 of this section.

$$E_{a,n} = GOR * FR * D \quad \text{(Eq. W-17)}$$

Where:

$E_{a,n}$ = Annual volumetric natural gas emissions from well testing in cubic feet under actual conditions.

GOR = Gas to oil ratio in cubic feet of gas per barrel of oil; oil here refers to hydrocarbon liquids produced of all API gravities.

FR = Flow rate in barrels of oil per day for the well being tested.

D = Number of days during the year, the well is tested.

(4) Calculate natural gas volumetric emissions at standard conditions using calculations in paragraph (t) of this section.

(5) Calculate both CH_4 and CO_2 volumetric and mass emissions from volumetric natural gas emissions using calculations in paragraphs (u) and (v) of this section.

(6) Calculate emissions from well testing to flares as follows:

(i) Use the well testing emissions volume and gas composition as determined in paragraphs (l)(1) through (3) of this section.

(ii) Use the calculation methodology of flare stacks in paragraph (n) of this section to determine well testing emissions from the flare.

(m) *Associated gas venting and flaring.* Calculate CH_4, CO_2 and N_2O (when flared) associated gas venting and flaring emissions not in conjunction with well testing (refer to paragraph (l): Well testing venting and flaring of this section) as follows:

(1) Determine the GOR of the hydrocarbon production from each well whose associated natural gas is vented or flared. If GOR from each well is not available, the GOR from a cluster of wells in the same field shall be used.

(2) If GOR cannot be determined from your available data, then use one of the two procedures in paragraph (m)(2) of this section to determine GOR:

(i) You may use an appropriate standard method published by a consensus-based standards organization if such a method exists.

(ii) Or you may use an industry standard practice as described in § 98.234(b).

(3) Estimate venting emissions using Equation W–18 of this section.

$$E_{a,n} = GOR * V \quad \text{(Eq. W-18)}$$

Where:

$E_{a,n}$ = Annual volumetric natural gas emissions from associated gas venting under actual conditions, in cubic feet.

GOR = Gas to oil ratio in cubic feet of gas per barrel of oil; oil here refers to hydrocarbon liquids produced of all API gravities.

V = Volume of oil produced in barrels in the calendar year during which associated gas was vented or flared.

(4) Calculate natural gas volumetric emissions at standard conditions using calculations in paragraph (t) of this section.

(5) Calculate both CH_4 and CO_2 volumetric and mass emissions from volumetric natural gas emissions using calculations in paragraphs (u) and (v) of this section.

(6) Calculate emissions from associated natural gas to flares as follows:

(i) Use the associated natural gas volume and gas composition as determined in paragraph (m)(1) through (4) of this section.

(ii) Use the calculation methodology of flare stacks in paragraph (n) of this section to determine associated gas emissions from the flare.

(n) *Flare stack emissions.* Calculate CO_2, CH_4, and N_2O emissions from a flare stack as follows:

(1) If you have a continuous flow measurement device on the flare, you must use the measured flow volumes to calculate the flare gas emissions. If all of the flare gas is not measured by the existing flow measurement device, then the flow not measured can be estimated using engineering calculations based on best available data or company records. If you do not have a continuous flow measurement device on the flare, you can install a flow measuring device on the flare or use engineering calculations based on process knowledge, company records, and best available data.

(2) If you have a continuous gas composition analyzer on gas to the flare, you must use these compositions in calculating emissions. If you do not have a continuous gas composition analyzer on gas to the flare, you must use the appropriate gas compositions for each stream of hydrocarbons going to the flare as follows:

(i) For onshore natural gas production, determine natural gas composition using (u)(2)(i) of this section.

(ii) For onshore natural gas processing, when the stream going to flare is natural gas, use the GHG mole percent in feed natural gas for all streams upstream of the de-methanizer or dew point control, and GHG mole percent in facility specific residue gas to transmission pipeline systems for all emissions sources downstream of the de-methanizer overhead or dew point control for onshore natural gas processing facilities.

(iii) When the stream going to the flare is a hydrocarbon product stream, such as ethane, propane, butane, pentane-plus and mixed light hydrocarbons, then use a representative composition from the source for the stream determined by engineering calculation based on process knowledge and best available data.

(3) Determine flare combustion efficiency from manufacturer. If not available, assume that flare combustion efficiency is 98 percent.

(4) Calculate GHG volumetric emissions at actual conditions using Equations W–19, W–20, and W–21 of this section.

$$E_{a,CH4}(un-combusted) = V_a * (1-\eta) * X_{CH4} \quad \text{(Eq. W-19)}$$

$$E_{a,CO2}(un-combusted) = V_a * X_{CO2} \quad \text{(Eq. W-20)}$$

$$E_{a,CO2}(combusted) = \sum_j \eta * V_a * Y_j * R_j \quad \text{(Eq. W-21)}$$

Where:

E_{a,CH_4}(un-combusted) = Contribution of annual un-combusted CH_4 emissions from flare stack in cubic feet, under actual conditions.

E_{a,CO_2}(un-combusted) = Contribution of annual un-combusted CO_2 emissions from flare stack in cubic feet, under actual conditions.

E_{a,CO_2}(combusted) = Contribution of annual combusted CO_2 emissions from flare stack in cubic feet, under actual conditions.

V_a = Volume of gas sent to flare in cubic feet, during the year.

η = Fraction of gas combusted by a burning flare (default is 0.98). For gas sent to an unlit flare, η is zero.

X_{CH_4} = Mole fraction of CH_4 in gas to the flare.

X_{CO_2} = Mole fraction of CO_2 in gas to the flare.

Y_j = Mole fraction of gas hydrocarbon constituents j (such as methane, ethane, propane, butane, and pentanes-plus).

R_j = Number of carbon atoms in the gas hydrocarbon constituent j: 1 for methane, 2 for ethane, 3 for propane, 4 for butane, and 5 for pentanes-plus).

(5) Calculate GHG volumetric emissions at standard conditions using calculations in paragraph (t) of this section.

(6) Calculate both CH_4 and CO_2 mass emissions from volumetric CH_4 and CO_2 emissions using calculation in paragraph (v) of this section.

(7) Calculate total annual emission from flare stacks by summing Equation W–40, Equation W–19, Equation W–20 and Equation W–21 of this section.

(8) Calculate N_2O emissions from flare stacks using Equation W–40 in paragraph (z) of this section.

(9) The flare emissions determined under paragraph (n) of this section must be corrected for flare emissions calculated and reported under other paragraphs of this section to avoid double counting of these emissions.

(o) *Centrifugal compressor venting.* Calculate CH_4, CO_2 and N_2O (when flared) emissions from both wet seal and dry seal centrifugal compressor vents as follows:

(1) For each centrifugal compressor covered by § 98.232 (d)(2), (e)(2), (f)(2), (g)(2), and (h)(2) you must conduct an annual measurement in the operating mode in which it is found. Measure emissions from all vents (including emissions manifolded to common vents)

including wet seal oil degassing vents, unit isolation valve vents, and blowdown valve vents. Record emissions from the following vent types in the specified compressor modes during the annual measurement.

(i) Operating mode, blowdown valve leakage through the blowdown vent, wet seal and dry seal compressors.

(ii) Operating mode, wet seal oil degassing vents.

(iii) Not operating, depressurized mode, unit isolation valve leakage through open blowdown vent, without blind flanges, wet seal and dry seal compressors.

(A) For the not operating, depressurized mode, each compressor must be measured at least once in any three consecutive calendar years. If a compressor is not operated and has blind flanges in place throughout the 3 year period, measurement is not required in this mode. If the compressor is in standby depressurized mode without blind flanges in place and is not operated throughout the 3 year period, it must be measured in the standby depressurized mode.

(2) For wet seal oil degassing vents, determine vapor volumes sent to an atmospheric vent or flare, using a temporary meter such as a vane anemometer or permanent flow meter according to 98.234(b) of this section. If you do not have a permanent flow meter, you may install a permanent flow meter on the wet seal oil degassing tank vent.

(3) For blowdown valve leakage and unit isolation valve leakage to open ended vents, you can use one of the following methods: Calibrated bagging or high volume sampler according to methods set forth in § 98.234(c) and § 98.234(d), respectively. For through valve leakage, such as isolation valves, you may use an acoustic leak detection device according to methods set forth in § 98.234(a). If you do not have a flow meter, you may install a port for insertion of a temporary meter, or a permanent flow meter, on the vents.

(4) Estimate annual emissions using the flow measurement and Equation W–22 of this section.

$$E_{s,i,m} = MT_m * T_m * M_{i,m} * (1 - B_m) \qquad \text{(Eq. W-22)}$$

Where:

$E_{s,i,m}$ = Annual GHG_i (either CH_4 or CO_2) volumetric emissions at standard conditions, in cubic feet.

MT_m = Measured gas emissions in standard cubic feet per hour.

T_m = Total time the compressor is in the mode for which $E_{s,i}$ is being calculated, in the calendar year in hours.

$M_{i,m}$ = Mole fraction of GHG_i in the vent gas; use the appropriate gas compositions in paragraph (u)(2) of this section.

B_m = Fraction of operating time that the vent gas is sent to vapor recovery or fuel gas as determined by keeping logs of the number of operating hours for the vapor recovery system and the time that vent gas is directed to the fuel gas system or sales.

(5) Calculate annual emissions from each centrifugal compressor using Equation W–23 of this section.

$$E_{s,i} = \sum_m EF_m * T_m * GHG_i \qquad \text{(Eq. W-23)}$$

Where:

$E_{s,i}$ = Annual total volumetric GHG emissions at standard conditions from each centrifugal compressor in cubic feet.

EF_m = Reporter emission factor for each mode m, in cubic feet per hour, from Equation W–24 of this section as calculated in paragraph 6.

T_m = Total time in hours per year the compressor was in each mode, as listed in paragraph (o)(1)(i) through (o)(1)(iii).

GHG_i = For onshore natural gas processing facilities, concentration of GHG_i, CH_4 or CO_2, in produced natural gas or feed natural gas; for other facilities listed in § 98.230(a)(4) through (a)(8), GHG_i equals 1.

(6) You shall use the flow measurements of operating mode wet seal oil degassing vent, operating mode blowdown valve vent and not operating depressurized mode isolation valve vent for all the reporter's compressor modes not measured in the calendar year to develop the following emission factors using Equation W–24 of this section for each emission source and mode as listed in paragraph (o)(1)(i) through (o)(1)(iii).

$$EF_m = \sum \frac{MT_m}{Count_m} \qquad \text{(Eq. W-24)}$$

Where:

EF_m = Reporter emission factors for compressor in the three modes m (as listed in paragraph (o)(1)(i) through (o)(1)(iii)) in cubic feet per hour.

MT_m = Flow Measurements from all centrifugal compressor vents in each mode in (o)(1)(i) through (o)(1)(iii) of this section in cubic feet per hour.

$Count_m$ = Total number of compressors measured.

m = Compressor mode as listed in paragraph (o)(1)(i) through (o)(1)(iii).

(i) The emission factors must be calculated annually. You must use all measurements from the current calendar year and the preceding two calendar years, totaling three consecutive calendar years of measurements in paragraph (o)(6) of this section.

(ii) [Reserved]

(7) Onshore petroleum and natural gas production shall calculate emissions from centrifugal compressor wet seal oil degassing vents as follows:

$$E_{s,i} = Count * EF_i \qquad \text{(Eq. W-25)}$$

Where:

$E_{s,i}$ = Annual total volumetric GHG emissions at standard conditions from centrifugal compressor wet seals in cubic feet.

Count = Total number of centrifugal compressors for the reporter.

EF_i = Emission factor for GHG $_i$. Use 12.2 million standard cubic feet per year per compressor for CH_4 and 538 thousand standard cubic feet per year per compressor for CO_2 at 68°F and 14.7 psia or 12 million standard cubic feet per year per compressor for CH_4 and 530 thousand standard cubic feet per year per compressor for CO_2 at 60°F and 14.7 psia.

(8) Calculate both CH_4 and CO_2 mass emissions from volumetric emissions using calculations in paragraph (v) of this section.

(9) Calculate emissions from seal oil degassing vent vapors to flares as follows:

(i) Use the seal oil degassing vent vapor volume and gas composition as determined in paragraphs (o)(5) of this section.

(ii) Use the calculation methodology of flare stacks in paragraph (n) of this section to determine degassing vent vapor emissions from the flare.

(p) *Reciprocating compressor venting.* Calculate CH_4 and CO_2 emissions from all reciprocating compressor vents as follows. For each reciprocating compressor covered in § 98.232(d)(1), (e)(1), (f)(1), (g)(1), and (h)(1) you must conduct an annual measurement for each compressor in the mode in which it is found during the annual measurement, except as specified in paragraph (p)(9) of this section. Measure emissions from (including emissions manifolded to common vents) reciprocating rod packing vents, unit isolation valve vents, and blowdown valve vents. Record emissions from the following vent types in the specified compressor modes during the annual measurement as follows:

(1) Operating or standby pressurized mode, blowdown vent leakage through the blowdown vent stack.

(2) Operating mode, reciprocating rod packing emissions.

(3) Not operating, depressurized mode, unit isolation valve leakage through the blowdown vent stack, without blind flanges.

(i) For the not operating, depressurized mode, each compressor must be measured at least once in any three consecutive calendar years if this mode is not found in the annual measurement. If a compressor is not operated and has blind flanges in place throughout the 3 year period, measurement is not required in this mode. If the compressor is in standby depressurized mode without blind flanges in place and is not operated throughout the 3 year period, it must be measured in the standby depressurized mode.

(ii) [Reserved]

(4) If reciprocating rod packing and blowdown vent are connected to an open-ended vent line use one of the following two methods to calculate emissions:

(i) Measure emissions from all vents (including emissions manifolded to common vents) including rod packing, unit isolation valves, and blowdown vents using either calibrated bagging or high volume sampler according to methods set forth in § 98.234(c) and § 98.234(d), respectively.

(ii) Use a temporary meter such as a vane anemometer or a permanent meter such as an orifice meter to measure emissions from all vents (including emissions manifolded to a common vent) including rod packing vents and unit isolation valve leakage through blowdown vents according to methods set forth in § 98.234(b). If you do not have a permanent flow meter, you may install a port for insertion of a temporary meter or a permanent flow meter on the vents. For through-valve leakage to open ended vents, such as unit isolation valves on not operating, depressurized compressors and blowdown valves on pressurized compressors, you may use an acoustic detection device according to methods set forth in § 98.234(a).

(5) If reciprocating rod packing is not equipped with a vent line use the following method to calculate emissions:

(i) You must use the methods described in § 98.234(a) to conduct annual leak detection of equipment leaks from the packing case into an open distance piece, or from the compressor crank case breather cap or other vent with a closed distance piece.

(ii) Measure emissions found in paragraph (p)(5)(i) of this section using an appropriate meter, or calibrated bag, or high volume sampler according to methods set forth in § 98.234(b), (c), and (d), respectively.

(6) Estimate annual emissions using the flow measurement and Equation W–26 of this section.

$$E_{s,i,m} = MT_m * T_m * M_{i,m} \quad \text{(Eq. W-26)}$$

Where:

$E_{s,i,m}$ = Annual GHG i (either CH_4 or CO_2) volumetric emissions at standard conditions, in cubic feet.

MT_m = Measured gas emissions in standard cubic feet per hour.

T_m = Total time the compressor is in the mode for which $E_{s,i,m}$ is being calculated, in the calendar year in hours.

$M_{i,m}$ = Mole fraction of GHG i in gas; use the appropriate gas compositions in paragraph (u)(2) of this section.

(7) Calculate annual emissions from each reciprocating compressor using Equation W–27 of this section.

$$E_{s,i} = \sum_m EF_m * T_m * GHG_i \quad \text{(Eq. W-27)}$$

Where:

$E_{s,i}$ = Annual total volumetric GHG emissions at standard conditions from each reciprocating compressor in cubic feet.

EF_m = Reporter emission factor for each mode, m, in cubic feet per hour, from Equation W–28 of this section as calculated in paragraph (p)(7)(i) of this section.

T_m = Total time in hours per year the compressor was in each mode, m, as listed in paragraph (p)(1) through (p)(3).

GHG_i = For onshore natural gas processing facilities, concentration of GHG i, CH_4 or CO_2, in produced natural gas or feed natural gas; for other facilities listed in § 98.230(a)(4) through (a)(8), GHG_i equals 1.

m = Compressor mode as listed in paragraph (p)(1) through (p)(3).

(i) You shall use the flow meter readings from measurements of operating and standby pressurized blowdown vent, operating mode vents, not operating depressurized isolation valve vent for all the reporter's compressor modes not measured in the

calendar year to develop the following emission factors using Equation W–28 of this section for each mode as listed in paragraph (p)(1) through (p)(3).

$$EF_m = \sum \frac{MT_m}{Count_m} \quad \text{(Eq. W-28)}$$

Where:

EF_m = Reporter emission factors for compressor in the three modes, m, in cubic feet per hour.

MT_m = Meter readings from all reciprocating compressor vents in each and mode, m, in cubic feet per hour.

$Count_m$ = Total number of compressors measured in each mode, m.

m = Compressor mode as listed in paragraph (p)(1) through (p)(3).

(A) You must combine emissions for blowndown vents, measured in the operating and standby pressurized modes.

(B) The emission factors must be calculated annually. You must use all measurements from the current calendar year and the preceding two calendar years, totaling three consecutive calendar years of measurements.

(ii) [Reserved]

(8) Determine if the reciprocating compressor vent vapors are sent to a vapor recovery system.

(i) Adjust the emissions estimated in paragraphs (p)(7) of this section downward by the magnitude of emissions recovered using a vapor recovery system as determined by engineering estimate based on best available data.

(ii) [Reserved]

(9) Onshore petroleum and natural gas production shall calculate emissions from reciprocating compressors as follows:

$$E_{s,i} = Count * EF_i \quad \text{(Eq. W-29)}$$

Where:

$E_{s,i}$ = Annual total volumetric GHG emissions at standard conditions from reciprocating compressors in cubic feet.

Count = Total number of reciprocating compressors for the reporter.

EF_i = Emission factor for GHG i. Use 9.63 thousand standard cubic feet per year per compressor for CH_4 and 0.535 thousand standard cubic feet per year per compressor for CO_2 at 68°F and 14.7 psia or 9.48 thousand standard cubic feet per year per compressor for CH_4 and 0.527 thousand standard cubic feet per year per compressor for CO_2 at 60°F and 14.7 psia.

(10) Estimate CH_4 and CO_2 volumetric and mass emissions from volumetric natural gas emissions using the calculations in paragraphs (u) and (v) of this section.

(q) *Leak detection and leaker emission factors.* You must use the methods described in § 98.234(a) to conduct leak detection(s) of equipment leaks from all sources listed in § 98.232(d)(7), (e)(7), (f)(5), (g)(3), (h)(4), and (i)(1). This paragraph (q) applies to emissions sources in streams with gas content greater than 10 percent CH_4 plus CO_2 by weight. Emissions sources in streams with gas content less than 10 percent CH_4 plus CO_2 by weight do not need to be reported. Tubing systems equal to or less than one half inch diameter are exempt from the requirements of this paragraph (q) and do not need to be reported. If equipment leaks are detected for sources listed in this paragraph (q), calculate emissions using Equation W–30 of this section for each source with equipment leaks.

$$E_{s,i} = GHG_i * \sum_x EF_s * T_x \quad \text{(Eq. W-30)}$$

Where:

$E_{s,i}$ = Annual total volumetric GHG emissions at standard conditions from each equipment leak source in cubic feet.

x = Total number of this type of emissions source found to be leaking during T_x.

EF_s = Leaker emission factor for specific sources listed in Table W–2 through Table W–7 of this subpart.

GHG_i = For onshore natural gas processing facilities, concentration of GHG_i, CH_4 or CO_2, in the total hydrocarbon of the feed natural gas; for other facilities listed in § 98.230(a)(4) through (a)(8), GHG_i equals 1 for CH_4 and 1.1×10^{-2} for CO_2.

T_x = The total time the component was found leaking and operational, in hours. If one leak detection survey is conducted, assume the component was leaking for the entire calendar year. If multiple leak detection surveys are conducted, assume that the component found to be leaking has been leaking since the previous survey or the beginning of the calendar year. For the last leak detection survey in the calendar year, assume that all leaking components continue to leak until the end of the calendar year.

(1) You must select to conduct either one leak detection survey in a calendar year or multiple complete leak detection surveys in a calendar year. The number of leak detection surveys selected must be conducted during the calendar year.

(2) Calculate GHG mass emissions in carbon dioxide equivalent at standard conditions using calculations in paragraph (v) of this section.

(3) Onshore natural gas processing facilities shall use the appropriate default leaker emission factors listed in Table W–2 of this subpart for equipment leaks detected from valves, connectors, open ended lines, pressure relief valves, and meters.

(4) Onshore natural gas transmission compression facilities shall use the appropriate default leaker emission factors listed in Table W–3 of this subpart for equipment leaks detected from valves, connectors, open ended lines, pressure relief valves, and meters.

(5) Underground natural gas storage facilities for storage stations shall use the appropriate default leaker emission factors listed in Table W–4 of this subpart for equipment leaks detected from valves, connectors, open ended lines, pressure relief valves, and meters.

(6) LNG storage facilities shall use the appropriate default leaker emission factors listed in Table W–5 of this subpart for equipment leaks detected from valves, pump seals, connectors, and other.

(7) LNG import and export facilities shall use the appropriate default leaker emission factors listed in Table W–6 of this subpart for equipment leaks detected from valves, pump seals, connectors, and other.

(8) Natural gas distribution facilities for above ground meters and regulators at city gate stations at custody transfer, shall use the appropriate default leaker emission factors listed in Table W–7 of this subpart for equipment leak detected from connectors, block valves, control valves, pressure relief valves, orifice meters, regulators, and open ended lines.

(r) *Population count and emission factors.* This paragraph applies to emissions sources listed in § 98.232 (c)(21), (f)(5), (g)(3), (h)(4), (i)(2), (i)(3), (i)(4) and (i)(5), on streams with gas content greater than 10 percent CH_4 plus CO_2 by weight. Emissions sources in streams with gas content less than 10 percent CH_4 plus CO_2 by weight do not need to be reported. Tubing systems equal or less than one half inch diameter are exempt from the requirements of paragraph (r) of this section and do not need to be reported. Calculate emissions from all sources listed in this paragraph using Equation W–31 of this section.

$$E_{s,i} = Count_s * EF_s * GHG_i * T_s \qquad \text{(Eq. W-31)}$$

Where:

$E_{s,i}$ = Annual volumetric GHG emissions at standard conditions from each equipment leak source in cubic feet.

$Count_s$ = Total number of this type of emission source at the facility. Average component counts are provided by major equipment piece in Tables W–1B and Table W–1C of this subpart. Use average component counts as appropriate for operations in Eastern and Western U.S., according to Table W–1D of this subpart.

EF_s = Population emission factor for the specific source, s listed in Table W–1A and Tables W–3 through Table W–7 of this subpart. Use appropriate population emission factor for operations in Eastern and Western U.S., according to Table W–1D of this subpart. EF for non-custody transfer city gate stations is determined in Equation W–32.

GHG_i = For onshore petroleum and natural gas production facilities and onshore natural gas processing facilities, concentration of GHG i, CH_4 or CO_2, in produced natural gas or feed natural gas; for other facilities listed in § 98.230(a)(4) through (a)(8), GHG_i equals 1 for CH_4 and 1.1×10^{-2} for CO_2.

T_s = Total time the specific source s associated with the equipment leak emission was operational in the calendar year, in hours.

(1) Calculate both CH_4 and CO_2 mass emissions from volumetric emissions using calculations in paragraph (v) of this section.

(2) Onshore petroleum and natural gas production facilities shall use the appropriate default population emission factors listed in Table W–1A of this subpart for equipment leaks from valves, connectors, open ended lines, pressure relief valves, pump, flanges, and other. Major equipment and components associated with gas wells are considered gas service components in reference to Table 1–A of this subpart and major natural gas equipment in reference to Table W–1B of this subpart. Major equipment and components associated with crude oil wells are considered crude service components in reference to Table 1–A of this subpart and major crude oil equipment in reference to Table W–1C of this subpart. Where facilities conduct EOR operations the emissions factor listed in Table W–1A of this subpart shall be used to estimate all streams of gases, including recycle CO_2 stream. The component count can be determined using either of the methodologies described in this paragraph (r)(2). The same methodology must be used for the entire calendar year.

(i) *Component Count Methodology 1.* For all onshore petroleum and natural gas production operations in the facility perform the following activities:

(A) Count all major equipment listed in Table W–1B and Table W–1C of this subpart.

(B) Multiply major equipment counts by the average component counts listed in Table W–1B and W–1C of this subpart for onshore natural gas production and onshore oil production, respectively. Use the appropriate factor in Table W–1A of this subpart for operations in Eastern and Western U.S. according to the mapping in Table W–1D of this subpart.

(ii) *Component Count Methodology 2.* Count each component individually for the facility. Use the appropriate factor in Table W–1A of this subpart for operations in Eastern and Western U.S. according to the mapping in Table W–1D of this subpart.

(3) Underground natural gas storage facilities for storage wellheads shall use the appropriate default population emission factors listed in Table W–4 of this subpart for equipment leak from connectors, valves, pressure relief valves, and open ended lines.

(4) LNG storage facilities shall use the appropriate default population emission factors listed in Table W–5 of this subpart for equipment leak from vapor recovery compressors.

(5) LNG import and export facilities shall use the appropriate default population emission factor listed in Table W–6 of this subpart for equipment leak from vapor recovery compressors.

(6) Natural gas distribution facilities shall use the appropriate emission factors as described in paragraph (r)(6) of this section.

(i) Below grade meters and regulators; mains; and services, shall use the appropriate default population emission factors listed in Table W–7 of this subpart.

(ii) Above grade meters and regulators at city gate stations not at custody transfer as listed in § 98.232(i)(2), shall use the total volumetric GHG emissions at standard conditions for all equipment leak sources calculated in paragraph (q)(8) of this section to develop facility emission factors using Equation W–32 of this section. The calculated facility emission factor from Equation W–32 of this section shall be used in Equation W–31 of this section.

$$EF = \sum \frac{E_{s,i}}{Count} \qquad \text{(Eq. W-32)}$$

Where:

EF = Facility emission factor for a meter at above grade M&R at city gate stations not at custody transfer in cubic feet per meter per year.

$E_{s,i}$ = Annual volumetric GHG emissions at standard condition from all equipment leak sources at all above grade M&R city gate stations at custody transfer, from paragraph (q) of this section.

Count = Total number of meter runs at all above grade M&R city gate stations at custody transfer.

(s) *Offshore petroleum and natural gas production facilities.* Report CO_2, CH_4, and N_2O emissions for offshore petroleum and natural gas production from all equipment leaks, vented emission, and flare emission source types as identified in the data collection and emissions estimation study conducted by BOEMRE in compliance with 30 CFR 250.302 through 304.

(1) Offshore production facilities under BOEMRE jurisdiction shall report the same annual emissions as calculated and reported by BOEMRE in data collection and emissions estimation study published by BOEMRE referenced in 30 CFR 250.302 through 304 (GOADS).

(i) For any calendar year that does not overlap with the most recent BOEMRE emissions study publication year, report the most recent BOEMRE reported emissions data published by BOEMRE referenced in 30 CFR 250.302 through 304 (GOADS). Adjust emissions based on the operating time for the facility relative to the operating time in the most recent BOEMRE published study.

(ii) [Reserved]

(2) Offshore production facilities that are not under BOEMRE jurisdiction shall use monitoring methods and calculation methodologies published by BOEMRE referenced in 30 CFR 250.302 through 304 to calculate and report emissions (GOADS).

(i) For any calendar year that does not overlap with the most recent BOEMRE emissions study publication, report the

most recent reported emissions data with emissions adjusted based on the operating time for the facility relative to operating time in the previous reporting period.

(ii) [Reserved]

(3) If BOEMRE discontinues or delays their data collection effort by more than 4 years, then offshore reporters shall once in every 4 years use the most recent BOEMRE data collection and emissions estimation methods to report emission from the facility sources.

(4) For either first or subsequent year reporting, offshore facilities either within or outside of BOEMRE jurisdiction that were not covered in the previous BOEMRE data collection cycle shall use the most recent BOEMRE data collection and emissions estimation methods published by BOEMRE referenced in 30 CFR 250.302 through 304 to calculate and report emissions (GOADS) to report emissions.

(t) *Volumetric emissions.* Calculate volumetric emissions at standard conditions as specified in paragraphs (t)(1) or (2) of this section determined by engineering estimate based on best available data unless otherwise specified.

(1) Calculate natural gas volumetric emissions at standard conditions by converting actual temperature and pressure of natural gas emissions to standard temperature and pressure of natural gas using Equation W–33 of this section.

$$E_{s,n} = \frac{E_{a,n} * (459.67 + T_s) * P_a}{(459.67 + T_a) * P_s} \quad \text{(Eq. W-33)}$$

Where:

$E_{s,n}$ = Natural gas volumetric emissions at standard temperature and pressure (STP) conditions in cubic feet.

$E_{a,n}$ = Natural gas volumetric emissions at actual conditions in cubic feet.

T_s = Temperature at standard conditions (°F).

T_a = Temperature at actual emission conditions (°F).

P_s = Absolute pressure at standard conditions (psia).

P_a = Absolute pressure at actual conditions (psia).

(2) Calculate GHG volumetric emissions at standard conditions by converting actual temperature and pressure of GHG emissions to standard temperature and pressure using Equation W–34 of this section.

$$E_{s,i} = \frac{E_{a,i} * (459.67 + T_s) * P_a}{(459.67 + T_a) * P_s} \quad \text{(Eq. W-34)}$$

Where:

$E_{s,i}$ = GHG i volumetric emissions at standard temperature and pressure (STP) conditions in cubic feet.

$E_{a,i}$ = GHG i volumetric emissions at actual conditions in cubic feet.

T_s = Temperature at standard conditions (°F).

T_a = Temperature at actual emission conditions (°F).

P_s = Absolute pressure at standard conditions (psia).

P_a = Absolute pressure at actual conditions (psia).

(u) *GHG volumetric emissions.* Calculate GHG volumetric emissions at standard conditions as specified in paragraphs (u)(1) and (2) of this section determined by engineering estimate based on best available data unless otherwise specified.

(1) Estimate CH_4 and CO_2 emissions from natural gas emissions using Equation W–35 of this section.

$$E_{s,i} = E_{s,n} * M_i \quad \text{(Eq. W-35)}$$

Where:

$E_{s,i}$ = GHG i (either CH_4 or CO_2) volumetric emissions at standard conditions in cubic feet.

$E_{s,n}$ = Natural gas volumetric emissions at standard conditions in cubic feet.

M_i = Mole fraction of GHG i in the natural gas.

(2) For Equation W–35 of this section, the mole fraction, M_i, shall be the annual average mole fraction for each facility, as specified in paragraphs (u)(2)(i) through (vii) of this section.

(i) GHG mole fraction in produced natural gas for onshore petroleum and natural gas production facilities. If you have a continuous gas composition analyzer for produced natural gas, you must use these values for determining the mole fraction. If you do not have a continuous gas composition analyzer, then you must use your most recent gas composition based on available sample analysis of the field.

(ii) GHG mole fraction in feed natural gas for all emissions sources upstream of the de-methanizer or dew point control and GHG mole fraction in facility specific residue gas to transmission pipeline systems for all emissions sources downstream of the de-methanizer overhead or dew point control for onshore natural gas processing facilities. If you have a continuous gas composition analyzer on feed natural gas, you must use these values for determining the mole fraction. If you do not have a continuous gas composition analyzer, then annual samples must be taken according to methods set forth in § 98.234(b).

(iii) GHG mole fraction in transmission pipeline natural gas that passes through the facility for onshore natural gas transmission compression facilities.

(iv) GHG mole fraction in natural gas stored in underground natural gas storage facilities.

(v) GHG mole fraction in natural gas stored in LNG storage facilities.

(vi) GHG mole fraction in natural gas stored in LNG import and export facilities.

(vii) GHG mole fraction in local distribution pipeline natural gas that passes through the facility for natural gas distribution facilities.

(v) *GHG mass emissions.* Calculate GHG mass emissions in carbon dioxide equivalent at standard conditions by converting the GHG volumetric emissions into mass emissions using Equation W–36 of this section.

$$Mass_{s,i} = E_{s,i} * \rho_i * GWP * 10^{-3} \quad \text{(Eq. W-36)}$$

Where:

$Mass_{s,i}$ = GHG i (either CH_4 or CO_2) mass emissions at standard conditions in metric tons CO_2e.

$E_{s,i}$ = GHG i (either CH_4 or CO_2) volumetric emissions at standard conditions, in cubic feet.

ρ_i = Density of GHG i. Use 0.0538 kg/ft³ for CO_2 and N_2O, and 0.0196 kg/ft³ for CH_4 at 68°F and 14.7 psia or 0.0530 kg/ft³ for CO_2 and N_2O, and 0.0193 kg/ft³ for CH_4 at 60°F and 14.7 psia.

GWP = Global warming potential, 1 for CO_2, 21 for CH_4, and 310 for N_2O.

(w) *EOR injection pump blowdown.* Calculate CO_2 pump blowdown emissions as follows:

(1) Calculate the total volume in cubic feet (including pipelines, manifolds and vessels) between isolation valves.

(2) Retain logs of the number of blowdowns per calendar year.

(3) Calculate the total annual venting emissions using Equation W–37 of this section:

$$Mass_{c,i} = N * V_v * R_c * GHG_i * 10^{-3} \quad \text{(Eq. W-37)}$$

Where:

$Mass_{c,i}$ = Annual EOR injection gas venting emissions in metric tons at critical conditions "c" from blowdowns.

N = Number of blowdowns for the equipment in the calendar year.

V_v = Total volume in cubic feet of blowdown equipment chambers (including pipelines, manifolds and vessels) between isolation valves.

R_c = Density of critical phase EOR injection gas in kg/ft³. You may use an appropriate standard method published by a consensus-based standards organization if such a method exists or you may use an industry standard practice to determine density of super critical EOR injection gas.

GHG_i = Mass fraction of GHG_i in critical phase injection gas.

1×10^{-3} = Conversion factor from kilograms to metric tons.

(x) EOR hydrocarbon liquids dissolved CO_2. Calculate dissolved CO_2 in hydrocarbon liquids produced through EOR operations as follows:

(1) Determine the amount of CO_2 retained in hydrocarbon liquids after flashing in tankage at STP conditions. Annual samples must be taken according to methods set forth in § 98.234(b) to determine retention of CO_2 in hydrocarbon liquids immediately downstream of the storage tank. Use the annual analysis for the calendar year.

(2) Estimate emissions using Equation W–38 of this section.

$$Mass_{s,CO2} = S_{hl} * V_{hl} \quad \text{(Eq. W-38)}$$

Where:

$Mass_{s,CO2}$ = Annual CO_2 emissions from CO_2 retained in hydrocarbon liquids produced through EOR operations beyond tankage, in metric tons.

S_{hl} = Amount of CO_2 retained in hydrocarbon liquids in metric tons per barrel, under standard conditions.

V_{hl} = Total volume of hydrocarbon liquids produced at the EOR operations in barrels in the calendar year.

(y) [Reserved]

(z) *Onshore petroleum and natural gas production and natural gas distribution combustion emissions.* Calculate CO_2 CH_4,and N_2O combustion-related emissions from stationary or portable equipment as follows:

(1) If the fuel combusted in the stationary or portable equipment is listed in Table C–1 of subpart C of this part, or is a blend of fuels listed in Table C–1, use the Tier 1 methodology described in subpart C of this part (General Stationary Fuel Combustion Sources). If the fuel combusted is natural gas and is pipeline quality and has a minimum high heat value of 950 Btu per standard cubic foot, then the natural gas emission factor and high heat values listed in Tables C–1 and C–2 of this part may be used.

(2) For fuel combustion units that combust field gas or process vent gas, or any blend of field gas or process vent gas and fuels listed in Table C–1 of subpart C of this part, calculate combustion emissions as follows:

(i) If you have a continuous flow meter on the combustion unit, you must use the measured flow volumes to calculate the total flow of gas to the unit. If you do not have a permanent flow meter on the combustion unit, you may install a permanent flow meter on the combustion unit, or use company records or engineering calculations based on best available data on heat duty or horsepower to estimate volumetric unit gas flow.

(ii) If you have a continuous gas composition analyzer on fuel to the combustion unit, you must use these compositions for determining the concentration of gas hydrocarbon constituent in the flow of gas to the unit. If you do not have a continuous gas composition analyzer on gas to the combustion unit, you must use the appropriate gas compositions for each stream of hydrocarbons going to the combustion unit as specified in paragraph (u)(2)(i) of this section.

(iii) Calculate GHG volumetric emissions at actual conditions using Equations W–39 of this section.

$$E_{a,CO2} = \sum_j V_a * Y_j * R_j \quad \text{(Eq. W-39)}$$

Where:

E_{a,CO_2} = Contribution of annual emissions from portable or stationary fuel combustion sources in cubic feet, under actual conditions.

V_a = Volume of gas sent to combustion unit in cubic feet, during the year.

Y_j = Concentration of gas hydrocarbon constituents *j* (such as methane, ethane, propane, butane, and pentanes plus).

R_j = Number of carbon atoms in the gas hydrocarbon constituent *j;* 1 for methane, 2 for ethane, 3 for propane, 4 for butane, and 5 for pentanes plus).

(3) External fuel combustion sources with a rated heat capacity equal to or less than 5 mmBtu/hr do not need to report combustion emissions. You must report the type and number of each external fuel combustion unit.

(4) Calculate GHG volumetric emissions at standard conditions using calculations in paragraph (t) of this section.

(5) Calculate both combustion-related CH_4 and CO_2 mass emissions from volumetric CH_4 and CO_2 emissions using calculation in paragraph (v) of this section.

(6) Calculate N_2O mass emissions using Equation W–40 of this section.

$$N_2O = \left(1 \times 10^3\right) \times Fuel \times HHV \times EF \quad \text{(Eq. W-40)}$$

Where:

N_2O = Annual N_2O emissions from the combustion of a particular type of fuel (metric tons).

Fuel = Mass or volume of the fuel combusted (mass or volume per year, choose appropriately to be consistent with the units of HHV).

HHV = High heat value of the fuel from paragraphs (z)(8)(i), (z)(8)(ii) or (z)(8)(iii) of this section (units must be consistent with Fuel).

EF = Use 1.0×10^{-4} kg N_2O/mmBtu.

1×10^{-3} = Conversion factor from kilograms to metric tons.

(i) For fuels listed in Table C–1 of subpart C of this part, use the provided default HHV in the table.

(ii) For field gas or process vent gas, use 1.235×10^{-3} mmBtu/scf for HHV.

(iii) For fuels not listed in Table C–1 of subpart C of this part and not field gas or process vent gas, you must use the methodology set forth in the Tier 2 methodology described in subpart C of this part to determine HHV.

§ 98.234 Monitoring and QA/QC requirements.

The GHG emissions data for petroleum and natural gas emissions sources must be quality assured as applicable as specified in this section. Offshore petroleum and natural gas production facilities shall adhere to the monitoring and QA/QC requirements as set forth in 30 CFR 250.

(a) You must use any of the methods described as follows in this paragraph to conduct leak detection(s) of equipment leaks and through-valve leakage from all source types listed in § 98.233(k), (o), (p) and (q) that occur during a calendar year, except as provided in paragraph (a)(4) of this section.

(1) *Optical gas imaging instrument.* Use an optical gas imaging instrument for equipment leak detection in accordance with 40 CFR part 60, subpart A, § 60.18(i)(1) and (2) of the *Alternative work practice for monitoring equipment leaks.* Any emissions detected by the optical gas imaging instrument is a leak unless screened with Method 21 (40 CFR part 60, appendix A–7) monitoring, in which case 10,000 ppm or greater is designated a leak. In addition, you must operate the optical gas imaging instrument to image the source types required by this subpart in accordance with the instrument manufacturer's operating parameters.

(2) *Method 21.* Use the equipment leak detection methods in 40 CFR part 60, appendix A–7, Method 21. If using Method 21 monitoring, if an instrument reading of 10,000 ppm or greater is measured, a leak is detected. Inaccessible emissions sources, as defined in 40 CFR part 60, are not exempt from this subpart. Owners or operators must use alternative leak detection devices as described in paragraph(a)(1) of this section to monitor inaccessible equipment leaks or vented emissions.

(3) *Infrared laser beam illuminated instrument.* Use an infrared laser beam illuminated instrument for equipment leak detection. Any emissions detected by the infrared laser beam illuminated instrument is a leak unless screened with Method 21 monitoring, in which case 10,000 ppm or greater is designated a leak. In addition, you must operate the infrared laser beam illuminated instrument to detect the source types required by this subpart in accordance with the instrument manufacturer's operating parameters.

(4) *Optical gas imaging instrument.* An optical gas imaging instrument must be used for all source types that are inaccessible and cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface.

(5) *Acoustic leak detection device.* Use the acoustic leak detection device to detect through-valve leakage. When using the acoustic leak detection device to quantify the through-valve leakage, you must use the instrument manufacturer's calculation methods to quantify the through-valve leak. When using the acoustic leak detection device, if a leak of 3.1 scf per hour or greater is calculated, a leak is detected. In addition, you must operate the acoustic leak detection device to monitor the source valves required by this subpart in accordance with the instrument manufacturer's operating parameters.

(b) You must operate and calibrate all flow meters, composition analyzers and pressure gauges used to measure quantities reported in § 98.233 according to the procedures in § 98.3(i) and the procedures in paragraph (b) of this section. You may use an appropriate standard method published by a consensus-based standards organization if such a method exists or you may use an industry standard practice. Consensus-based standards organizations include, but are not limited to, the following: ASTM International, the American National Standards Institute (ANSI), the American Gas Association (AGA), the American Society of Mechanical Engineers (ASME), the American Petroleum Institute (API), and the North American Energy Standards Board (NAESB).

(c) Use calibrated bags (also known as vent bags) only where the emissions are at near-atmospheric pressures such that it is safe to handle and can capture all the emissions, below the maximum temperature specified by the vent bag manufacturer, and the entire emissions volume can be encompassed for measurement.

(1) Hold the bag in place enclosing the emissions source to capture the entire emissions and record the time required for completely filling the bag. If the bag inflates in less than one second, assume one second inflation time.

(2) Perform three measurements of the time required to fill the bag, report the emissions as the average of the three readings.

(3) Estimate natural gas volumetric emissions at standard conditions using calculations in § 98.233(t).

(4) Estimate CH_4 and CO_2 volumetric and mass emissions from volumetric natural gas emissions using the calculations in § 98.233(u) and (v).

(d) Use a high volume sampler to measure emissions within the capacity of the instrument.

(1) A technician following manufacturer instructions shall conduct measurements, including equipment manufacturer operating procedures and measurement methodologies relevant to using a high volume sampler, including positioning the instrument for complete capture of the equipment leak without creating backpressure on the source.

(2) If the high volume sampler, along with all attachments available from the manufacturer, is not able to capture all the emissions from the source then use anti-static wraps or other aids to capture all emissions without violating operating requirements as provided in the instrument manufacturer's manual.

(3) Estimate CH_4 and CO_2 volumetric and mass emissions from volumetric natural gas emissions using the calculations in § 98.233(u) and (v).

(4) Calibrate the instrument at 2.5 percent methane with 97.5 percent air and 100 percent CH_4 by using calibrated gas samples and by following manufacturer's instructions for calibration.

(e) Peng Robinson Equation of State means the equation of state defined by Equation W–41 of this section:

$$p = \frac{RT}{V_m - b} - \frac{a\alpha}{V_m^2 + 2bV_m - b^2} \qquad \text{(Eq. W-41)}$$

Where:

p = Absolute pressure.
R = Universal gas constant.
T = Absolute temperature.
V_m = Molar volume.

$$a = \frac{0.45724 R^2 T_c^2}{p_c}$$

$$b = \frac{0.7780 R T_c}{p_c}$$

$$\alpha = \left(1 + \left(0.37464 + 1.54226\omega - 0.26992\omega^2\right)\left(1 - \sqrt{\frac{T}{T_c}}\right)\right)^2$$

Where:

ω = Acentric factor of the species.
T_c = Critical temperature.
P_c = Critical pressure.

(f) Special reporting provisions

(1) *Best available monitoring methods.* EPA will allow owners or operators to use best available monitoring methods for parameters in § 98.233 Calculating GHG Emissions as specified in paragraphs (f)(2), (f)(3), and (f)(4) of this section. If the reporter anticipates the potential need for best available monitoring for sources for which they need to petition EPA and the situation is unresolved at the time of the deadline, reporters should submit written notice of this potential situation to EPA by the specified deadline for requests to be considered. EPA reserves the right to review petitions after the deadline but will only consider and approve late petitions which demonstrate extreme or unusual circumstances. The Administrator reserves to right to request further information in regard to all petition requests. The owner or operator must use the calculation methodologies and equations in § 98.233 Calculating GHG Emissions. Best available monitoring methods means any of the following methods specified in paragraph (f)(1) of this section:

(i) Monitoring methods currently used by the facility that do not meet the specifications of this subpart.

(ii) Supplier data.

(iii) Engineering calculations.

(iv) Other company records.

(2) *Best available monitoring methods for well-related emissions.* During January 1, 2011 through June 30, 2011, owners or operators may use best available monitoring methods for any well-related data that cannot reasonably be measured according to the monitoring and QA/QC requirements of this subpart, and only where required measurements cannot be duplicated due to technical limitations after June 30, 2011. These well-related sources are:

(i) Gas well venting during well completions and workovers with hydraulic fracturing as specified in § 98.233(g).

(ii) Well testing venting and flaring as specified in § 98.233(l).

(3) *Best available monitoring methods for specified activity data.* During January 1, 2011 through June 30, 2011, owners or operators may use best available monitoring methods for activity data as listed below that cannot reasonably be obtained according to the monitoring and QA/QC requirements of this subpart, specifically for events that generate data that can be collected only between January 1, 2011 and June 30, 2011 and cannot be duplicated after June 30, 2011. These sources are:

(i) Cumulative hours of venting, days, or times of operation in § 98.233(e), (f), (g), (h), (l), (o), (p), (q), and (r).

(ii) Number of blowdowns, completions, workovers, or other events in § 98.233(f), (g), (h), (i), and (w).

(iii) Cumulative volume produced, volume input or output, or volume of fuel used in paragraphs § 98.233(d), (e), (j), (k), (l), (m), (n), (x), (y), and (z).

(4) *Best available monitoring methods for leak detection and measurement.* The owner or operator may request use of best available monitoring methods between January 1, 2011 and December 31, 2011 for sources requiring leak detection and/or measurement. These sources include:

(i) Reciprocating compressor rod packing venting in onshore natural gas processing, onshore natural gas transmission compression, underground natural gas storage, LNG storage, and LNG import and export equipment as specified in § 98.232(d)(1), (e)(1), (f)(1), (g)(1), and (h)(1).

(ii) Centrifugal compressor wet seal oil degassing venting in onshore natural gas processing, onshore natural gas transmission compression, underground natural gas storage, LNG storage, and LNG import and export equipment as specified in § 98.232(d)(2), (e)(2), (f)(2), (g)(2), and (h)(2).

(iii) Acid gas removal vent stacks in onshore petroleum and natural gas production and onshore natural gas processing as specified in § 98.232(c)(17) and (d)(6).

(iv) Equipment leak emissions from valves, connectors, open ended lines, pressure relief valves, block valves, control valves, compressor blowdown valves, orifice meters, other meters, regulators, vapor recovery compressors, centrifugal compressor dry seals, and/or other equipment leaks in onshore

natural gas processing, onshore natural gas transmission compression, underground natural gas storage, LNG storage, LNG import and export equipment, and natural gas distribution as specified in § 98.232(d)(7), (e)(7), (f)(5), (g)(3), (h)(4), and (i)(1).

(v) Condensate (oil and/or water) storage tanks in onshore natural gas transmission compression as specified in § 98.232(e)(3).

(5) *Requests for the use of best available monitoring methods.* The owner or operator may submit a request to the Administrator to use one or more best available monitoring methods.

(i) No request or approval by the Administrator is necessary to use best available monitoring methods between January 1, 2011 and June 30, 2011 for the sources specified in paragraph (f)(2) of this section.

(ii) No request or approval by the Administrator is necessary to use best available monitoring methods between January 1, 2011 and June 30, 2011 for the sources specified in paragraph (f)(3) of this section.

(iii) Owners or operators must submit a request and receive approval by the Administrator to use best available monitoring methods between January 1, 2011 and December 31, 2011 for sources specified in paragraph (f)(4) of this section.

(A) *Timing of request.* The request to use best available monitoring methods for paragraph (f)(4) of this section must be submitted to EPA no later than April 30, 2011.

(B) *Content of request.* Requests must contain the following information for sources listed in paragraph (f)(4) of this section:

(*1*) A list of specific source types and specific equipment, monitoring instrumentation, and/or services for which the request is being made and the locations where each piece of monitoring instrumentation will be installed or monitoring service will be supplied.

(*2*) Identification of the specific rule requirements (by subpart, section, and paragraph number) for which the instrumentation or monitoring service is needed.

(*3*) Documentation which demonstrates that the owner or operator made all reasonable efforts to obtain the information, services or equipment necessary to comply with subpart W reporting requirements, including evidence of specific service or equipment providers contacted and why services or information could not be obtained during 2011.

(*4*) A description of the specific actions the facility will take to obtain and/or install the equipment or obtain the monitoring service as soon as reasonably feasible and the expected date by which the equipment will be obtained and operating or service will be provided.

(C) *Approval criteria.* To obtain approval, the owner or operator must demonstrate to the Administrator's satisfaction that it does not own the required monitoring equipment, and it is not reasonably feasible to acquire, install, and operate a required piece of monitoring equipment or to obtain leak detection or measurement services in order to meet the requirements of this subpart for 2011.

(iv) EPA does not anticipate a need to approve the use of best available monitoring methods for sources not listed in paragraphs(f)(2), (f)(3), and (f)(4) of this section; however, EPA will review such requests if submitted in accordance with paragraph (f)(5)(iv)(A)–(C) of this section.

(A) *Timing of request.* The request to use best available monitoring methods for sources not listed in paragraphs (f)(2), (f)(3), and (f)(4) of this section must be submitted to EPA no later than April 30, 2011.

(B) *Content of request.* Requests must contain the following information:

(*1*) A list of specific source categories and parameters for which the owner or operator is seeking use of best available monitoring methods.

(*2*) A description of the data collection methodologies that do not meet safety regulations, technical infeasibility, or specific laws or regulations that conflict with each specific source for which an owner or operator is requesting use of best available monitoring methodologies.

(*3*) A detailed explanation and supporting documentation of how and when the owner or operator will receive the services or equipment to comply with all subpart W reporting requirements.

(C) *Approval criteria.* To obtain approval, the owner or operator must demonstrate to the Administrator's satisfaction that the owner or operator faces unique safety, technical or legal issues rendering them unable to meet the requirements of this subpart for 2011.

(6) *Requests for extension of the use of best available monitoring methods through December 31, 2011 for sources in paragraph (f)(2) of this section.* The owner or operator may submit a request to the Administrator to use one or more best available monitoring methods described in paragraph (f)(2) of this section beyond June 30, 2011.

(i) *Timing of request.* The extension request must be submitted to EPA no later than April 30, 2011.

(ii) *Content of request.* Requests must contain the following information:

(A) A list of specific source types and specific equipment, monitoring instrumentation, contract modifications, and/or services for which the request is being made and the locations where each piece of monitoring instrumentation will be installed, monitoring service will be supplied, or contracts will be modified.

(B) Identification of the specific rule requirements (by subpart, section, and paragraph number) for which the instrumentation, contract modification, or monitoring service is needed.

(C) A description and applicable correspondence outlining the diligent efforts of the owner or operator in obtaining the needed equipment or service and why they could not be obtained and installed in a period of time enabling completion of applicable requirements of this subpart within the 2011 calendar year.

(D) If the reason for the extension is that the owner or operator cannot collect data from a service provider or relevant organization in order for the owner or operator to meet requirements of this subpart for the 2011 calendar year, the owner or operator must demonstrate a good faith effort that it is not possible to obtain the necessary information, service or hardware which may include providing correspondence from specific service providers or other relevant entities to the owner or operator, whereby the service provider states that it is unable to provide the necessary data or services requested by the owner or operator that would enable the owner or operator to comply with subpart W reporting requirements by June 30, 2011.

(E) A description of the specific actions the owner or operator will take to comply with monitoring requirements in 2012 and beyond.

(iii) *Approval criteria.* To obtain approval, the owner or operator must demonstrate to the Administrator's satisfaction that it is not reasonably feasible to obtain the data necessary to meet the requirements of this subpart for the sources specified in paragraph (f)(2) of this section by June 30, 2011.

(7) *Requests for extension of the use of best available monitoring methods through December 31, 2011 for sources in paragraph (f)(3) of this section.* The owner or operator may submit a request to the Administrator to use one or more best available monitoring methods described in paragraph (f)(3) of this section beyond June 30, 2011.

(i) *Timing of request.* The extension request must be submitted to EPA no later than April 30, 2011.

(ii) *Content of request.* Requests must contain the following information:

(A) A list of specific source types for which data collection could not be implemented.

(B) Identification of the specific rule requirements (by subpart, section, and paragraph number) for which the data collection could not be implemented.

(C) A description of the data collection methodologies that do not meet safety regulations, technical infeasibility, or specific laws or regulations that conflict with each specific source for which an owner or operator is requesting use of best available monitoring methodologies for which data collection could not be implemented in the 2011 calendar year.

(iii) *Approval criteria.* To obtain approval, the owner or operator must demonstrate to the Administrator's satisfaction that it is not reasonably feasible to implement the data collection for the sources described in paragraph (f)(3) of this section for the methods required in this subpart by June, 30, 2011.

(8) *Requests for extension of the use of best available monitoring methods beyond 2011 for sources listed in paragraphs (f)(2), (f)(3), (f)(4), (f)(5)(iv) of this section and other sources in this subpart.* EPA does not anticipate a need for approving the use of best available methods beyond December 31, 2011, except in extreme circumstances, which include safety, a requirement being technically infeasible or counter to other local, State, or Federal regulations.

(i) *Timing of request.* The request to use best available monitoring methods for paragraphs (f)(2), (f)(3), (f)(4), (f)(5)(iv) of this section and sources not listed in paragraphs (f)(2), (f)(3), (f)(4), (f)(5)(iv) of this section must be submitted to EPA no later than September 30, 2011.

(ii) *Content of request.* Requests must contain the following information:

(iii) A list of specific source categories and parameters for which the owner or operator is seeking use of best available monitoring methods.

(iv) A description of the data collection methodologies that do not meet safety regulations, technical infeasibility, or specific laws or regulations that conflict with each specific source for which an owner or operator is requesting use of best available monitoring methodologies.

(v) A detailed explanation and supporting documentation of how and when the owner or operator will receive the services or equipment to comply with all of this subpart W reporting requirements.

(C) *Approval criteria.* To obtain approval, the owner or operator must demonstrate to the Administrator's satisfaction that the owner or operator faces unique safety, technical or legal issues rendering them unable to meet the requirements of this subpart.

§ 98.235 Procedures for estimating missing data.

A complete record of all estimated and/or measured parameters used in the GHG emissions calculations is required. If data are lost or an error occurs during annual emissions estimation or measurements, you must repeat the estimation or measurement activity for those sources as soon as possible, including in the subsequent calendar year if missing data are not discovered until after December 31 of the year in which data are collected, until valid data for reporting is obtained. Data developed and/or collected in a subsequent calendar year to substitute for missing data cannot be used for that subsequent year's emissions estimation. Where missing data procedures are used for the previous year, at least 30 days must separate emissions estimation or measurements for the previous year and emissions estimation or measurements for the current year of data collection. For missing data which are continuously monitored or measured, (for example flow meters), or for missing temperature or pressure data that are required under § 98.236, the reporter may use best available data for use in emissions determinations. The reporter must record and report the basis for the best available data in these cases.

§ 98.236 Data reporting requirements.

In addition to the information required by § 98.3(c), each annual report must contain reported emissions and related information as specified in this section.

(a) Report annual emissions separately for each of the industry segments listed in paragraphs (a)(1) through (8) of this section in metric tons CO_2e per year at standard conditions. For each segment, report emissions from each source type § 98.232(a) in the aggregate, unless specified otherwise. For example, an onshore natural gas production operation with multiple reciprocating compressors must report emissions from all reciprocating compressors as an aggregate number.

(1) Onshore petroleum and natural gas production.

(2) Offshore petroleum and natural gas production.

(3) Onshore natural gas processing.

(4) Onshore natural gas transmission compression.

(5) Underground natural gas storage.

(6) LNG storage.

(7) LNG import and export.

(8) Natural gas distribution. Report each source in the aggregate for pipelines and for Metering and Regulating (M&R) stations.

(b) Offshore petroleum and natural gas production is not required to report activity data and emissions for each aggregated source under § 98.236(c). Reporting requirements for offshore petroleum and natural gas production is set forth by BOEMRE in compliance with 30 CFR 250.302 through 304.

(c) For each aggregated source, unless otherwise specified, report activity data and emissions (in metric tons CO_2e per year at standard conditions) for each aggregated source type as follows:

(1) For natural gas pneumatic devices (refer to Equation W–1 of § 98.233), report the following:

(i) Actual count and estimated count separately of natural gas pneumatic high bleed devices as applicable.

(ii) Actual count and estimated count separately of natural gas pneumatic low bleed devices as applicable.

(iii) Actual count and estimated count separately of natural gas pneumatic intermittent bleed devices as applicable.

(iv) Report emissions collectively.

(2) For natural gas driven pneumatic pumps (refer to Equation W–2 of § 98.233), report the following,

(i) Count of natural gas driven pneumatic pumps.

(ii) Report emissions collectively.

(3) For each acid gas removal unit (refer to Equation W–3 and Equation W–4 of § 98.233), report the following:

(i) Total throughput off the acid gas removal unit using a meter or engineering estimate based on process knowledge or best available data in million cubic feet per year.

(ii) For Calculation Methodology 1 and Calculation Methodology 2 of § 98.233(d), fraction of CO_2 content in the vent from the acid gas removal unit (refer to § 98.233(d)(6)).

(iii) For Calculation Methodology 3 of § 98.233(d), volume fraction of CO_2 content of natural gas into and out of the acid gas removal unit (refer to § 98.233(d)(7) and (d)(8)).

(iv) Report emissions from the AGR unit recovered and transferred outside the facility.

(v) Report emissions individually.

(4) For dehydrators, report the following:

(i) For each Glycol dehydrator with a throughput greater than or equal to 0.4 MMscfd (refer to § 98.233(e)(1)), report the following:

(A) Glycol dehydrator feed natural gas flow rate in MMscfd, determined by engineering estimate based on best available data.

(B) Glycol dehydrator absorbent circulation pump type.

(C) Whether stripper gas is used in glycol dehydrator.

(D) Whether a flash tank separator is used in glycol dehydrator.

(E) Type of absorbent.

(F) Total time the glycol dehydrator is operating in hours.

(G) Temperature, in degrees Fahrenheit and pressure, in psig, of the wet natural gas.

(H) Concentration of CH_4 and CO_2 in natural gas.

(I) What vent gas controls are used (refer to § 98.233(e)(3) and (e)(4)).

(J) Report vent and flared emissions individually.

(ii) For all glycol dehydrators with a throughput less than 0.4 MMscfd (refer to § 98.233, Equation W–5 of § 98.233), report the following:

(A) Count of glycol dehydrators.

(B) Whether any vent gas controls are used (refer to § 98.233(e)(3) and (e)(4)).

(C) Report vent emissions collectively.

(iii) For absorbent desiccant dehydrators (refer to Equation W–6 of § 98.233), report the following:

(A) Count of desiccant dehydrators.

(B) Report emissions collectively.

(5) For well venting for liquids unloading (refer to Equations W–7, W–8 and W–9 of § 98.233), report the following by field:

(i) Count of wells vented to the atmosphere for liquids unloading.

(ii) Count of plunger lifts.

(iii) Cumulative number of unloadings vented to the atmosphere.

(iv) Average flow rate of the measured well venting in cubic feet per hour (refer to § 98.233(f)(1)(i)(A)).

(v) Average casing diameter in inches.

(vi) Report emissions collectively.

(6) For well completions and workovers, report the following for each field:

(i) For gas well completions and workovers with hydraulic fracturing (refer to Equation W–10 of § 98.233):

(A) Total count of completions in calendar year.

(B) Average flow rate of the measured well completion venting in cubic feet per hour (refer to § 98.233(g)(1)(i) or (g)(1)(ii)).

(C) Total count of workovers in calendar year.

(D) Average flow rate of the measured well workover venting in cubic feet per hour (refer to § 98.233(g)(1)(i) or (g)(1)(ii)).

(E) Total number of days of gas venting to the atmosphere during backflow for completion.

(F) Total number of days of gas venting to the atmosphere during backflow for workovers.

(G) Report number of completions and workovers employing reduced emissions completions and engineering estimate based on best available data of the amount of gas recovered to sales.

(H) Report vent emissions collectively. Report flared emissions collectively.

(ii) For gas well completions and workovers without hydraulic fracturing (refer to Equation W–13 of § 98.233):

(A) Total count of completions in calendar year.

(B) Total count of workovers in calendar year.

(C) Total number of days of gas venting to the atmosphere during backflow for completion.

(D) Report vent emissions collectively. Report flared emissions collectively.

(7) For each blowdown vent stack (refer to Equation W–14 of § 98.233), report the following:

(i) Total number of blowdowns per equipment type in calendar year.

(ii) Report emissions collectively per equipment type.

(8) For gas emitted from produced oil sent to atmospheric tanks:

(i) For wellhead gas-liquid separator with oil throughput greater than or equal to 10 barrels per day, using Calculation Methodology 1 and 2 of § 98.233(j), report the following by field:

(A) Number of wellhead separators sending oil to atmospheric tanks.

(B) Estimated average separator temperature, in degrees Fahrenheit, and estimated average pressure, in psig.

(C) Estimated average sales oil stabilized API gravity, in degrees.

(D) Count of hydrocarbon tanks at well pads.

(E) Best estimate of count of stock tanks not at well pads receiving your oil.

(F) Total volume of oil from all wellhead separators sent to tank(s) in barrels per year.

(G) Count of tanks with emissions control measures, either vapor recovery system or flaring, for tanks at well pads.

(H) Best estimate of count of stock tanks assumed to have emissions control measures not at well pads, receiving your oil.

(I) Range of concentrations of flash gas, CH_4 and CO_2.

(J) Report emissions individually for Calculation Methodology 1 and 2 of § 98.233(j).

(ii) For wells with oil production greater than or equal to 10 barrels per day, using Calculation Methodology 3 and 4 of § 98.233(j), report the following by field:

(A) Total volume of sales oil from all wells in barrels per year.

(B) Total number of wells sending oil directly to tanks.

(C) Total number of wells sending oil to separators off the well pads.

(D) Sales oil API gravity range for (B) and (C) of this section, in degrees.

(E) Count of hydrocarbon tanks on wellpads.

(F) Count of hydrocarbon tanks, both on and off well pads assumed to have emissions control measures: either vapor recovery system or flaring of tank vapors.

(G) Report emissions collectively for Calculation Methodology 3 and 4 of § 98.233(j).

(iii) For wellhead gas-liquid separators and wells with throughput less than 10 barrels per day, using Calculation Methodology 5 of § 98.233(j) Equation W–15 of § 98.233), report the following:

(A) Number of wellhead separators.

(B) Number of wells without wellhead separators.

(C) Total volume of oil production in barrels per year.

(D) Best estimate of fraction of production sent to tanks with assumed control measures: either vapor recovery system or flaring of tank vapors.

(E) Count of hydrocarbon tanks on well pads.

(F) Report CO_2 and CH_4 emissions collectively.

(iv) If wellhead separator dump valve is functioning improperly during the calendar year (refer to Equation W–16 of § 98.233), report the following:

(A) Count of wellhead separators that dump valve factor is applied.

(9) For transmission tank emissions identified using optical gas imaging instrument per § 98.234(a) (refer to § 98.233(k)), or acoustic leak detection of scrubber dump valves report the following for each tank:

(i) Report emissions individually.

(ii) [Reserved]

(10) For well testing (refer to Equation W–17 of § 98.233), report the following for each basin:

(i) Number of wells tested per basin in calendar year.

(ii) Average gas to oil ratio for each basin.

(iii) Average number of days the well is tested in a basin.

(iv) Report emissions of the venting gas collectively.

(11) For associated natural gas venting (refer to Equation W–18 of § 98.233), report the following for each basin:

(i) Number of wells venting or flaring associated natural gas in a calendar year.

(ii) Average gas to oil ratio for each basin.

(iii) Report emissions of the flaring gas collectively.

(12) For flare stacks (refer to Equation W–19, W–20, and W–21 of § 98.233), report the following for each flare:

(i) Whether flare has a continuous flow monitor.

(ii) Volume of gas sent to flare in cubic feet per year.

(iii) Percent of gas sent to un-lit flare determined by engineering estimate and process knowledge based on best available data and operating records.

(iv) Whether flare has a continuous gas analyzer.

(v) Flare combustion efficiency.

(vi) Report uncombusted and combusted CO_2 and CH_4 emissions separately.

(13) For each centrifugal compressor:

(i) For compressors with wet seals in operational mode (refer to Equations W–22 through W–24 of § 98.233), report the following for each degassing vent:

(A) Number of wet seals connected to the degassing vent.

(B) Fraction of vent gas recovered for fuel or sales or flared.

(C) Annual throughput in million scf, use an engineering calculation based on best available data.

(D) Type of meters used for making measurements.

(E) Reporter emission factor for wet seal oil degassing vents in cubic feet per hour (refer to Equation W–24 of § 98.233).

(F) Total time the compressor is operating in hours.

(G) Report seal oil degassing vent emissions for compressors measured (refer to Equation W–22 of § 98.233) and for compressors not measured (refer to Equation W–23 and Equation W–24 of § 98.233).

(ii) For wet and dry seal centrifugal compressors in operating mode, (refer to Equations W–22 through W–24 of § 98.233), report the following:

(A) Total time in hours the compressor is in operating mode.

(B) Reporter emission factor for blowdown vents in cubic feet per hour (refer to Equation W–24 of § 98.233).

(C) Report blowdown vent emissions when in operating mode (refer to Equation W–23 and Equation W–24 of § 98.233).

(iii) For wet and dry seal centrifugal compressors in not operating, depressurized mode (refer to Equations W–22 through W–24 of § 98.233), report the following:

(A) Total time in hours the compressor is in shutdown, depressurized mode.

(B) Reporter emission factor for isolation valve emissions in shutdown, depressurized mode in cubic feet per hour (refer to Equation W–24 of § 98.233).

(C) Report the isolation valve leakage emissions in not operating, depressurized mode in cubic feet per hour (refer to Equation W–23 and Equation W–24 of § 98.233).

(iv) Report total annual compressor emissions from all modes of operation (refer to Equation W–24 of § 98.233).

(v) For centrifugal compressors in onshore petroleum and natural gas production (refer to Equation W–25 of § 98.233), report the following:

(A) Count of compressors.

(B) Report emissions (refer to Equation W–25 of § 98.233) collectively.

(14) For reciprocating compressors:

(i) For reciprocating compressors rod packing emissions with or without a vent in operating mode, report the following:

(A) Annual throughput in million scf, use an engineering calculation based on best available data.

(B) Total time in hours the reciprocating compressor is in operating mode.

(C) Report rod packing emissions for compressors measured (refer to Equation W–26 of § 98.233) and for compressors not measured (refer to Equation W–27 and Equation W–28 of § 98.233).

(ii) For reciprocating compressors blowdown vents not manifold to rod packing vents, in operating and standby pressurized mode (refer to Equations W–26 through W–28 of § 98.233), report the following:

(A) Total time in hours the compressor is in standby, pressurized mode.

(B) Reporter emission factor for blowdown vents in cubic feet per hour (refer to § 98.233, Equation W–28).

(C) Report blowdown vent emissions when in operating and standby pressurized modes (refer to Equation W–27 and Equation W–28 of § 98.233).

(iii) For reciprocating compressors in not operating, depressurized mode (refer to Equations W–26 through W–28 of § 98.233), report the following:

(A) Total time the compressor is in not operating, depressurized mode.

(B) Reporter emission factor for isolation valve emissions in not operating, depressurized mode in cubic feet per hour (refer to Equation W–28 of § 98.233).

(C) Report the isolation valve leakage emissions in not operating, depressurized mode.

(iv) Report total annual compressor emissions from all modes of operation (refer to Equation W–27 and Equation W–28 of § 98.233).

(v) For reciprocating compressors in onshore petroleum and natural gas production (refer to Equation W–29 of § 98.233), report the following:

(A) Count of compressors.

(B) Report emissions collectively.

(15) For each equipment leak sources that uses emission factors for estimating emissions (refer to § 98.233(q) and (r).

(i) For equipment leaks found in each leak survey (refer to § 98.233(q)), report the following:

(A) Total count of leaks found in each complete survey listed by date of survey and each type of leak source for which there is a leaker emission factor in Tables W–2, W–3, W–4, W–5, W–6, and W–7 of this subpart.

(B) Concentration of CH_4 and CO_2 as described in Equation W–30 of § 98.233.

(C) Report CH_4 and CO_2 emissions (refer to Equation W–30 of § 98.233) collectively by equipment type.

(ii) For equipment leaks calculated using population counts and factors (refer to § 98.233(r)), report the following:

(A) For source categories § 98.230(a)(3), (a)(4), (a)(5), (a)(6), and (a)(7), total count for each type of leak source in Tables W–2, W–3, W–4, W–5, and W–6 of this subpart for which there is a population emission factor, listed by major heading and component type.

(B) For onshore production (refer to § 98.230 paragraph (a)(2)), total count for each type of major equipment in Table W–1B and Table W–1C of this subpart, by field.

(C) Report CH_4 and CO_2 emissions (refer to Equation W–31 of § 98.233) collectively by equipment type.

(16) For local distribution companies, report the following:

(i) Number of custody transfer gate stations.

(ii) Number of non-custody transfer gate stations.

(iii) Custody transfer gate station meter run leak factor (refer to Equation W–32 of § 98.233).

(iv) Number of below grade M&R stations with inlet pressure greater than 300 psig.

(v) Number of below grade M&R stations with inlet pressure between 100 and 300 psig.

(vi) Number of below grate M&R stations with inlet pressure less than 100 psig.

(vii) Number of miles of unprotected steel distribution mains.

(viii) Number of miles of protected steel distribution mains.

(ix) Number of miles of plastic distribution mains.

(x) Number of miles of cast iron distribution mains.

(xi) Number of unprotected steel distribution services.

(xii) Number of protected steel distribution services.

(xiii) Number of plastic distribution services.

(xiv) Number of copper distribution services.

(xv) Total emissions from each natural gas distribution facility.

(17) For each EOR injection pump blowdown (refer to Equation W–37 of § 98.233), report the following:

(i) Pump capacity, in barrels per day.

(ii) Volume of critical phase gas between isolation valves.

(iii) Number of blowdowns per year.

(iv) Critical phase EOR injection gas density.

(v) Report emissions collectively.

(18) For EOR hydrocarbon liquids dissolved CO_2 for each field (refer to Equation W–38 of § 98.233), report the following:

(i) Volume of crude oil produced in barrels per year.

(ii) Amount of CO_2 retained in hydrocarbon liquids in metric tons per barrel, under standard conditions.

(iii) Report emissions individually.

(19) For onshore petroleum and natural gas production and natural gas distribution combustion emissions, report the following:

(i) Cumulative number of external fuel combustion units with a rated heat capacity equal to or less than 5 mmBtu/hr, by type of unit.

(ii) Cumulative number of external fuel combustion units with a rated heat capacity larger than 5 mmBtu/hr, by type of unit.

(iii) Cumulative emissions from external fuel combustion units with a rated heat capacity larger than 5 mmBtu/hr, by type of unit.

(iv) Cumulative volume of fuel combusted in external fuel combustion units with a rated heat capacity larger than 5 mmBtu/hr, by fuel type.

(v) Cumulative number of all internal combustion units, by type of unit.

(vi) Cumulative emissions from internal combustion units, by type of unit.

(vii) Cumulative volume of fuel combusted in internal combustion units, by fuel type.

(d) Report annual throughput as determined by engineering estimate based on best available data for each industry segment listed in paragraphs (a)(1) through (a)(8) of this section.

§ 98.237 Records that must be retained.

Monitoring Plans, as described in § 98.3(g)(5), must be completed by April 1, 2011. In addition to the information required by § 98.3(g), you must retain the following records:

(a) Dates on which measurements were conducted.

(b) Results of all emissions detected and measurements.

(c) Calibration reports for detection and measurement instruments used.

(d) Inputs and outputs of calculations or emissions computer model runs used for engineering estimation of emissions.

§ 98.238 Definitions.

Except as provided in this section, all terms used in this subpart have the same meaning given in the Clean Air Act and subpart A of this part.

Acid gas means hydrogen sulfide (H_2S) and/or carbon dioxide (CO_2) contaminants that are separated from sour natural gas by an acid gas removal unit.

Acid gas removal unit (AGR) means a process unit that separates hydrogen sulfide and/or carbon dioxide from sour natural gas using liquid or solid absorbents or membrane separators.

Acid gas removal vent emissions mean the acid gas separated from the acid gas absorbing medium (*e.g.,* an amine solution) and released with methane and other light hydrocarbons to the atmosphere or a flare.

Basin means geologic provinces as defined by the American Association of Petroleum Geologists (AAPG) Geologic Note: AAPG–CSD Geologic Provinces Code Map: AAPG Bulletin, Prepared by Richard F. Meyer, Laure G. Wallace, and Fred J. Wagner, Jr., Volume 75, Number 10 (October 1991) (incorporated by reference, see § 98.7) and the Alaska Geological Province Boundary Map, Compiled by the American Association of Petroleum Geologists Committee on Statistics of Drilling in Cooperation with the USGS, 1978 (incorporated by reference, see § 98.7).

Component means each metal to metal joint or seal of non-welded connection separated by a compression gasket, screwed thread (with or without thread sealing compound), metal to metal compression, or fluid barrier through which natural gas or liquid can escape to the atmosphere.

Compressor means any machine for raising the pressure of a natural gas or CO_2 by drawing in low pressure natural gas or CO_2 and discharging significantly higher pressure natural gas or CO_2.

Condensate means hydrocarbon and other liquid, including both water and hydrocarbon liquids, separated from natural gas that condenses due to changes in the temperature, pressure, or both, and remains liquid at storage conditions.

Engineering estimation, for purposes of subpart W, means an estimate of emissions based on engineering principles applied to measured and/or approximated physical parameters such as dimensions of containment, actual pressures, actual temperatures, and compositions.

Enhanced oil recovery (EOR) means the use of certain methods such as water flooding or gas injection into existing wells to increase the recovery of crude oil from a reservoir. In the context of this subpart, EOR applies to injection of critical phase or immiscible carbon dioxide into a crude oil reservoir to enhance the recovery of oil.

Equipment leak means those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally-equivalent opening.

Equipment leak detection means the process of identifying emissions from equipment, components, and other point sources.

External combustion means fired combustion in which the flame and products of combustion are separated from contact with the process fluid to which the energy is delivered. Process fluids may be air, hot water, or hydrocarbons. External combustion equipment may include fired heaters, industrial boilers, and commercial and domestic combustion units.

Facility with respect to natural gas distribution for purposes of this subpart and for subpart A means the collection of all distribution pipelines, metering stations, and regulating stations that are operated by a Local Distribution Company (LDC) that is regulated as a separate operating company by a public utility commission or that are operated as an independent municipally-owned distribution system.

Facility with respect to onshore petroleum and natural gas production for purposes of this subpart and for subpart A means all petroleum or natural gas equipment on a well pad or associated with a well pad and CO_2 EOR operations that are under common ownership or common control including leased, rented, or contracted activities by an onshore petroleum and natural gas production owner or operator and that are located in a single hydrocarbon basin as defined in § 98.238. Where a person or entity owns or operates more than one well in a basin, then all onshore petroleum and natural gas production equipment associated with all wells that the person or entity owns or operates in the basin would be considered one facility.

Farm Taps are pressure regulation stations that deliver gas directly from transmission pipelines to generally rural customers. The gas may or may not be metered, but always does not pass through a city gate station. In some cases a nearby LDC may handle the billing of the gas to the customer(s).

Field means oil and gas fields identified in the United States as defined by the Energy Information Administration Oil and Gas Field Code Master List 2008, DOE/EIA 0370(08) (incorporated by reference, see § 98.7).

Flare stack emissions means CO_2 and N_2O from partial combustion of hydrocarbon gas sent to a flare plus CH_4 emissions resulting from the incomplete combustion of hydrocarbon gas in flares.

Flare combustion efficiency means the fraction of hydrocarbon gas, on a volume or mole basis, that is combusted at the flare burner tip.

Gas well means a well completed for production of natural gas from one or more gas zones or reservoirs. Such wells contain no completions for the production of crude oil.

Internal combustion means the combustion of a fuel that occurs with an oxidizer (usually air) in a combustion chamber. In an internal combustion engine the expansion of the high-temperature and –pressure gases produced by combustion applies direct force to a component of the engine, such as pistons, turbine blades, or a nozzle. This force moves the component over a distance, generating useful mechanical energy. Internal combustion equipment may include gasoline and diesel industrial engines, natural gas-fired reciprocating engines, and gas turbines.

Liquefied natural gas (LNG) means natural gas (primarily methane) that has been liquefied by reducing its temperature to -260 degrees Fahrenheit at atmospheric pressure.

LNG boil-off gas means natural gas in the gaseous phase that vents from LNG storage tanks due to ambient heat leakage through the tank insulation and heat energy dissipated in the LNG by internal pumps.

Offshore means seaward of the terrestrial borders of the United States, including waters subject to the ebb and flow of the tide, as well as adjacent bays, lakes or other normally standing waters, and extending to the outer boundaries of the jurisdiction and control of the United States under the Outer Continental Shelf Lands Act.

Oil well means a well completed for the production of crude oil from at least one oil zone or reservoir.

Onshore petroleum and natural gas production owner or operator means the person or entity who holds the permit to operate petroleum and natural gas wells on the drilling permit or an operating permit where no drilling permit is issued, which operates an onshore petroleum and/or natural gas production facility (as described in § 98.230(a)(2). Where petroleum and natural gas wells operate without a drilling or operating permit, the person or entity that pays the State or Federal business income taxes is considered the owner or operator.

Operating pressure means the containment pressure that characterizes the normal state of gas or liquid inside a particular process, pipeline, vessel or tank.

Pump means a device used to raise pressure, drive, or increase flow of liquid streams in closed or open conduits.

Pump seals means any seal on a pump drive shaft used to keep methane and/or carbon dioxide containing light liquids from escaping the inside of a pump case to the atmosphere.

Pump seal emissions means hydrocarbon gas released from the seal face between the pump internal chamber and the atmosphere.

Reservoir means a porous and permeable underground natural formation containing significant quantities of hydrocarbon liquids and/or gases.

Residue Gas and *Residue Gas Compression* mean, respectively, production lease natural gas from which gas liquid products and, in some cases, non-hydrocarbon components have been extracted such that it meets the specifications set by a pipeline transmission company, and/or a distribution company; and the compressors operated by the processing facility, whether inside the processing facility boundary fence or outside the fence-line, that deliver the residue gas from the processing facility to a transmission pipeline.

Separator means a vessel in which streams of multiple phases are gravity separated into individual streams of single phase.

Transmission pipeline means high pressure cross country pipeline transporting saleable quality natural gas from production or natural gas processing to natural gas distribution pressure let-down, metering, regulating stations where the natural gas is typically odorized before delivery to customers.

Turbine meter means a flow meter in which a gas or liquid flow rate through the calibrated tube spins a turbine from which the spin rate is detected and calibrated to measure the fluid flow rate.

Vented emissions means intentional or designed releases of CH_4 or CO_2 containing natural gas or hydrocarbon gas (not including stationary combustion flue gas), including process designed flow to the atmosphere through seals or vent pipes, equipment blowdown for maintenance, and direct venting of gas used to power equipment (such as pneumatic devices).

TABLE W–1A TO SUBPART W OF PART 98—DEFAULT WHOLE GAS EMISSION FACTORS FOR ONSHORE PETROLEUM AND NATURAL GAS PRODUCTION

Onshore petroleum and natural gas production	Emission factor (scf/hour/component)
Eastern U.S.	
Population Emission Factors—All Components, Gas Service:[1]	
Valve	0.027
Connector	0.004
Open-ended Line	0.062
Pressure Relief Valve	0.041
Low Continuous Bleed Pneumatic Device Vents[2]	1.80
High Continuous Bleed Pneumatic Device Vents[2]	48.1
Intermittent Bleed Pneumatic Device Vents[2]	17.4
Pneumatic Pumps[3]	13.3
Population Emission Factors—All Components, Light Crude Service:[4]	
Valve	0.04
Flange	0.002
Connector	0.005
Open-ended Line	0.04
Pump	0.01
Other[5]	0.23
Population Emission Factors—All Components, Heavy Crude Service:[6]	
Valve	0.0004
Flange	0.0007
Connector (other)	0.0002
Open-ended Line	0.004
Other[5]	0.002
Western U.S.	
Population Emission Factors—All Components, Gas Service:[1]	
Valve	0.123
Connector	0.017
Open-ended Line	0.032
Pressure Relief Valve	0.196
Low Continuous Bleed Pneumatic Device Vents[2]	1.80
High Continuous Bleed Pneumatic Device Vents[2]	48.1
Intermittent Bleed Pneumatic Device Vents[2]	17.4
Pneumatic Pumps[3]	13.3
Population Emission Factors—All Components, Light Crude Service:[4]	
Valve	0.04
Flange	0.002
Connector (other)	0.005
Open-ended Line	0.04
Pump	0.01
Other[5]	0.23

TABLE W–1A TO SUBPART W OF PART 98—DEFAULT WHOLE GAS EMISSION FACTORS FOR ONSHORE PETROLEUM AND NATURAL GAS PRODUCTION—Continued

Onshore petroleum and natural gas production	Emission factor (scf/hour/component)
Population Emission Factors—All Components, Heavy Crude Service:[6]	
Valve	0.0004
Flange	0.0007
Connector (other)	0.0002
Open-ended Line	0.004
Other[5]	0.002

[1] For multi-phase flow that includes gas, use the gas service emissions factors.

[2] Emission Factor is in units of "scf/hour/device."

[3] Emission Factor is in units of "scf/hour/pump."

[4] Hydrocarbon liquids greater than or equal to 20°API are considered "light crude.".

[5] "Others" category includes instruments, loading arms, pressure relief valves, stuffing boxes, compressor seals, dump lever arms, and vents.

[6] Hydrocarbon liquids less than 20°API are considered "heavy crude."

TABLE W–1B TO SUBPART W OF PART 98—DEFAULT AVERAGE COMPONENT COUNTS FOR MAJOR ONSHORE NATURAL GAS PRODUCTION EQUIPMENT

Major equipment	Valves	Connectors	Open-ended lines	Pressure relief valves
Eastern U.S.				
Wellheads	8	38	0.5	0
Separators	1	6	0	0
Meters/piping	12	45	0	0
Compressors	12	57	0	0
In-line heaters	14	65	2	1
Dehydrators	24	90	2	2
Western U.S.				
Wellheads	11	36	1	0
Separators	34	106	6	2
Meters/piping	14	51	1	1
Compressors	73	179	3	4
In-line heaters	14	65	2	1
Dehydrators	24	90	2	2

TABLE W–1C TO SUBPART W OF PART 98—DEFAULT AVERAGE COMPONENT COUNTS FOR MAJOR CRUDE OIL PRODUCTION EQUIPMENT

Major equipment	Valves	Flanges	Connectors	Open-ended lines	Other components
Eastern U.S.					
Wellhead	5	10	4	0	1
Separator	6	12	10	0	0
Heater-treater	8	12	20	0	0
Header	5	10	4	0	0
Western U.S.					
Wellhead	5	10	4	0	1
Separator	6	12	10	0	0
Heater-treater	8	12	20	0	0
Header	5	10	4	0	0

TABLE W–1D OF SUBPART W OF PART 98—DESIGNATION OF EASTERN AND WESTERN U.S.

Eastern U.S.	Western U.S.
Connecticut	Alabama
Delaware	Alaska
Florida	Arizona
Georgia	Arkansas
Illinois	California
Indiana	Colorado
Kentucky	Hawaii
Maine	Idaho
Maryland	Iowa
Massachusetts	Kansas
Michigan	Louisiana
New Hampshire	Minnesota
New Jersey	Mississippi
New York	Missouri
North Carolina	Montana

TABLE W–1D OF SUBPART W OF PART 98—DESIGNATION OF EASTERN AND WESTERN U.S.—Continued

Eastern U.S.	Western U.S.
Ohio	Nebraska
Pennsylvania	Nevada
Rhode Island	New Mexico
South Carolina	North Dakota
Tennessee	Oklahoma
Vermont	Oregon
Virginia	South Dakota
West Virginia	Texas
Wisconsin	Utah
	Washington
	Wyoming

TABLE W–2 TO SUBPART W OF PART 98—DEFAULT TOTAL HYDROCARBON EMISSION FACTORS FOR ONSHORE NATURAL GAS PROCESSING

Onshore natural gas processing	Emission Factor (scf/hour/component)
Leaker Emission Factors—Compressor Components, Gas Service	
Valve[1]	15.07
Connector	5.68
Open-Ended Line	17.54
Pressure Relief Valve	40.27
Meter	19.63
Leaker Emission Factors—Non-Compressor Components, Gas Service	
Valve	6.52
Connector	5.80
Open-Ended Line	11.44
Pressure Relief Valve	2.04
Meter	2.98

[1] Valves include control valves, block valves and regulator valves.

TABLE W–3 TO SUBPART W OF PART 98—DEFAULT TOTAL HYDROCARBON EMISSION FACTORS FOR ONSHORE NATURAL GAS TRANSMISSION COMPRESSION

Onshore natural gas transmission compression	Emission Factor (scf/hour/component)
Leaker Emission Factors—Compressor Components, Gas Service	
Valve[1]	15.07
Connector	5.68
Open-Ended Line	17.54
Pressure Relief Valve	40.27
Meter	19.63
Leaker Emission Factors—Non-Compressor Components, Gas Service	
Valve[1]	6.52
Connector	5.80
Open-Ended Line	11.44
Pressure Relief Valve	2.04

TABLE W–3 TO SUBPART W OF PART 98—DEFAULT TOTAL HYDROCARBON EMISSION FACTORS FOR ONSHORE NATURAL GAS TRANSMISSION COMPRESSION—Continued

Onshore natural gas transmission compression	Emission Factor (scf/hour/component)
Meter	2.98
Population Emission Factors—Gas Service	
Low Continuous Bleed Pneumatic Device Vents[2]	1.41
High Continuous Bleed Pneumatic Device Vents[2]	18.8
Intermittent Bleed Pneumatic Device Vents[2]	18.8

[1] Valves include control valves, block valves and regulator valves.

[2] Emission Factor is in units of "scf/hour/device."

TABLE W–4 TO SUBPART W OF PART 98—DEFAULT TOTAL HYDROCARBON EMISSION FACTORS FOR UNDERGROUND NATURAL GAS STORAGE

Underground natural gas storage	Emission Factor (scf/hour/component)
Leaker Emission Factors—Storage Station, Gas Service	
Valve[1]	15.07
Connector	5.68
Open-Ended Line	17.54
Pressure Relief Valve	40.27
Meter	19.63
Population Emission Factors—Storage Wellheads, Gas Service	
Connector	0.01
Valve	0.10
Pressure Relief Valve	0.17
Leaker Emission Factors—Storage Station, Gas Service	
Open-ended Line	0.03
Population Emission Factors—Other Components, Gas Service	
Low Continuous Bleed Pneumatic Device Vents[2]	1.41
High Continuous Bleed Pneumatic Device Vents[2]	18.8
Intermittent Bleed Pneumatic Device Vents[2]	18.8

[1] Valves include control valves, block valves and regulator valves.

[2] Emission Factor is in units of "scf/hour/device"

TABLE W–5 TO SUBPART W OF PART 98—DEFAULT METHANE EMISSION FACTORS FOR LIQUEFIED NATURAL GAS (LNG) STORAGE

LNG Storage	Emission Factor (scf/hour/component)
Leaker Emission Factors—LNG Storage Components, LNG Service	
Valve	1.21
Pump Seal	4.06
Connector	0.35
Other[1]	1.80
Population Emission Factors—LNG Storage Compressor, Gas Service	
Vapor Recovery Compressor[2]	4.23

[1] "other" equipment type should be applied for any equipment type other than connectors, pumps, or valves.

[2] Emission Factor is in units of "scf/hour/compressor."

TABLE W–6 TO SUBPART W OF PART 98—DEFAULT METHANE EMISSION FACTORS FOR LNG IMPORT AND EXPORT EQUIPMENT

LNG import and export equipment	Emission Factor (scf/hour/component)
Leaker Emission Factors—LNG Terminals Components, LNG Service	
Valve	1.21
Pump Seal	4.06
Connector	0.35
Other[1]	1.80
Population Emission Factors—LNG Terminals Compressor, Gas Service	
Vapor Recovery Compressor[2]	4.23

[1] "other" equipment type should be applied for any equipment type other than connectors, pumps, or valves.

[2] Emission Factor is in units of "scf/hour/compressor."

TABLE W–7 TO SUBPART W OF PART 98—DEFAULT METHANE EMISSION FACTORS FOR NATURAL GAS DISTRIBUTION

Natural gas distribution	Emission Factor (scf/hour/component)
Leaker Emission Factors—Above Grade M&R at City Gate Stations[1] Components, Gas Service	
Connector	1.72
Block Valve	0.566
Control Valve	9.48
Pressure Relief Valve	0.274
Orifice Meter	0.215

TABLE W–7 TO SUBPART W OF PART 98—DEFAULT METHANE EMISSION FACTORS FOR NATURAL GAS DISTRIBUTION—Continued

Natural gas distribution	Emission Factor (scf/hour/component)
Regulator	0.784
Open-ended Line	26.533
Population Emission Factors—Below Grade M&R [2] Components, Gas Service [3]	
Below Grade M&R Station, Inlet Pressure > 300 psig	1.32
Below Grade M&R Station, Inlet Pressure 100 to 300 psig	0.20

TABLE W–7 TO SUBPART W OF PART 98—DEFAULT METHANE EMISSION FACTORS FOR NATURAL GAS DISTRIBUTION—Continued

Natural gas distribution	Emission Factor (scf/hour/component)
Below Grade M&R Station, Inlet Pressure < 100 psig	0.10
Population Emission Factors—Distribution Mains, Gas Service [4]	
Unprotected Steel	12.77
Protected Steel	0.36
Plastic	1.15
Cast Iron	27.67
Population Emission Factors—Distribution Services, Gas Service [5]	
Unprotected Steel	0.19

TABLE W–7 TO SUBPART W OF PART 98—DEFAULT METHANE EMISSION FACTORS FOR NATURAL GAS DISTRIBUTION—Continued

Natural gas distribution	Emission Factor (scf/hour/component)
Protected Steel	0.02
Plastic	0.001
Copper	0.03

[1] City gate stations at custody transfer and excluding customer meters.

[2] Excluding customer meters.

[3] Emission Factor is in units of "scf/hour/station".

[4] Emission Factor is in units of "scf/hour/mile".

[5] Emission Factor is in units of "scf/hour/number of services".

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Federal Register

Tuesday,

November 30, 2010

Part IV

Environmental Protection Agency

40 CFR Part 52

Approval and Promulgation of Implementation Plans; State of California; 2008 San Joaquin Valley State Implementation Plan for Fine Particulate Matter; 2007 State Strategy; $PM_{2.5}$; Proposed Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R09–OAR–2010–0516; FRL–9229–4]

Approval and Promulgation of Implementation Plans; State of California; 2008 San Joaquin Valley State Implementation Plan for Fine Particulate Matter; 2007 State Strategy; $PM_{2.5}$

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: EPA is proposing to approve in part and disapprove in part state implementation plan (SIP) revisions submitted by California to provide for attainment of the 1997 annual and 24-hour fine particulate matter ($PM_{2.5}$) national ambient air quality standards (NAAQS) in the San Joaquin Valley (SJV) nonattainment area. The SIP revisions are the SJV 2008 $PM_{2.5}$ Plan (revised 2010) and portions of the 2007 State Strategy (revised 2009). Specifically, EPA is proposing to approve the emissions inventories as meeting the requirements of the Clean Air Act and EPA's fine particle implementing rule and to approve commitments to implement specific measures and meet specific aggregate emissions reductions by the San Joaquin Valley Air Pollution Control District and the California Air Resource Board. In addition, we are proposing to find that volatile organic compounds are a $PM_{2.5}$ attainment plan precursor in the SJV for which controls should be evaluated. EPA is proposing to disapprove the attainment demonstration. EPA is also proposing to disapprove the reasonably available control measures/reasonably available control technology demonstration, the air quality modeling, the reasonable further progress (RFP) demonstration, the contingency measures, and the attainment and RFP conformity motor vehicle emissions budgets. EPA is also proposing to not grant California's request to extend to April 5, 2015 the deadline for the SJV nonattainment area to attain the 1997 $PM_{2.5}$ NAAQS.

DATES: Any comments must arrive by January 31, 2011.

ADDRESSES: Submit comments, identified by docket number EPA–R09–OAR–2010–0516, by one of the following methods:

- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the online instructions.
- *E-mail:* wicher.frances@epa.gov.
- *Mail or deliver:* Frances Wicher, Office of Air Planning (AIR–2), U.S. Environmental Protection Agency Region IX, 75 Hawthorne Street, San Francisco, CA 94105.

Instructions: All comments will be included in the public docket without change and may be made available online at *http://www.regulations.gov,* including any personal information provided, unless the comment includes Confidential Business Information (CBI) or other information for which disclosure is restricted by statute. Information that you consider CBI or otherwise protected should be clearly identified as such and should not be submitted through *http://www.regulations.gov* or e-mail. The *http://www.regulations.gov* Web site is an "anonymous access" system, and EPA will not know your identity or contact information unless you provide it in the body of your comments. If you send e-mail directly to EPA, your e-mail address will be automatically captured and included as part of the public comment. If EPA cannot read your comments due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comments.

Docket: The index to the docket for this action is available electronically at *http://www.regulations.gov* and in hard copy at EPA Region IX, 75 Hawthorne Street, San Francisco, California. While all documents in the docket are listed in the index, some may be publicly available only at the hard copy location (*e.g.,* copyrighted material) and some may not be publicly available at either location (*e.g.,* CBI). To inspect the hard copy materials, please schedule an appointment during normal business hours with the contact listed in the **FOR FURTHER INFORMATION CONTACT** section below.

Copies of the SIP materials are also available for inspection at the following locations:

- California Air Resources Board, 2020 L Street, Sacramento, California 95812
- San Joaquin Valley Unified Air Pollution Control District, 1990 E. Gettysburg, California 93726.

The SIP materials are also electronically available at: *http://www.valleyair.org/Air_Quality_Plans/PM_Plans.htm* and *http://www.arb.ca.gov/planning/sip/sip.htm.*

FOR FURTHER INFORMATION CONTACT: Frances Wicher, Air Planning Office (AIR–2), U.S. Environmental Protection Agency, Region IX, (415) 972–3957, *wicher.frances@epa.gov.*

SUPPLEMENTARY INFORMATION: Throughout this document, we, us and our refer to EPA.

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I. The $PM_{2.5}$ NAAQS and the San Joaquin Valley $PM_{2.5}$ Nonattainment Area

On July 18, 1997 (62 FR 36852), EPA established new national ambient air quality standards (NAAQS) for $PM_{2.5}$, particulate matter with a diameter of 2.5 microns or less, including annual standards of 15.0 μg/m³ based on a 3-year average of annual mean $PM_{2.5}$ concentrations and 24-hour (daily) standards of 65 μg/m³ based on a 3-year average of the 98th percentile of 24-hour concentrations. 40 CFR 50.7. EPA established the standards based on substantial evidence from numerous health studies demonstrating that serious health effects are associated with exposures to $PM_{2.5}$ concentrations above the levels of these standards.

Epidemiological studies have shown statistically significant correlations between elevated $PM_{2.5}$ levels and premature mortality. Other important health effects associated with $PM_{2.5}$ exposure include aggravation of respiratory and cardiovascular disease (as indicated by increased hospital admissions, emergency room visits, absences from school or work, and restricted activity days), changes in lung function and increased respiratory symptoms, as well as new evidence for more subtle indicators of cardiovascular health. Individuals particularly sensitive to $PM_{2.5}$ exposure include older adults, people with heart and lung disease, and children. *See,* EPA, *Air Quality Criteria for Particulate Matter,* No. EPA/600/P–99/002aF and EPA/600/P–99/002bF, October 2004.

$PM_{2.5}$ can be emitted directly into the atmosphere as a solid or liquid particle (primary $PM_{2.5}$ or direct $PM_{2.5}$) or can be formed in the atmosphere as a result of various chemical reactions from precursor emissions of nitrogen oxides, sulfur dioxide, volatile organic compounds, and ammonia (secondary $PM_{2.5}$). *See* 72 FR 20586, 20589 (April 25, 2007).

Following promulgation of a new or revised NAAQS, EPA is required by Clean Air Act (CAA) section 107(d) to designate areas throughout the nation as attaining or not attaining the NAAQS. On January 5, 2005, EPA published initial air quality designations for the 1997 $PM_{2.5}$ NAAQS, based on air quality monitoring data for the three-year periods of 2001–2003 or 2002–2004. 70 FR 944. These designations became effective on April 5, 2005.[1]

EPA designated the San Joaquin Valley (SJV), in the southern part of California's Central Valley, nonattainment for both the 1997 annual and 24-hour $PM_{2.5}$ standards. 40 CFR 81.305. The SJV $PM_{2.5}$ nonattainment area is home to 4 million people and is the nation's leading agricultural area. Stretching over 250 miles from north to south and averaging 80 miles wide, it is partially enclosed by the Coast Mountain range to the west, the Tehachapi Mountains to the south, and the Sierra Nevada range to the east. It encompasses over 23,000 square miles and includes all or part of eight counties: San Joaquin, Stanislaus, Merced, Madera, Fresno, Tulare, Kings, and the valley portion of Kern. For a precise description of the geographic boundaries of the San Joaquin Valley $PM_{2.5}$ nonattainment area, see 40 CFR § 81.305. The local air district with primary responsibility for developing a plan to attain the $PM_{2.5}$ NAAQS in this area is the San Joaquin Valley Air Pollution Control District (SJVAPCD or District).

Ambient annual and 24-hour $PM_{2.5}$ levels in the urban Bakersfield area in the southern SJV are the highest recorded in the United States at 22.6 μg/m³ and 70 μg/m³, respectively, for the 2007–2009 period.[2] In the SJV, the levels and composition of ambient $PM_{2.5}$ differ by season. 2008 $PM_{2.5}$ Plan, Figures H–4 and H–5. Higher $PM_{2.5}$ concentrations occur during the winter, between late November and February, when ambient $PM_{2.5}$ is dominated by ammonium nitrate, formed from NO_X and ammonia emissions, and directly-emitted particulates, such as wood smoke. During the winter, the SJV experiences extended periods of stagnant weather with cold, damp, foggy conditions which are conducive to the formation of secondary ammonium nitrate particulates and encourage wood burning. During the summer, $PM_{2.5}$ levels generally remain below 15 μg/m³, the level of the annual standards. 2008 $PM_{2.5}$ Plan, Figures H–6 and H–7.

II. California's State Implementation Plan Submittals to Address $PM_{2.5}$ Nonattainment in the San Joaquin Valley

A. California's SIP Submittals

Designation of an area as nonattainment starts the process for a state to develop and submit to EPA a state implementation plan (SIP) under title 1, part D of the CAA. This SIP must include, among other things, a demonstration of how the NAAQS will be attained in the nonattainment area as expeditiously as practicable but no later than the date required by the CAA. Under CAA section 172(b), a state has up to three years after an area's designation as nonattainment to submit its SIP to EPA. For the 1997 $PM_{2.5}$ NAAQS, these SIPs were due no later than April 5, 2008.

California has made several SIP submittals to address the CAA's $PM_{2.5}$ attainment planning requirements in the San Joaquin Valley. The two principal ones are the SJVAPCD's 2008 $PM_{2.5}$ Plan (2008 $PM_{2.5}$ Plan or Plan) and the California Air Resources Board's (CARB) State Strategy for California's 2007 State Implementation Plan (2007 State Strategy).

In addition to these submittals, the District and State have also submitted numerous rules that contribute to improving air quality in the San Joaquin Valley. EPA has approved many of these rules. See Appendices A and B of the technical support document (TSD) for this proposal.

1. SJV 2008 $PM_{2.5}$ Plan

The 2008 $PM_{2.5}$ Plan was adopted by the District's Governing Board on April 30, 2008 and by CARB on May 22, 2008 and submitted to EPA on June 30, 2008.[3] It includes an attainment

[1] On October 17, 2006, EPA strengthened the 24-hour $PM_{2.5}$ NAAQS by lowering the level to 35 μg/m³. At the same time, it retained the level of the annual $PM_{2.5}$ standards at 15.0 μg/m³. 71 FR 61144. On November 13, 2006, EPA designated areas, including the SJV, with respect to the revised 24-hour NAAQS. 74 FR 58688. California is now required to submit an attainment plan for the 35 μg/m³ 24-hour standards no later than 3 years after the effective date of the designation, that is, no later than December 14, 2012. In this preamble, all references to the $PM_{2.5}$ NAAQS, unless otherwise specified, are to the 1997 24-hour $PM_{2.5}$ standards of 65 μg/m³ and annual standards of 15 μg/m³ as codified in 40 CFR § 50.7.

[2] *See* EPA, Air Quality System, Design Value Report, August 9, 2010. These values are the highest design values in the SJV. A design value is an ambient concentration calculated using a specific methodology from monitored air quality data and is used to compare an area's air quality to a NAAQS. The methodologies for calculating design values for the annual and 24-hour $PM_{2.5}$ NAAQS are found in 40 CFR part 50 Appendix N Sections 1(c)(1) and (c)(2), respectively.

[3] *See* San Joaquin Valley Unified Air Pollution Control District Governing Board Resolution: In the Matter of Adopting the San Joaquin Valley Unified Air Pollution Control District 2008 $PM_{2.5}$ Plan,

Continued

demonstration, commitments by the SJVAPCD to adopt control measures to achieve emissions reductions from sources under its jurisdiction (primarily stationary sources), and motor-vehicle emissions budgets used for transportation conformity purposes. The attainment demonstration includes air quality modeling, a reasonable further progress (RFP) plan, an analysis of reasonably available control measures/reasonably available control technology (RACM/RACT), base year and projected year emissions inventories, and contingency measures. The 2008 $PM_{2.5}$ Plan also includes the District's demonstration that attainment of the $PM_{2.5}$ standards in the SJV will require significant reductions in NO_X and $PM_{2.5}$ emissions (50 percent and 25 percent from 2005 levels, respectively) and that the most expeditious date for attaining the 1997 $PM_{2.5}$ NAAQS in the San Joaquin Valley is April 5, 2015. On September 15, 2010, CARB submitted a minor revision to the 2008 $PM_{2.5}$ Plan's control strategy to extend the adoption date for one control measure.[4] Future references to the 2008 $PM_{2.5}$ Plan in this proposal will be to the Plan as revised in 2010.

2. CARB 2007 State Strategy

To demonstrate attainment, the 2008 $PM_{2.5}$ Plan relies in part on measures in CARB's 2007 State Strategy. The 2007 State Strategy was adopted by CARB on September 27, 2007 and submitted to EPA on November 16, 2007.[5] It discusses CARB's overall approach to addressing, in conjunction with local plans, attainment of both the 1997 $PM_{2.5}$ and 8-hour ozone NAAQS not only in the San Joaquin Valley but also in California's other nonattainment areas such as the South Coast Air Basin and the Sacramento area. It also includes CARB's commitments to propose 15 defined State measures[6] and to obtain specific amounts of aggregate emissions reductions of direct $PM_{2.5}$, nitrogen oxides (NO_X), and volatile organic compounds (VOC) in the SJV from sources under the State's jurisdiction, which are primarily on- and off-road motor vehicles and engines.

On August 12, 2009, CARB submitted the "Status Report on the State Strategy for California's 2007 State Implementation Plan (SIP) and Proposed Revision to the SIP Reflecting Implementation of the 2007 State Strategy," dated March 24, 2009, adopted April 24, 2009 (2009 State Strategy Status Report)[7] which updates the 2007 State Strategy to reflect its implementation during 2007 and 2008.[8]

In today's proposal, we are only evaluating those portions of the 2007 State Strategy as revised in 2009 that are relevant for attainment of the 1997 $PM_{2.5}$ standards in the San Joaquin Valley.

B. CAA Procedural and Administrative Requirements for SIP Submittals

CAA sections 110(a)(1) and (2) and 110(l) require a state to provide reasonable public notice and opportunity for public hearing prior to the adoption and submittal of a SIP or SIP revision. To meet this requirement, every SIP submittal should include evidence that adequate public notice was given and a public hearing was held on it consistent with EPA's implementing regulations in 40 CFR 51.102.

Both the SJVAPCD and CARB have satisfied applicable statutory and regulatory requirements for reasonable public notice and hearing prior to adoption and submittal of the 2008 $PM_{2.5}$ Plan. The District conducted public workshops, provided public comment periods, and held a public hearing prior to the adoption of the Plan on April 30, 2008. *See* 2008 $PM_{2.5}$ Plan, Appendix J and SJVAPCD Governing Board Resolution, p. 3. CARB provided the required public notice and opportunity for public comment prior to its May 22, 2008 public hearing on the Plan. *See* CARB Resolution No. 08–28. The District also provided the required public notice and hearing on the 2010 revision to the Plan. *See* SJVAPCD Governing Board Resolution No. 10–06–18.

CARB conducted public workshops, provided public comment periods, and held a public hearing prior to the adoption of the 2007 State Strategy on September 27, 2007. *See* CARB Resolution No. 07–28. CARB also provided the required public notice, opportunity for public comment, and a public hearing prior to its April 24, 2009 adoption of the 2009 State Strategy Status Report. *See* CARB Resolution No. 09–34.

The SIP submittals include proof of publication for notices of SJVAPCD and CARB public hearings, as evidence that all hearings were properly noticed. We find, therefore, that each of the four submittals that comprise the SJV $PM_{2.5}$ SIP meets the procedural requirements of CAA sections 110(a) and 110(l).

CAA section 110(k)(1)(B) requires EPA to determine whether a SIP submittal is complete within 60 days of receipt. This section also provides that any plan that EPA has not affirmatively determined to be complete or incomplete will become complete six months after the date of submittal by operation of law. EPA's SIP completeness criteria are found in 40 CFR part 51, Appendix V.

The June 30, 2008 submittal of the 2008 $PM_{2.5}$ Plan became complete by operation of law on December 30, 2008. We found the 2010 revision to the Plan complete on September 23, 2010.[9] The November 16, 2007 submittal of the 2007 State Strategy and the August 12, 2009 submittal of the 2009 revisions to the Strategy became complete by operation of law on May 16, 2008 and February 12, 2010, respectively.

III. CAA and Regulatory Requirements for $PM_{2.5}$ Attainment SIPs

EPA is implementing the 1997 $PM_{2.5}$ NAAQS under Title 1, Part D, subpart 1 of the CAA, which includes section 172, "Nonattainment plan provisions." Section 172(a)(2) requires that a $PM_{2.5}$ nonattainment area attain the NAAQS as "as expeditiously as practicable" but no later than five years from the date of the area's designation as nonattainment. This section also allows EPA to grant up to a five-year extension of an area's attainment date based on the severity of the area's nonattainment and the availability and feasibility of controls. EPA designated the SJV as nonattainment effective April 5, 2005, and thus the applicable attainment date is no later than April 5, 2010 or, should EPA grant a full five-year extension, no later than April 5, 2015.

April 30, 2008 (SJVAPCD Governing Board Resolution), CARB Resolution No. 08–28, May 22, 2008; and letter, James N. Goldstene, Executive Officer, CARB to Wayne Nastri, Regional Administrator, EPA Region 9, June 30, 2008, with enclosures.

[4] *See* letter, James N. Goldstene, Executive Officer, CARB to Jared Blumenfeld, Regional Administrator, EPA Region 9, September 15, 2010, with enclosures.

[5] *See* CARB Resolution No. 07–28, September 27, 2007 with attachments and letter, James N. Goldstene, Executive Officer, CARB, to Wayne Nastri, Regional Administrator, EPA Region 9, November 16, 2007 with enclosures.

[6] The 2007 State Strategy also includes measures to be implemented by the California Bureau of Automotive Repair (Smog Check improvements) and the California Department of Pesticide Regulation (VOC reductions from pesticide use). *See* 2007 State Strategy, pp. 64–65 and CARB Resolution 7–28, Attachment B, p. 8.

[7] *See* CARB Resolution No. 09–34, April 21, 2009, with attachments and letter, James N. Goldstene, Executive Officer, CARB, to Laura Yoshii, Acting Regional Administrator, EPA Region 9, August 12, 2009 with enclosures. Only pages 11–27 of the 2009 State Strategy Status Report are submitted as a SIP revision. The balance is for informational purposes only. *See* Attachment A to the CARB Resolution No. 09–34.

[8] We will also refer to the 2007 State Strategy as revised in 2009 as the revised 2007 State Strategy.

[9] Letter, Deborah Jordan, EPA–Region 9 to James Goldstene, CARB, September 23, 2010.

Section 172(c) contains the general statutory planning requirements applicable to all nonattainment areas, including the requirements for emissions inventories, RACM/RACT, attainment demonstrations, RFP demonstrations, and contingency measures.

On April 25, 2007, EPA issued the Clean Air Fine Particle Implementation Rule for the 1997 $PM_{2.5}$ NAAQS. 72 FR 20586, codified at 40 CFR part 51, subpart Z ($PM_{2.5}$ implementation rule). The $PM_{2.5}$ implementation rule and its preamble address the statutory planning requirements for emissions inventories, RACM/RACT, attainment demonstrations including air quality modeling requirements, RFP demonstrations, and contingency measures. This rule also addresses other matters such as which $PM_{2.5}$ precursors must be addressed by the state in its $PM_{2.5}$ attainment SIP, applicable attainment dates, and the requirement for mid-course reviews.[10] We will discuss each of these CAA and regulatory requirements for $PM_{2.5}$ attainment plans in more detail below.

IV. Review of the SJV 2008 $PM_{2.5}$ Plan and the SJV Portion of the Revised 2007 State Strategy

A. Summary of EPA's Proposed Actions

EPA is proposing to approve in part and disapprove in part the SJV 2008 $PM_{2.5}$ Plan and those portions of the 2007 State Strategy as revised in 2009 specific to $PM_{2.5}$ attainment in the SJV.

We are proposing to approve the emissions inventories in these SIP revisions as meeting the applicable requirements of the CAA and $PM_{2.5}$ implementation rule. We are also proposing to approve the District's and CARB's commitments to specific measures and specific aggregate emissions reductions in these SIP revisions as strengthening the SIP.

In addition, we are proposing to find that volatile organic compounds (VOC) are a $PM_{2.5}$ attainment plan precursor that must be addressed in the RACM/RACT analysis, RFP and attainment demonstrations, and for other $PM_{2.5}$ SIP control requirements. The Plan as submitted does not treat VOC as a $PM_{2.5}$ attainment plan precursor.

We are proposing to disapprove the air quality modeling analysis on which the 2008 $PM_{2.5}$ Plan's attainment, RACM/RACT, and RFP demonstrations and the State's attainment date extension request are based because the Plan does not currently include sufficient documentation and analysis for EPA to determine the modeling's adequacy.

Based on our proposed finding that VOC should be a $PM_{2.5}$ attainment plan precursor and our proposed disapproval of the air quality modeling, we are proposing to disapprove the 2008 $PM_{2.5}$ Plan's RACM/RACT analysis and the RFP and attainment demonstrations and related contingency measures as not meeting the applicable requirements of the CAA and $PM_{2.5}$ implementation rule. We are also proposing to disapprove the transportation conformity motor vehicle emissions budgets for the RFP milestone years of 2009 and 2012 and the attainment year of 2014.[11] We are proposing to disapprove the attainment demonstration for the additional reason that it relies too extensively on commitments to emissions reductions in lieu of fully adopted and submitted rules. Rules that have either not been adopted in final form or have not been submitted to and approved by EPA cannot be credited toward the attainment demonstration. Finally, we are proposing to not grant the State's request to extend the attainment date for the $PM_{2.5}$ NAAQS in the SJV to April 5, 2015.

EPA's analysis and findings are summarized below and are described in more detail in the TSD for this proposal which is available online at *http://www.regulations.gov* in the docket, EPA–R09–OAR–2010–0516, or from the EPA contact listed at the beginning of this notice.

B. Emissions Inventories

1. Requirements for Emissions Inventories

CAA section 172(c)(3) requires states to submit a "comprehensive, accurate, current inventory of actual emissions from all sources of the relevant pollutant." The $PM_{2.5}$ implementation rule requires a state to include direct $PM_{2.5}$ emissions and emissions of all $PM_{2.5}$ precursors in this inventory, even if it has determined that control of any of these precursors is not necessary for expeditious attainment. 40 CFR 51.1008(a)(1) and 72 FR 20586 at 20648. Direct $PM_{2.5}$ includes condensable particulate matter. 40 CFR 51.1000. $PM_{2.5}$ precursors are NO_X, SO_2, VOC, and ammonia. *Id.* The inventories should meet the data requirements of EPA's Consolidated Emissions Reporting Rule (codified at 40 CFR part 51 subpart A) and include any additional inventory information needed to support the SIP's attainment demonstration and (where applicable) RFP demonstration. 40 CFR 51.1008(a)(1) and (2).

A baseline emissions inventory is required for the attainment demonstration and for meeting RFP requirements. As determined on the date of designation, the base year for this inventory should be the most recent calendar year for which a complete inventory was required to be submitted to EPA. The baseline emissions inventory for calendar year 2002 or other suitable year should be used for attainment planning and RFP plans for areas initially designated nonattainment for the $PM_{2.5}$ NAAQS in 2005. 40 CFR 51.1008(b).

EPA has provided additional guidance for $PM_{2.5}$ emissions inventories in "Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter NAAQS and Regional Haze Regulations," November 2005 (EPA–454/R–05–001).

2. Emissions Inventories in the SJV $PM_{2.5}$ SIP

The baseline planning inventories for direct $PM_{2.5}$ and all $PM_{2.5}$ precursors for the SJV $PM_{2.5}$ nonattainment area together with additional documentation for the inventories are found in Appendix B of the 2008 $PM_{2.5}$ Plan. Both average winter day and average annual day baseline inventories are provided for the year 2005 (the reference year for the air quality

[10] In June 2007, a petition to the EPA Administrator was filed on behalf of several public health and environmental groups requesting reconsideration of four provisions in the $PM_{2.5}$ implementation rule. *See* Earthjustice, Petition for Reconsideration, "In the Matter of Final Clean Air Fine Particle Implementation Rule," June 25, 2007. These provisions are (1) The presumption that compliance with the Clean Air Interstate Rule satisfies the NO_X and SO_2 RACT requirements for electric generating units; (2) the deferral of the requirement to establish emission limits for condensable particulate matter (CPM) until January 1, 2011; (3) revisions to the criteria for analyzing the economic feasibility of RACT; and (4) the use of out-of-area emissions reductions to demonstrate RFP. These provisions are found in the $PM_{2.5}$ implementation rule and preamble at 20623–20628, 40 CFR 51.1002(c), 20619–20620, and 20636, respectively. On May 13, 2010, EPA granted the petition with respect to the fourth issue. Letter, Gina McCarthy, EPA, to David Baron and Paul Cort, Earthjustice, May 13, 2010. EPA is currently considering the other issues raised in the petition.

Neither the District nor the State relied on the first, third, or fourth of these provisions in preparing the 2008 $PM_{2.5}$ Plan or the 2007 State Strategy. The District has deferred some, but not all, CPM limits in its rules. EPA does not believe this deferral affects its proposed disapproval actions on the SIP's RACM/RACT or expeditious attainment demonstrations. *See* section II.D.3 of the TSD for this proposal. We will evaluate any rule adopted or revised by the District after January 1, 2011 to assure that it appropriately addresses CPM.

[11] While the attainment date for $PM_{2.5}$ areas with a full five-year extension would be April 5 2015, reductions must be implemented by 2014 to achieve attainment by that date. *See* 40 CFR 51.1007(b). We refer, therefore, to 2014 as the attainment year and April 5, 2015 as the attainment date.

modeling) and each year from 2009 to 2014. These baseline inventories incorporate reductions from federal, State, and District measures adopted prior to 2007. 2008 $PM_{2.5}$ Plan, p. B–1 and 2007 State Strategy, Appendix A, p. 1. A winter inventory is provided because the majority of high $PM_{2.5}$ days in the SJV occur during the winter months between November and February. 2008 $PM_{2.5}$ Plan, Figures H–4 and H–5.

Table 1 is a summary of the average annual day inventories of direct $PM_{2.5}$ and $PM_{2.5}$ precursors for the baseline year of 2005 and the projected attainment year of 2014. These inventories provide the basis for the control measure analysis and the RFP and attainment demonstrations in the 2008 $PM_{2.5}$ Plan.

As a starting point for the 2008 $PM_{2.5}$ Plan's inventories, the District used CARB's 2002 base year inventory. An example of this inventory and CARB's documentation for its inventories can be found in Appendices A and F, respectively, of the 2007 State Strategy. The 2002 inventory for the SJV was projected to 2005 and future years using CARB's California emissions forecasting system (CEFSv 1.06). 2008 $PM_{2.5}$ Plan, p. B–1. Both base year and baseline inventories use the most current version of California's mobile source emissions model approved by EPA for use in SIPs, EMFAC2007, for estimating on-road motor vehicle emissions. 73 FR 3464 (January 18, 2008). Off-road inventories were developed using the CARB off-road model.

TABLE 1—SAN JOAQUIN VALLEY EMISSIONS INVENTORY SUMMARY FOR $PM_{2.5}$ AND $PM_{2.5}$ PRECURSORS FOR THE 2005 BASE YEAR AND 2014 ATTAINMENT YEAR

[Annual average day emissions in tons per day]

Emissions inventory category	$PM_{2.5}$		NO_X		SO_2		VOC		Ammonia	
	2005	2014	2005	2014	2005	2014	2005	2014	2005	2014
Stationary Sources	13.3	14.4	80.1	56.5	20.4	22.0	121.5	129.5	19.8	23.0
Area Sources	51.5	45.2	13.5	10.7	0.9	0.9	140.7	128.0	355.9	423.1
On-Road Mobile Sources	12.1	8.9	327.9	206.7	2.6	0.7	94.8	57.2	6.2	4.8
Off-Road Mobile Sources	9.0	6.6	153.9	102.2	2.4	0.8	62.7	48.5	0	0
Total	86.0	75.0	575.4	376.2	26.4	24.5	419.8	363.2	382.0	451.0

3. Proposed Action on the Emissions Inventories

We have reviewed the emissions inventories in the 2008 $PM_{2.5}$ Plan and the inventory methodologies used by SJVAPCD and CARB for consistency with CAA requirements, the $PM_{2.5}$ implementation rule, and EPA's guidance. We find that the base year and projected baseline year inventories are comprehensive, accurate, and current inventories of actual or projected emissions of $PM_{2.5}$ and $PM_{2.5}$ precursors in the SJV nonattainment area as of the date of their submittal. We propose, therefore, to approve these inventories as meeting the requirements of CAA section 172(c)(3), the $PM_{2.5}$ implementation rule and applicable EPA guidance. We provide more detail on our review of the inventories in section II.A. of the TSD.

C. Reasonably Available Control Measures/Reasonably Available Control Technology Demonstration and Adopted Control Strategy

1. Requirements for RACM/RACT

CAA section 172(c)(1) requires that each attainment plan "provide for the implementation of all reasonably available control measures [RACM] as expeditiously as practicable (including such reductions in emissions from existing sources in the area as may be obtained through the adoption, at a minimum, of reasonably available control technology [RACT]), and shall provide for attainment of the national primary ambient air quality standards." EPA defines RACM as measures that a state finds are both reasonably available and contribute to attainment as expeditiously as practicable in its nonattainment area. Thus, what constitutes RACM/RACT in a $PM_{2.5}$ attainment plan is closely tied to that plan's expeditious attainment demonstration. 40 CFR 51.1010; 72 FR 20586 at 20612. States are required to evaluate RACM/RACT for direct $PM_{2.5}$ and all of its attainment plan precursors. 40 CFR 51.1002(c).

For $PM_{2.5}$ attainment plans, EPA is requiring a combined approach to RACM and RACT under subpart 1 of Part D of the CAA. Subpart 1, unlike subparts 2 and 4, does not identify specific source categories for which EPA must issue control technology documents or guidelines, or identify specific source categories for state and EPA evaluation during attainment plan development. 72 FR 20586 at 20610. Rather, under subpart 1, EPA considers RACT to be part of an area's overall RACM obligation. Because of the variable nature of the $PM_{2.5}$ problem in different nonattainment areas which may require states to develop attainment plans that address widely disparate circumstances, EPA determined not only that states should have flexibility with respect to RACT and RACM controls but also that in areas needing significant emission reductions to attain the standards, RACT/RACM controls on smaller sources may be necessary to reach attainment as expeditiously as practicable. 72 FR 20586 at 20612, 20615. Thus, under the $PM_{2.5}$ implementation rule, RACT and RACM are those reasonably available measures that contribute to attainment as expeditiously as practicable in the specific nonattainment area. 40 CFR 51.1010; 72 FR 20586 at 20612.

Specifically, the $PM_{2.5}$ implementation rule requires that attainment plans include the list of measures a state considered and information sufficient to show that the state met all requirements for the determination of what constitutes RACM/RACT in a specific nonattainment area. 40 CFR 51.1010(a). In addition, the rule requires that the state, in determining whether a particular emissions reduction measure or set of measures must be adopted as RACM/RACT, consider the cumulative impact of implementing the available measures and to adopt as RACM/RACT any potential measures that are reasonably available considering technological and economic feasibility if, considered collectively, they would advance the attainment date by one year or more. Any measures that are necessary to meet these requirements which are not already either federally promulgated, part of the state's SIP, or otherwise creditable in SIPs must be submitted in enforceable form as part of

a state's attainment plan for the area. 72 FR 20586 at 20614.

A more comprehensive discussion of the RACM/RACT requirement for $PM_{2.5}$ attainment plans and EPA's guidance for it can be found in the $PM_{2.5}$ implementation rule preamble (72 FR 20586 at 20609–20633) and in section II.D. of the TSD.

2. RACM/RACT Demonstration in the SJV $PM_{2.5}$ SIP

The 2008 $PM_{2.5}$ Plan and the 2007 State Strategy are the latest in a series of air quality plans that the District and CARB have developed to provide for attainment of the federal air quality standards in the SJV. These planning efforts have resulted in a comprehensive set of rules and programs that address the vast majority of emissions sources in the Valley. Many of these District and State rules are among the most stringent in the nation.

For the 2008 $PM_{2.5}$ Plan and the 2007 State Strategy, the District, CARB, and the local agencies (through the SJV's eight metropolitan planning organizations (MPO)) each undertook a process to identify and evaluate potential reasonably available control measures that could contribute to expeditious attainment of the $PM_{2.5}$ standards in the SJV. We describe each agency's efforts below.

a. SJVAPCD's RACM/RACT Analysis and Adopted Control Strategy

The District's RACM/RACT analysis, which focuses on stationary and area source controls, is described in Chapter 6 and Appendix I of the 2008 $PM_{2.5}$ Plan. To identify potential RACM/RACT, the District reviewed potential measures from a number of sources including EPA's list of potential control measures in the $PM_{2.5}$ implementation rule preamble (72 FR 20586 at 20621), measures in other nonattainment areas' plans, and measures suggested by the public during development of the 2008 $PM_{2.5}$ Plan. 2008 $PM_{2.5}$ Plan, pp. 6–6 to 6–8. The identified potential measures, as well as existing District measures, are described by emissions inventory category in Appendix I. These measures address emissions of direct $PM_{2.5}$, NO_X and SO_2. See 2008 $PM_{2.5}$ Plan, p. 6–8 and Appendix I. Potential RACM/RACT controls for VOC or ammonia were not specifically identified or evaluated.

From the set of identified potential controls for $PM_{2.5}$, NO_X, and SO_2, the District selected measures for adoption and implementation based on the technological feasibility and practicality of emissions controls, the potential magnitude and timing of emissions reductions, cost effectiveness, and other acceptable criteria. 2008 $PM_{2.5}$ Plan, p. 6–7.

After completing its RACM/RACT analysis for stationary and area sources under its jurisdiction, the District developed its "Stationary Source Regulatory Implementation Schedule" (2008 $PM_{2.5}$ Plan, Table 6–2) which gives the schedule for regulatory adoption and implementation of the selected RACM/RACT measures. The District also identified a number of source categories for which feasibility studies would be undertaken to refine the inventory and evaluate potential controls. These categories and the schedule for studying them are listed in Table 6–4 of the 2008 $PM_{2.5}$ Plan.

In the five years prior to the adoption of the 2008 $PM_{2.5}$ Plan, the SJVAPCD developed and implemented comprehensive plans to address attainment of the PM_{10} standards (2003 PM_{10} Plan, approved 69 FR 30005 (May 26, 2004)), the 1-hour ozone standards (2004 Extreme Ozone Attainment Plan, approved 75 FR 10420 (March 8, 2010)), and the 8-hour ozone standards (2007 Ozone Plan, submitted November 16, 2007). These plans for other NAAQS have resulted in the adoption by the District of many new rules and revisions to existing rules for stationary and area sources in the SJV. In general, the SJVAPCD's current rules are equivalent to or more stringent than those developed by other air districts. In addition to these stationary and area source measures, the District has also adopted an indirect source review rule, Rule 9510, to address increased indirect emissions from new industrial, commercial and residential developments. See SJVAPCD Rule 9510 "Indirect Source Review," adopted December 15, 2005. EPA proposed to approve this rule as a revision to the California SIP on May 21, 2010. 75 FR 28509. The District also operates incentive grant programs including the Carl Moyer program,[12] to accelerate turnover of existing stationary and mobile engines to cleaner units. 2008 $PM_{2.5}$ Plan, Section 6.5.

For the 2008 $PM_{2.5}$ Plan, the District identified and committed to adopting and implementing 13 new control measures for direct $PM_{2.5}$, NO_X, and/or SO_2. In Table 2 below, we list these measures, which mostly involve strengthening existing District rules, along with their anticipated and actual adoption, initial implementation, and final compliance dates. As can be seen from Table 2, the District has met its intended rulemaking schedule and has only two rule actions remaining (S–COM–6 and S–COM–10). On Table 3, we list the expected emissions reductions from each measure. We note, however, that the District's commitment is only to the aggregate emissions reductions of direct $PM_{2.5}$, NO_X, and SO_2 shown. *See* 2008 $PM_{2.5}$ Plan, p. 6–9 and SJVUAPCD Governing Board Resolution, p. 5. The reductions listed on Table 3 are those anticipated to be achievable from each measure at the time the 2008 $PM_{2.5}$ Plan was adopted. Actual reductions from each measure once adopted may be greater or less than those anticipated. Finally, on Table 4 we give the current SIP submittal and approval status of the measures in the Plan.

TABLE 2—SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT 2008 $PM_{2.5}$ PLAN SPECIFIC RULE COMMITMENTS

Measure number & description	District rule number	Rule making completion date	Actual adoption date	Compliance date	Actual compliance date	Year reductions start	Actual year reductions start
S–AGR–1	4103—Open Burning	2nd Q—2010	April 2010	2010	June 2010	2009	2010
S–COM–1	4320—Advanced Emissions Reductions for Boilers, Steam Generators and Process Heaters (≤ 5 MMBtu/hr).	3rd Q—2008	October 2008	2012	July 2012 to January 2014.	2012	July 2011
S–COM–2	4307—Boilers, Steam Generators and Process Heaters (2 to 5 MMBtu/hr).	3rd Q—2008	October 2008	2012	July 2010 to January 2016.	2012	July 2010

[12] The Carl Moyer Memorial Air Quality Standards Attainment Program provides incentive grants for engines, equipment and other sources of pollution that are cleaner than required by federal,State, or local rules, providing early or extra emission reductions. Eligible projects include cleaner on-road, off-road, marine, locomotive and stationary agricultural pump engines. The program achieves near-term reductions in emissions of NO_X, PM, and VOC.

TABLE 2—SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT 2008 $PM_{2.5}$ PLAN SPECIFIC RULE COMMITMENTS—Continued

Measure number & description	District rule number	Rule making completion date	Actual adoption date	Compliance date	Actual compliance date	Year reductions start	Actual year reductions start
S–COM–3	4308—Boilers, Steam Generators and Process Heaters (0.075 to < 2 MM Btu/hr).	4th Q—2009	December 2009	2011	January 2011	2011	January 2011
S–COM–5	4703—Stationary Gas Turbines	3rd Q—2007	September 2007	2012	January 2012	2012	July 2009
S–COM–6	Rule 4702—Reciprocating Internal Combustion Engines.	4th Q—2010	Scheduled for December 2010.	2012	TBD	2012	TBD
S–COM–7	4354—Glass Melting Furnaces	3rd Q—2008	October 2008 Under revision	2009	PM_{10} & SO_x—January 2011. NO_X limits—January 2014–2018.	2009	PM_{10} & SO_x—June 2009 NO_X limits—January 2011
S–COM–9	4902—Residential Water Heaters	1st Q—2009	March 2009	Attrition	Attrition	2011	January 2010
S–COM–10	4905—Natural Gas-Fired, Fan Type Residential Central Furnaces.	4nd Q—2014	TBD	Attrition	TBD	2015	TBD
S–COM–14	4901—Wood Burning Fireplaces and Wood Burning Heaters.	3rd Q—2009	October 2008	2010	2008	2010	2008
S–IND–9	4692—Commercial Charbroiling	2nd Q—2009	September 2009	2011	January 2011	2011	January 2011
S–IND–21	4311—Flares	2nd Q—2009	June 2009	2010	July 2011	2010	July 2011
M–TRAN–1	9410—Employer Based Trip Reduction Program.	4th Q—2009	December 2009	2012	January 2012	2012	January 2012

Source: 2008 $PM_{2.5}$ Plan, Table 6–2. "Actual" information is taken from the individual rules as adopted or revised.

TABLE 3—SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT ESTIMATED EMISSIONS REDUCTIONS FOR 2008 $PM_{2.5}$ PLAN SPECIFIC RULE COMMITMENTS

(tons per average annual day)

		2009	2010	2011	2012	2013	2014
NO_X Emissions Reductions							
S–AGR–1	4103—Open Burning	1.21	1.95	2.68	2.67	2.66	2.65
S–COM–1	4320—Advanced Emissions Reductions for Boilers, Steam Generators and Process Heaters (> 5 MMBtu/hr).	0	0	0	1.49	1.50	1.52
S–COM–3	4308—Boilers, Steam Generators and Process Heaters (0.075 to < 2 MMBtu/hr).	0	0	0.12	0.27	0.39	0.55
S–COM–5	4703—Stationary Gas Turbines	0	0	0	2.21	2.21	2.21
S–COM–7	4354—Glass Melting Furnaces	1.22	1.25	1.18	1.60	1.67	1.58
S–COM–9	4902—Residential Water Heaters	0	0	0.20	0.25	0.32	0.40
S–COM–14	4901—Wood Burning Fireplaces and Wood Burning Heaters.	0	0.04	0.08	0.07	0.07	0.06
Commitment to Total NO_X Reductions.		2.43	3.24	4.26	8.56	8.82	8.97
$PM_{2.5}$ Emissions Reductions							
S–AGR–1	4103—Open Burning	1.60	2.57	3.53	3.52	3.50	3.49
S–COM–1	4320—Advanced Emissions Reductions for Boilers, Steam Generators and Process Heaters (> 5 MMBtu/hr).	0	0	0	0.23	0.24	0.24
S–COM–14	4901—Wood Burning Fireplaces and Wood Burning Heaters.	0	0.39	0.76	0.73	0.71	0.69
S–IND–9	4692—Commercial Charbroiling	0	0	2.17	2.21	2.25	2.28
Commitment to Total $PM_{2.5}$ Reductions.		1.60	2.96	4.46 [1]	6.69	6.70	6.70
SO_2 Emissions Reductions							
S–AGR–1	4103—Open Burning	0.06	0.10	0.14	0.14	0.14	0.14
S–COM–1	4320—Advanced Emissions Reductions for Boilers, Steam Generators and Process Heaters (> 5 MMBtu/hr).	0	0	0	0.76	0.76	0.76
S–COM–14	4901—Wood Burning Fireplaces and Wood Burning Heaters.	0	0.01	0.02	0.02	0.02	0.02
M–TRAN–1	9410—Employer Based Trip Reduction Programs	TBD	TBD	TBD	TBD	TBD	TBD
Commitment to Total SO_2 Reductions.		0.06	0.11	0.16	0.92	0.92	0.92

[1] This column sums to 6.46 tpd. Because the 4.46 tpd figure is given in Table 6–3b in the 2008 $PM_{2.5}$ Plan and used in the attainment demonstration in Table 9–1 in the Plan, we are assuming that it reflects the District's intended emissions reductions commitment.

TABLE 4—SIP SUBMITTAL AND APPROVAL STATUS OF SJVAPCD RULES IN THE 2008 $PM_{2.5}$ PLAN

Rule 4103—Open Burning (Phase IV)	Not submitted	Most current revision of rule approved: May 17, 2007 at 74 FR 57907 (November 10, 2009)
4320—Advanced Emissions Reductions for Boilers, Steam Generators and Process Heaters (> 5 MMBtu/hr).	Submitted	Submittal date: March 17, 2009 Submittal found complete: April 20, 2009 New rule
Rule 4307 Boilers, Steam Generators and Process Heaters (2 to 5 MMBtu/hr).	Approved	75 FR 1715 (January 13, 2010)
Rule 4308 Boilers, Steam Generators and Process Heaters (0.075 to < 2 MMBtu/hr).	Submitted	Submittal date: May 17, 2010 Submittal found complete: June 8, 2010 Most current revision of rule approved: October 20, 2005 at 72 FR 29887 (May 30, 2007)
Rule 4703 Stationary Gas Turbines	Approved	74 FR 53888 (October 21, 2009)
Rule 4702 Reciprocating Internal Combustion Engines (2010 revisions).	Under development, expected adoption December 2010.	Most current revision of rule approved: January 18, 2007 73 FR 1819 (January 10, 2008)
Rule 4354 Glass Melting Furnaces (2008 revisions)	Not Submitted	Most current revision of rule approved: August 17, 2006 at 72 FR 41894 (August 1, 2007)
Rule 4902 Residential Water Heaters	Approved	75 FR 24408 (May 5, 2010)
4905—Natural Gas-Fired, Fan Type Residential Central Furnaces.	Adoption scheduled for 2014.	Most current version of the rule approved: October 20, 2005 at 72 FR 29886 (May 30, 2007)
Rule 4901 Wood Burning Fireplaces and Wood Burning Heaters.	Approved	74 FR 57907 (November 10, 2009)
Rule 4692 Commercial Charbroiling	Submitted	Submittal date: May 17, 2010 Submittal found complete: June 8, 2010 Most current revision of rule approved: March 21, 2002 at 68 FR 33005 (June 3, 2003)
Rule 4311 Flares	Submitted	Submittal date: January 10, 2010 Submittal found complete: February 4, 2010 Most current revision of rule approved: June 20, 2002 at 68 FR 8835 (February 26, 2003)
Rule 9410 Employer Based Trip Reduction Program	Submitted	Submittal date: May 17, 2010 Submittal found complete: June 8, 2010 New rule.

b. CARB's RACM Analysis and Adopted Control Strategy

Source categories for which CARB has primary responsibility for reducing emissions in California include most new and existing on- and off-road engines and vehicles, motor vehicle fuels, and consumer products. In addition, California has unique authority under CAA section 209 (subject to a waiver by EPA) to adopt and implement new emission standards for many categories of on-road vehicles and engines and new and in-use off-road vehicles and engines.

Given the need for significant emissions reductions from mobile and area sources to meet the NAAQS in California nonattainment areas, the State of California has been a leader in the development of some of the most stringent control measures nationwide for on-road and off-road mobile sources and the fuels that power them. These standards have reduced new car emissions by 99 percent and new truck emissions by 90 percent from uncontrolled levels. 2007 State Strategy, p. 37. The State is also working with EPA on goods movement activities and is implementing programs to reduce emissions from ship auxiliary engines, locomotives, harbor craft and new cargo handling equipment. In addition, the State has standards for lawn and garden equipment, recreational vehicles and boats, and other off-road sources that require newly manufactured equipment to be 80–98 percent cleaner than their uncontrolled counterparts. Id. Finally, the State has adopted many measures that focus on achieving reductions from in-use mobile sources that include more stringent inspection and maintenance requirements in California's Smog Check program, truck and bus idling restrictions, and various incentive programs. Since 1994 alone, the State has taken more than 45 rulemaking actions and achieved most of the emissions reductions needed for attainment in the State's nonattainment areas. See 2007 State Strategy, pp. 36–40. As is noted in the 2007 State Strategy, EPA has approved California's mobile source program as representing best available control measures. *See* 2007 State Strategy, Appendix G, 69 FR 5412 (February 4, 2004) and 69 FR 30006 (May 26, 2004) (proposed and final approval of SJV 2003 PM_{10} Plan).

CARB developed its proposed 2007 State Strategy after an extensive public consultation process to identify potential SIP measures. This process is described in the 2008 $PM_{2.5}$ Plan at 7–11.[13] From this process, CARB identified and committed to propose 15 new defined measures. These measures focus on cleaning up the in-use fleet as well as increasing the stringency of emissions standards for a number of engine categories, fuels, and consumer products. Many, if not most, of these measures are being proposed for adoption for the first time anywhere in the nation. They build on CARB's already comprehensive program described above that addresses emissions from all types of mobile sources and consumer products, through both regulations and incentive programs. *See* Appendix A of the TSD. Table 5 below lists the new defined measures in the 2007 State Strategy, which also include one measure each from the California Bureau of Automotive Repair and the California Department of Pesticide Regulation. As shown in this table, the State has adopted many of the measures.

[13] More information on this public process including presentations from the workshops and symposium that proceeded adoption of the 2007 State Strategy can be found at *http://www.arb.ca.gov/planning/sip/2007sip/2007sip.htm.*

TABLE 5—2007 STATE STRATEGY DEFINED MEASURES SCHEDULED FOR CONSIDERATION AND CURRENT STATUS

Defined state measure	Primary area (SC and/or SJV)	Adoption year	Current status
Smog Check Improvements	Both	2007–2008	Elements approved 75 FR 38023 (July 1, 2010).
Expanded Vehicle Retirement	Both	2008–2014	Adopted CARB June 2009; Bureau of Automotive Repair September 2010.
Revisions to Reformulated Gasoline Program.	Both	2007	Approved, *see* 75 FR 26653 (May 2, 2010).
Cleaner In-use Heavy Duty Trucks	Both	2008	Adopted 2008, pending revisions.
Auxiliary Ship Cold Ironing and Other Clean Technologies.	SC	2007–2008	Adopted December 2007.
Cleaner Main Ship Engines and Fuels.	SC	Fuel: 2007 Engines: 2009	Adopted July 2007.
Port Truck Modernization	SC	2007–2008	Adopted December 2007 and December 2008.
Accelerated Introduction of Cleaner Locomotives.	Both	2007–2008	In progress.
Clean Up Existing Harbor Crafts	SC	2007	Adopted November 2007, revised June 2010.
Cleaner In-Use Off-Road Engines	Both	2007	Adopted 2007, pending revisions.
Cleaner In-Use Agricultural Equipment.	SJV	2009	On-going through incentive grant programs.
New Emissions Standards for Recreational Boats.	Both	2009–2010	Partial adoption, 2008; additional regulation in public review.
Expanded Off-Road Recreational Vehicle Emissions Standards.	Both	By 2010	Adopted November 2008.
Enhanced Vapor Recovery for Above Ground Storage Tanks.	Both	2007	Adopted June 2007.
Additional Evaporative Emissions Standards.	Both	By 2010	Partial adoption, 2008.
Consumer Products Program (I & II).	Both	2008 & 2010–2012.	Phase I—Approved 74 FR 57074 (November 4, 2009).
Department of Pesticide Regulation.	SJV	2008	Adopted 2008, amended 2009.

SC = South Coast Air Basin. Source: 2009 State Strategy Status Report, p. 23 (footnotes in original not included)

Appendix A of the TSD includes a list of all measures adopted by CARB between 1990 and the beginning of 2007. These measures, reductions from which are reflected in the Plan's baseline inventories, fall into two categories: Measures that are subject to a waiver of Federal pre-emption under CAA section 209 (section 209 waiver measures or waiver measures) and those for which the State is not required to obtain a waiver (non-waiver measures). Emissions reductions from waiver measures are fully creditable in attainment and RFP demonstrations and may be used to meet other CAA requirements, such as contingency measures. *See* EPA's proposed approval of the SJV 1–Hour Ozone Plan at 74 FR 33933, 33938 (July 14, 2009) and final approval at 75 FR 10420 (March 8, 2010). The State's baseline non-waiver measures have generally all been approved by EPA into the SIP and as such are fully creditable for meeting CAA requirements.

In addition to the State's commitments to propose defined measures, the 2007 State Strategy includes enforceable commitments for direct $PM_{2.5}$, NO_X, and VOC emissions reductions from mobile source categories that are crucial for attainment of the $PM_{2.5}$ NAAQS in the San Joaquin Valley. For the SJV, the 2007 State Strategy includes State commitments to achieve 5 tpd of direct $PM_{2.5}$, 76 tpd of NO_X, and 23 tpd of VOC reductions. See 2007 State Strategy, p. 63 and CARB Resolution 07–28, Attachment B, p. 6. The 2007 State Strategy indicates that the State expects to achieve these emissions reductions in the San Joaquin Valley by the projected attainment year of 2014 from the measures listed in Table 5 or other similar measures. In the 2007 State Strategy, CARB provides an estimated emissions reduction for each measure to show that, when considered together, these measures can meet the total commitment. CARB states, however, that its enforceable commitment is to achieve the aggregate emissions reductions for each pollutant by the given dates and not for a specific level of reductions from any specific measure. *See* 2007 State Strategy, p. 58. A summary of the estimates from the proposed measures is provided in Table 6 below.

As mentioned above, CARB's commitment is also to propose specific new measures that are identified and defined in the 2007 Strategy State. *See* 2007 State Strategy, pp. 64–65 and 2009 State Strategy revisions, pp. 22–23.

TABLE 6—EXPECTED EMISSIONS REDUCTIONS FROM DEFINED MEASURES IN THE 2007 STATE STRATEGY FOR THE SAN JOAQUIN VALLEY 2014 TONS PER DAY

Measure	$PM_{2.5}$	NO_X	VOC
Smog Check Improvements (BAR)	0.05	3.3	2.9
Expanded Vehicle Retirement	0.01	0.5	0.7
Modifications to Reformulated Gasoline Program	—	—	2.9
Cleaner In-Use Heavy-Duty Trucks	3.6	61.4	6.4

TABLE 6—EXPECTED EMISSIONS REDUCTIONS FROM DEFINED MEASURES IN THE 2007 STATE STRATEGY FOR THE SAN JOAQUIN VALLEY 2014 TONS PER DAY—Continued

Measure	$PM_{2.5}$	NO_X	VOC
Accelerated Intro. Of Cleaner Line-Haul Locomotives	0.2	7.2	0.5
Cleaner In-Use Off-Road Equipment (>25hp)	0.8	3.7	0.9
Cleaner In-Use Agricultural Equipment	NYQ	NYQ	NYQ
New Emission Standards for Recreational Boats	—	0.1	1.3
Expanded Off-Road Recreational Vehicle Emissions Standards	—	—	2.2
Consumer Products Program	—	—	3.2
Pesticides	—	—	2.5
Totals:	5	76	23

Source: 2009 State Strategy Status Report, p. 6. Only defined measures with reductions in the SJV are shown here.
NYQ = Not yet quantified.

c. The Local Jurisdictions' RACM Analysis

The local jurisdictions' RACM analysis was conducted by the SJV's eight MPOs.[14] This analysis focused on potential NO_X emissions reductions from transportation control measures (TCM). TCMs are, in general, measures designed to reduce emissions from on-road motor vehicles through reductions in vehicle miles traveled or traffic congestion. The analysis' results are described in Chapter 7 (pp. 7–8 to 7–11) of the 2008 $PM_{2.5}$ Plan. It addressed NO_X but not direct $PM_{2.5}$, SO_2, or VOC.

For the 2008 $PM_{2.5}$ Plan, the SJV MPOs reviewed and updated the RACM analysis they performed for the SJV 2007 [8-hour] Ozone Plan, based on EPA's guidance in the preamble to the $PM_{2.5}$ implementation rule. For the 2007 Ozone Plan, they developed a local RACM strategy after an extensive evaluation of potential RACM for advancing the 8-hour ozone standard attainment date. After reviewing the 2007 Ozone Plan's local RACM analysis, EPA's suggested RACM, recently-developed plans from other areas, and the potential emission reductions available from the implementation of TCMs in the SJV, the MPOs determined that there were no additional local RACM for NO_X, beyond those measures already adopted, that could advance attainment of the $PM_{2.5}$ NAAQS in the SJV. 2008 $PM_{2.5}$ Plan, p. 7–11.

3. Proposed Actions on RACM/RACT Demonstration and Adopted Control Strategy

Under the $PM_{2.5}$ implementation rule, RACM/RACT are the set of measures necessary for expeditious attainment. The measures must address emissions of $PM_{2.5}$ and all $PM_{2.5}$ attainment plan precursors that are necessary for such expeditious attainment. Thus, in order for a $PM_{2.5}$ plan to demonstrate that it provides for RACM/RACT, it must also demonstrate that it provides for expeditious attainment. 72 FR 20586 at 20612–20623. As discussed in section IV.D.2. below, we are proposing to disapprove the air quality modeling in the 2008 $PM_{2.5}$ plan because there is insufficient documentation for us to determine its adequacy. Air quality modeling establishes the level of emissions reductions needed for attainment in an area. Thus, uncertainties about the adequacy of the air quality modeling result in uncertainties regarding the emissions reductions needed for attainment. Without a reliable estimate of the emission reductions needed for attainment, we are unable to determine if the measures in the 2008 $PM_{2.5}$ Plan include all RACM/RACT that will provide for attainment of the $PM_{2.5}$ NAAQS in the San Joaquin Valley as expeditiously as practicable.

In addition, as described in section IV.D.3. below, EPA is proposing to determine that VOC is a $PM_{2.5}$ attainment plan precursor in the SJV nonattainment area. Under the $PM_{2.5}$ implementation rule, States must address all $PM_{2.5}$ attainment plan precursors in their RACM/RACT analyses. *See* 40 CFR 51.1002(c)(3). Neither the District nor the local jurisdictions (through the MPOs) evaluated potential RACM/RACT for VOC emission sources.

For these reasons, EPA is proposing to find that the 2008 $PM_{2.5}$ Plan, together with the revised 2007 State Strategy, does not provide for the implementation of RACM/RACT as required by CAA section 172(c)(1) and 40 CFR 51.1010 and to disapprove the SJV $PM_{2.5}$ SIP's RACM/RACT demonstration. It appears, however, that the State, District, and local jurisdictions have identified and otherwise provided for the implementation of a comprehensive set of measures that are among the most stringent in the nation and, should the District and State correct the deficiencies in the attainment demonstration and appropriately address VOC as an attainment plan precursor in its RACM/RACT demonstration, we may be able to approve the SIP's RACM/RACT demonstration.

Because they will strengthen the California SIP, we are proposing to approve the SJVAPCD's commitments to adopt and implement specific control measures on the schedule identified in Table 6–2 (as amended June 15, 2010) in the 2008 $PM_{2.5}$ Plan, to the extent that these commitments have not yet been fulfilled, and to achieve specific aggregate emissions reductions of direct $PM_{2.5}$, NO_X and SO_x by specific years as given in Table 6–3 of the 2008 $PM_{2.5}$ Plan.

We are also proposing to approve, as a SIP strengthening measure, CARB's commitments to propose certain defined measures, as given on page 23 of the 2009 State Strategy Status Report, and to achieve aggregate emissions reductions of 5 tpd direct $PM_{2.5}$, 76 tpd NO_x, and 23 tpd VOC in the San Joaquin Valley by 2014 as given on page 21 of the 2009 State Strategy Status Report.

D. Attainment Demonstration

1. Requirements for Attainment Demonstrations

CAA section 172 requires a State to submit a plan for each of its nonattainment areas that demonstrates attainment of the applicable ambient air quality standard as expeditiously as practicable but no later than the specified attainment date. Under the $PM_{2.5}$ implementation rule, this demonstration should consist of four parts:

(1) Technical analyses that locate, identify, and quantify sources of

[14] These eight MPOs represent the eight counties in the San Joaquin Valley nonattainment area: The San Joaquin Council of Governments, the Stanislaus Council of Governments, the Merced County Association of Governments, the Madera County Transportation Commission, the Council of Fresno County Governments, Kings County Association of Governments, the Tulare County Association of Governments and the Kern Council of Governments.

emissions that are contributing to violations of the $PM_{2.5}$ NAAQS;

(2) Analyses of future year emissions reductions and air quality improvement resulting from already-adopted national, state, and local programs and from potential new state and local measures to meet the RACM/RACT and RFP requirements in the area;

(3) Adopted emissions reduction measures with schedules for implementation; and

(4) Contingency measures required under section 172(c)(9) of the CAA.

See 40 CFR 51.1007; 72 FR 20586 at 20605.

The requirements for the first two parts are described in the sections on emissions inventories and RACM/RACT above (sections IV.B. and IV.C.) and in the sections on air quality modeling, $PM_{2.5}$ precursors, extension of the attainment date, and attainment demonstration that follow immediately below. Requirements for the third and fourth parts are described in the sections on the control strategy and contingency measures (sections IV.C. and IV.F.), respectively.

2. Air Quality Modeling in the SJV 2008 $PM_{2.5}$ Plan

The $PM_{2.5}$ implementation rule requires states to submit an attainment demonstration based on modeling results. Specifically, 40 CFR 51.1007(a) states:

> For any area designated as nonattainment for the $PM_{2.5}$ NAAQS, the State must submit an attainment demonstration showing that the area will attain the annual and 24-hour standards as expeditiously as practicable. The demonstration must meet the requirements of § 51.112 and Appendix W of this part and must include inventory data, modeling results, and emission reduction analyses on which the State has based its projected attainment date. The attainment date justified by the demonstration must be consistent with the requirements of § 51.1004(a). The modeled strategies must be consistent with requirements in § 51.1009 for RFP and in § 51.1010 for RACT and RACM. The attainment demonstration and supporting air quality modeling should be consistent with EPA's $PM_{2.5}$ modeling guidance.[15]

See also, 72 FR 20586 at 20665.

Air quality modeling is used to establish emissions attainment targets, the combination of emissions of $PM_{2.5}$ and $PM_{2.5}$ precursors that the area can accommodate without exceeding the NAAQS, and to assess whether the proposed control strategy will result in attainment of the NAAQS. Air quality modeling is performed for a base year and compared to air quality monitoring data in order to determine model performance. Once the performance is determined to be acceptable, future year changes to the emissions inventory are simulated to determine the relationship between emissions reductions and changes in ambient air quality throughout the air basin.

The procedures for modeling $PM_{2.5}$ as part of an attainment SIP are contained in EPA's "Guidance on the Use of Models and Other Analyses for Demonstrating Attainment of Air Quality Goals for the 8-Hour Ozone and $PM_{2.5}$ NAAQS and Regional Haze." A brief description of the modeling in 2008 $PM_{2.5}$ Plan and our concerns regarding it follows. More detailed information about the modeling is available in section II.D. of the TSD.

CARB and the District jointly performed the air quality modeling for the 2008 $PM_{2.5}$ Plan. Significant time, money, and effort by CARB, the District, and many others have gone into preparing the air quality modeling to support the attainment demonstration in the 2008 $PM_{2.5}$ Plan for the San Joaquin Valley, including support for the multi-million dollar California Regional Particulate Air Quality Study (CRPAQS). CRPAQS is a cooperative effort involving California cities; State and local and air pollution control agencies, federal agencies, industry groups, academics, and contractors. Field data for CRPAQS were collected during the 14 months from December 1999 through February 2001 and included short-term, intensive monitoring during the fall and winter. The study's design placed emphasis on collecting sufficient continuous air quality and meteorological data, both at the surface and aloft, to support receptor and photochemical modeling. Data and modeling results based on the CRPAQS study provided solid underpinnings for the 2008 $PM_{2.5}$ Plan.

The 2008 $PM_{2.5}$ Plan uses multiple modeling analyses to demonstrate attainment of the $PM_{2.5}$ NAAQS in the SJV. It mainly relies on several variants of an approach based on receptor modeling for the annual $PM_{2.5}$ NAAQS. This approach begins with Chemical Mass Balance (CMB) modeling, which distinguishes the ambient $PM_{2.5}$ contributions of several broad emissions source categories based on how they match the chemical species components of $PM_{2.5}$ measurements. The CMB results are then refined with emissions inventory data to distinguish additional source categories; an area of influence analysis to better reflect particular sources affecting a monitor; and information from past photochemical modeling to assess how secondarily-formed $PM_{2.5}$ will respond to changes in precursor emissions. Several variants of this approach were used with CMB results from different locations and different base case years. This modeling only addresses the annual $PM_{2.5}$ standard.

The receptor modeling approaches are supplemented with an attainment demonstration using photochemical modeling with the Community Multiscale Air Quality (CMAQ) model. This modeling incorporates data collected during CRPAQS. The CMAQ modeling addresses both the annual and 24-hour $PM_{2.5}$ standards.

EPA recommends that States prepare modeling/analysis protocols as part of their modeled attainment demonstrations. Guidance, p. 133. The Guidance at pp. 133–134 describes the topics to be addressed in this modeling protocol. A modeling protocol should detail and formalize the procedures for conducting all phases of the modeling analysis, such as describing the background and objectives, creating a schedule and organizational structure, developing the input data, conducting model performance evaluations, interpreting modeling results, describing procedures for using the model to demonstrate whether proposed strategies are sufficient to attain the NAAQS, and producing documentation to be submitted for EPA Regional Office review and approval prior to actual modeling.

The 2008 $PM_{2.5}$ Plan's modeling protocol is contained in Appendix F and includes descriptions of both the receptor modeling approaches and the photochemical modeling. Additional description of the photochemical modeling is also covered in Appendix G, and also in the additional appendix entitled "Regional Model Performance Analysis" (RMPA). The protocol covers all of the topics recommended in the Guidance, except that it does not identify how modeling and other analyses will be archived or made available to the public. See Guidance, p. 117.

The 2008 $PM_{2.5}$ Plan's air quality model performance is discussed in the RMPA, starting at p. 6. Overall, modeling performance is not sufficiently documented for EPA to fully evaluate it. While substantial effort went into preparing the materials for model evaluation, the 2008 $PM_{2.5}$ Plan has relatively little discussion of the evaluation results and no discussion of sensitivity or diagnostic testing, both of

[15] EPA's modeling guidance can be found in "Guideline on Air Quality Models" in 40 CFR part 51, Appendix W and "Guidance on the Use of Models and Other Analyses for Demonstrating Attainment of Air Quality Goals for the 8-Hour Ozone and $PM_{2.5}$ NAAQS and Regional Haze", EPA–454/B–07–002, April 2007.

which are necessary for confidence in the model and the performance statistics presented. Without such testing, it cannot be determined if the model is adequately simulating the physical and chemical processes leading to $PM_{2.5}$ in the atmosphere and if the model will respond in a scientifically reasonable way to emissions changes. Also insufficiently documented are the Plan's deviations from EPA's guidance on performing the Speciated Modeled Attainment Test (SMAT). Although, the Plan cites several factors as justifying such deviations (*e.g.,* the prevalence of ammonia, the dominance of ammonium nitrate, the effect of substantial controls on fugitive dust and direct carbon emissions (p. G–10 and p. 3–20)), it does not provide sufficiently detailed explanations for EPA to understand exactly what these deviations are or to judge whether these deviations are acceptable. Another example of insufficient documentation is that the Relative Reduction Factors, which are the key results from the model for use in the attainment test, and details of their calculation, are not presented in the 2008 $PM_{2.5}$ Plan. Given this lack of documentation, EPA cannot determine at this time whether the attainment tests are adequate and meet EPA guidance.

In addition to a modeled attainment demonstration, which focuses on locations with an air quality monitor, EPA's Guidance requires an unmonitored area analysis. This analysis is intended to ensure that a control strategy leads to reductions in $PM_{2.5}$ at other locations that have no monitor but that might have baseline (and future) ambient $PM_{2.5}$ levels exceeding the NAAQS. The unmonitored area analysis uses a combination of model output and ambient data to identify areas that might exceed the NAAQS if monitors were located there. The analysis should include, at a minimum, all counties designated nonattainment and the counties surrounding the nonattainment area. In order to examine unmonitored areas in all portions of the modeling domain, EPA recommends use of interpolated spatial fields of ambient data combined with gridded modeled outputs. Guidance, p. 29.

In lieu of an unmonitored area analysis, the 2008 $PM_{2.5}$ Plan section entitled "Unmonitored peaks" presents a simple screening analysis. This consists of a filled concentration contour plot (Figure 3 on p. G–20), and the observation that "there are no areas with steep gradients that would result in higher design values than those measured at monitors." 2008 $PM_{2.5}$ Plan, p. G–15. This analysis departs significantly from the procedures recommended in the Guidance and does not adequately substitute for an unmonitored area analysis consistent with the procedures recommended in the Guidance. Without an unmonitored area analysis, EPA cannot determine whether emission reductions in the Plan are sufficient for attainment of the NAAQS at locations without an air quality monitor.

In summary, the 2008 $PM_{2.5}$ Plan lacks or fails to adequately document several significant elements of a modeling demonstration including: a provision for access to the underlying modeling data, the sensitivity and diagnostic testing of the air quality model, a discussion of the relative reduction factors, and an unmonitored area analysis. While the modeling appears to be essentially sound, the documentation provided in the 2008 $PM_{2.5}$ Plan is not sufficient for EPA to fully evaluate its adequacy. An attainment demonstration must demonstrate, i.e. document with evidence and analyses, that the controls will result in attainment. Without sufficient documentation, the Plan states but does not adequately demonstrate that it provides for attainment of the $PM_{2.5}$ standards in the SJV. Although it is not necessary to provide comprehensive documentation on every single facet of a modeling analysis, the level of documentation in the Plan falls significantly short of what is necessary for a reliable attainment demonstration, as described in the EPA's modeling guidance. Given the lack of documentation and the absence of an unmonitored area analysis, EPA cannot at this time propose to approve the Plan's air quality modeling. We also cannot determine at this time that the modeling provides an adequate basis for the RACM/RACT, RFP, and attainment demonstrations in the Plan.

3. $PM_{2.5}$ Attainment Plan Precursors

EPA recognizes NO_X, SO_2, VOCs, and ammonia as the main precursor gases associated with the formation of secondary $PM_{2.5}$ in the ambient air. These gas-phase $PM_{2.5}$ precursors undergo chemical reactions in the atmosphere to form secondary particulate matter. Formation of secondary $PM_{2.5}$ depends on numerous factors including the concentrations of precursors; the concentrations of other gaseous reactive species; atmospheric conditions including solar radiation, temperature, and relative humidity; and the interactions of precursors with preexisting particles and with cloud or fog droplets. 72 FR 20586 at 20589.

As discussed previously, a state must submit emissions inventories for each of the four $PM_{2.5}$ precursor pollutants. 72 FR 20586 at 20589 and 40 CFR 51.1008(a)(1). However, the overall contribution of different precursors to $PM_{2.5}$ formation and the effectiveness of alternative potential control measures will vary by area. Thus, the precursors that a state should regulate to attain the $PM_{2.5}$ NAAQS could also vary to some extent from area to area. 72 FR 20586 at 20589.

In the $PM_{2.5}$ implementation rule, EPA did not make a finding that all potential $PM_{2.5}$ precursors must be controlled in each specific nonattainment area. *See* 72 FR 20586 at 20589. Instead, for reasons explained in the rule's preamble, a state must evaluate control measures for sources of SO_2 in addition to sources of direct $PM_{2.5}$ in all nonattainment areas. 40 CFR 51.1002(c) and (c)(1). A state must also evaluate control measures for sources of NO_X unless the state and/or EPA determine that control of NO_X emissions would not significantly reduce $PM_{2.5}$ concentrations in the specific nonattainment area. 40 CFR 51.1002(c)(2). In contrast, EPA has determined in the $PM_{2.5}$ implementation rule that a state does not need to address controls for sources of VOC and ammonia unless the state and/or EPA make a technical demonstration that such controls would significantly contribute to reducing $PM_{2.5}$ concentrations in the nonattainment area. 40 CFR 51.1002(c)(3) and (4). Such a demonstration is required "if the administrative record related to development of its SIP shows that the presumption is not technically justified for that area." 40 CFR 51.1002(c)(5).

"Significantly contributes" in this context means that a significant reduction in emissions of the precursor from sources in the area would be projected to provide a significant reduction in $PM_{2.5}$ concentrations in the area. 72 FR 20586 at 20590. Although EPA did not establish a quantitative test for determining what constitutes a significant change, EPA noted that even relatively small reductions in $PM_{2.5}$ levels are estimated to result in worthwhile public health benefits. Id.

EPA further explained that a technical demonstration to reverse the presumption for NO_X, VOC, or ammonia in any area could consider the emissions inventory, speciation data, modeling information, or other special studies such as monitoring of additional compounds, receptor modeling, or special monitoring studies. 72 FR 20586 at 20596–20597. These factors could indicate that the emissions or ambient

concentration contributions of a precursor, or the sensitivity of ambient concentrations to changes in precursor emissions, differs for a specific nonattainment area from the presumption for that precursor in the $PM_{2.5}$ implementation rule.

The SJV 2008 $PM_{2.5}$ Plan does not explicitly identify the pollutants that have been selected as $PM_{2.5}$ attainment plan precursors as defined in 40 CFR 51.1000. The Plan addresses only NO_X and SO_2 in the RFP and attainment demonstrations and in the District's RACM/RACT analysis, and thereby implicitly identifies NO_X and SO_2, but not VOC or ammonia, as attainment plan precursors. It does include supporting documentation for the inclusion of NO_X as an attainment plan precursor and for the exclusion of ammonia. However, as discussed below, it does not fully evaluate the impact of controlling VOC as a precursor for $PM_{2.5}$ attainment, even though other information in the Plan indicates that controlling VOC, in addition to SO_2 and NO_X, may contribute significantly to reductions in ambient $PM_{2.5}$ levels in the SJV.

As mentioned above, ambient contribution and ambient sensitivity to emissions changes may both be considered in determining whether the presumption for an attainment plan precursor should be reversed. The 2008 $PM_{2.5}$ Plan contains numerous qualitative statements that San Joaquin Valley's ambient $PM_{2.5}$ levels are dominated by ammonium nitrate, and that NO_X reductions are more effective at reducing ambient $PM_{2.5}$ than reductions in the other precursors. Most of those statements are in Chapter 3 and Appendix F, and are based on excerpts of findings from CRPAQS. Several of the cited CRPAQS documents are available at CARB's "Central California Air Quality Studies" Web site (at *http://www.arb.ca.gov/airways*).

For the 1997 annual and 24-hour $PM_{2.5}$ NAAQS, the 2008 $PM_{2.5}$ Plan contains some qualitative descriptions of precursor ambient contributions. For example, the 2008 $PM_{2.5}$ Plan states on p. 2–8 that annual concentrations are driven by wintertime concentrations and further, that the highest short term concentrations are driven by ammonium nitrate, as found in the CRPAQS study:

For most of the sites within the SJV, 50–75% of the annual average $PM_{2.5}$ concentration could be attributed to a high $PM_{2.5}$ period occurring from November to January. At non-urban sites, the elevated $PM_{2.5}$ was driven by secondary [ammonium nitrate].[16]

There are also quantitative data in the Plan's Appendix G (p. G–21, Table 2) and, projected to 2014, in the Receptor Modeling Documentation (RMD). Ammonium nitrate for 2000 monitored data ranges from 24–36 percent of total $PM_{2.5}$, and if projected to 2014, ranges from 36–51 percent, confirming the importance of NO_X, one source of the nitrate in ammonium nitrate, as a precursor that significantly contributes to annual $PM_{2.5}$ levels in the SJV.

In addition to composition data, ambient sensitivity to emissions changes can also be a consideration in determining which pollutants should be regulated in the attainment plan for a specific area. For ammonium nitrate $PM_{2.5}$, which is formed from both ammonia and NO_X, a key issue is whether the control of either or both precursors would be effective at reducing ambient $PM_{2.5}$ concentrations. Among the findings cited in the 2008 $PM_{2.5}$ Plan that address this issue are that:

> Particulate [ammonium nitrate] concentrations are limited by the rate of [nitric acid] formation, rather than by the availability of [ammonia].

and

> Comparisons of ammonia and nitric acid concentrations show that ammonia is far more abundant than nitric acid, which indicates that ammonium nitrate formation is limited by the availability of nitric acid, rather than ammonia * * *. This study's analyses suggest that reductions in NO_X emissions will be more effective in reducing secondary ammonium nitrate aerosol concentrations than reductions in ammonia emissions. Reductions in VOC emissions will reduce secondary organic aerosol concentrations and may reduce ammonium nitrate. * * * The results indicate ammonium nitrate formation is ultimately controlled by NO_X emission rates and the other species, including VOCs and background ozone, which control the rate of NO_X oxidation in winter, rather than by ammonia emissions.[17]

These findings are based on the relative abundance of ammonia relative to nitrate: There is so much ammonia present that significantly reducing its emissions would still leave ample ammonia to form ammonium nitrate. On the other hand, NO_X is scarce (relative to ammonia), so reducing it could reduce ammonium nitrate significantly.

Finally, sensitivity results from photochemical modeling were used in conjunction with the CMB results mentioned above. The 2014 RMD section on "Review of control strategy effectiveness supported by CMAQ nitrate particulate evaluation" shows the projected effect of a 50 percent reduction of NO_X emissions on $PM_{2.5}$ concentrations annually and in shorter seasonal episodes. For the annual concentration, the NO_X reduction resulted in a predicted 5 $\mu g/m^3$ $PM_{2.5}$ reduction, while for the winter episode the NO_X reduction resulted in a predicted 28 $\mu g/m^3$ $PM_{2.5}$ reduction. 2014 RMD, p. 80. A 50 percent reduction in ammonia emissions, on the other hand, predicted $PM_{2.5}$ reductions of only 0.1 $\mu g/m^3$ on an annual basis and 0.3 $\mu g/m^3$ during the winter episode. RMD, p. 81. When compared to the annual and 24-hour NAAQS of 15 and 65 $\mu g/m^3$, respectively, the effect of NO_X reductions appears to be significant while the effect of ammonia reductions does not. Thus, the data and modeling results presented in the 2008 $PM_{2.5}$ Plan, as well as the results of the cited studies, support the identification of NO_X and the exclusion of ammonia as $PM_{2.5}$ attainment plan precursors, consistent with the EPA presumption in the $PM_{2.5}$ implementation rule.

EPA's presumption in the $PM_{2.5}$ implementation rule is that VOC need not be an attainment plan precursor. 40 CFR 51.1002(c)(3). As explained in the preamble to the rule, this presumption may not be technically justified for a particular nonattainment area, *i.e.,* this presumption may be incorrect where emissions of VOC significantly contribute to $PM_{2.5}$ concentrations in the nonattainment area. 72 FR 20586 at 20590–93, 20596–97. States or EPA may conduct a technical demonstration to reverse the presumptive exclusion of VOC as a $PM_{2.5}$ attainment plan precursor based on the weight of evidence of available technical and scientific information. *Id.*

The 2008 $PM_{2.5}$ Plan contains substantial information indicating that, for the SJV nonattainment area, VOC should be considered as a potential $PM_{2.5}$ attainment plan precursor. On an annual basis, Table 2 in Appendix G (p. G–21,) gives an organic carbon range of 38–49 percent of the total $PM_{2.5}$. This organic $PM_{2.5}$ can be further divided into vegetative burning (9–19 percent of total annual $PM_{2.5}$), direct VOC $PM_{2.5}$ emissions (also 9–19 percent of total annual $PM_{2.5}$), and secondary organic

[16] Quote from "Initial Data Analysis of Field Program Measurements," DRI Document No. 2497, July 29, 2005; Judith C. Chow, L.W. Antony Chen, Douglas H. Lowenthal, Prakash Doraiswamy, Kihong Park, Steven D. Kohl, Dana L. Trimble, John G. Watson, Desert Research Institute.

[17] Quote from Lurmann, F. *et. al.,* 2006, "Processes Influencing Secondary Aerosol Formation in the San Joaquin Valley During Winter," Journal of the Air & Waste Management Association, (56): 1679–1693, cited at 2008 $PM_{2.5}$ Plan p. 3–10.

aerosols (SOA) (2–5 percent of total annual $PM_{2.5}$). RMD at 19. This SOA contribution to overall $PM_{2.5}$ levels appears to be non-negligible.

The 2008 $PM_{2.5}$ Plan states: "Secondary organic aerosols (SOA) contribute to a significant fraction of $PM_{2.5}$. SOA is organic carbon particulate formed in the photochemical oxidation of anthropogenic and biogenic VOC precursor gases. Aromatic compounds are believed to be efficient SOA producers contributing to this secondary particulate." 2008 $PM_{2.5}$ Plan, p.3–8. On a 24-hour episodic basis, the contribution of SOA could be higher than the annual 2–5 percent, though it is likely lower for the winter episodes of most concern in the SJV, due to decreased photochemical activity when fog and clouds (typical for the SJV in the winter) partially block sunlight. The chemistry of SOA is less well understood than the chemistry of other chemical species, so overall these considerations are not enough to overcome the negative presumption for VOC.

But as noted in the preamble to the $PM_{2.5}$ implementation rule at pp. 20592—20593, the lightest organic molecules can participate in atmospheric chemistry processes that result in the formation of ozone and certain free radical compounds (such as the hydroxyl radical [OH]) and these in turn participate in oxidation reactions to form secondary organic aerosols, sulfates, and nitrates. That is, VOC may be a $PM_{2.5}$ precursor not just via formation of SOA, but also via its participation in the oxidant chemistry that leads to nitrate formation, a necessary step in the formation of ammonium nitrate $PM_{2.5}$. NO_X emissions must be oxidized to nitric acid before they form particulate ammonium nitrate. Two pathways for this to occur are 1) daytime oxidation by OH, which VOC radicals help create, and 2) nighttime oxidation by ozone.[18]

The discussion in the 2008 $PM_{2.5}$ Plan regarding ammonium nitrate (at p. 3–10, quoted above) also refers to VOC, which is identified as one of the controlling factors in NO_X oxidation (which as noted above is a key process in the formation of nitrate and ammonium nitrate $PM_{2.5}$): "Reductions in VOC emissions will reduce secondary organic aerosol concentrations and may reduce ammonium nitrate." The Plan also states: "Relatively low non-methane organic compounds/nitrogen oxide ratios indicate the daytime photochemistry is VOC, sunlight, and background-ozone limited in winter." *Id.* If nitrate formation is VOC-limited under some circumstances, then VOC emission reductions could lead to ambient $PM_{2.5}$ reductions.

Finally, the RMD at page 82 contains sensitivity analyses for VOC, similar to the ones described above for NO_X and ammonia. According to the sensitivity analysis, a 50 percent reduction in VOC emissions was predicted to reduce $PM_{2.5}$ levels by 1.3 $\mu g/m^3$ annually and 8.7 $\mu g/m^3$ for the winter episode. When compared to the 1997 annual $PM_{2.5}$ NAAQS of 15 $\mu g/m^3$ and 24-hour NAAQS of 65 $\mu g/m^3$, these projected reductions appear significant. The 2014 RMD concludes: "Finding: VOC reduction is effective for the annual standard and the winter episode for reduction of total carbon secondary particulates."

In response to comments submitted during the District's public comment period on the VOC issue, the Plan states that the "modeling has shown that VOC reductions are not as effective in reducing secondary $PM_{2.5}$ as NO_X or SO_2 reductions" and that "[a]ll of the technical evaluations for CRPAQS and prior assessments of regional particulate models have indicated that NO_X is the dominant factor and VOC and ammonia are not." 2008 $PM_{2.5}$ Plan, pp.J–9 and p.J–19. These statements about VOC may be true, but they state only the relative effectiveness of controlling VOC compared to other precursors, do not cite any supporting modeling or technical evaluations, and do not address the substantial information in the 2008 $PM_{2.5}$ Plan indicating that VOC may contribute significantly to ambient $PM_{2.5}$ levels in the SJV.

As explained above, although EPA's presumption in the $PM_{2.5}$ implementation rule is that VOC need not be a $PM_{2.5}$ attainment plan precursor, this presumption may not be technically justified for certain nonattainment areas. Indeed, technical information in the 2008 $PM_{2.5}$ Plan strongly suggests that VOC reductions can significantly reduce ambient $PM_{2.5}$ concentrations and contribute to expeditious attainment of the $PM_{2.5}$ NAAQS in the SJV.

Other statements in the 2008 $PM_{2.5}$ Plan clearly indicate the State did not intend to reverse the presumption for VOC. Nevertheless, the technical information we have identified is part of the administrative record related to development of the SIP provides evidence that the VOC presumption may not be technically justified in the SJV. It also indicates that the State should submit a demonstration to either support or reverse the presumption under the $PM_{2.5}$ implementation rule that VOC is not an attainment plan precursor. 40 CFR 51.1002(c)(5).

In the absence of a technical demonstration by the State, EPA reviewed the results of several modeling and monitoring studies of $PM_{2.5}$ in the San Joaquin Valley. Some of these documents are available on the "Central California Air Quality Studies" Web site (at *http://www.arb.ca.gov/airways*) and/or are cited in the Plan and are reports from contractors involved in CRPAQS. Others are papers from peer-reviewed journals and are analyses using CRPAQS data or data from the earlier 1995 Integrated Monitoring Study (IMS95 study). We found that four monitoring studies and six modeling studies were relevant to the VOC precursor issue.[19] Further information on these studies as well as excerpts from these studies are provided in the TSD.

[18] Lurmann, F. *et. al.,* 2006, op cit., p. 1688.

[19] These studies are:

Kleeman, M.K., Ying, Q., and Kaduwela, A., 2005, "Control strategies for the reduction of airborne particulate nitrate in California's San Joaquin Valley", Atmospheric Environment, 39: 5325–5341 September 2005.

Livingstone, P.L., *et. al.,* 2009, "Simulating PM Concentrations During a Winter Episode in a Subtropical Valley and Sensitivity Simulations and Evaluation methods", Atmospheric Environment, 43: 5971–5977.

Lurmann, F.W., Brown, S.G., McCarthy, M.C., and Roberts P.T., 2006, "Processes Influencing Secondary Aerosol Formation in the San Joaquin Valley During Winter", Journal of the Air & Waste Management Association, 56: 1679–1693.

McCarthy, M., 2005, "The Role of Nighttime Chemistry in Winter Ammonium Nitrate Formation in the San Joaquin Valley", presented at the American Association for Aerosol Research (AAAR), Supersites Conference, February 2005, Atlanta, GA.

Pun, B.K. and Seigneur, C., 1998, "Conceptual Model of Particulate Matter Pollution in the California San Joaquin Valley", prepared by Atmospheric and Environmental Research for Pacific Gas & Electric, Document Number CP045–1–98, 8 September 1998.

Pun, B.K. and Seigneur, C., 2001, "Sensitivity of Particulate Matter Nitrate Formation to Precursor Emissions in the California San Joaquin Valley", Environmental Science and Technology, 35: 2979–2987.

Pun, B., 2004, "CRPAQS Task 2.7 When and Where Does High O3 Correspond to High $PM_{2.5}$? How Much $PM_{2.5}$ Corresponds to Photochemical End Products?", prepared by Atmospheric and Environmental Research, Inc. for the San Joaquin Valleywide Air Pollution Study Agency.

Pun, B.K., Balmori R.T.F, and Seigneur, C., 2009, "Modeling Wintertime Particulate Matter Formation in Central California", Atmospheric Environment, 43: 402–409.

Stockwell, W.R., Watson, J.G., Robinson, N.F., Steiner, W., and Sylte, W.W., 2000, "The Ammonium Nitrate Particle Equivalent of NO_X Emissions for Continental Wintertime Conditions", Atmospheric Environment, 34: 4711–4717.

Ying, Q., Lu, J., and Kleeman, M., 2009, "Modeling air quality during the California Regional $PM_{10}/PM_{2.5}$ Air Quality Study (CPRAQS) using the UCD/CIT source-oriented air quality model—Part III. Regional source apportionment of secondary and total airborne particulate matter", Atmospheric Environment, 43: 419–430, January 2009.

The monitoring studies all contain evidence that the VOC pathway for nitrate creation is important at least some of the time but differ as to how important it is relative to other pathways such as the nighttime ozone pathway, and are not conclusive on the efficacy of VOC controls. Unlike the monitoring studies, most of the modeling studies explicitly assessed the relative effectiveness of precursor controls, simulating the effect of 50 percent reductions in NO_X, ammonia, and VOC. (One study does not explicitly address the issue, but states that background ozone is the most important oxidant, implying that VOC control would have little effect.) The two earliest modeling studies are based on photochemical box modeling and differ on whether VOC controls would significantly affect $PM_{2.5}$. Three later studies use more sophisticated photochemical grid models and find VOC control to be effective, though generally less so than NO_X control. One study predicts VOC control to be about two-thirds as effective as NO_X control. The second study predicted VOC control to be effective, though only by a relatively small amount, at most 10 percent for a 50 percent reduction in VOC emissions, or only on certain days. The third grid modeling study predicts VOC control to give slightly more benefit than NO_X control. While the models, input data, and results differ between these studies, they provide ample evidence that control of VOC can significantly reduce $PM_{2.5}$ concentrations in the SJV. EPA is, therefore, proposing to find that these studies constitute a technical demonstration that VOC is a $PM_{2.5}$ attainment plan precursor, necessitating the evaluation of controls for VOC for $PM_{2.5}$ attainment in the SJV.

EPA proposes to concur with the evaluation in the 2008 $PM_{2.5}$ Plan that, at this time, ammonia does not need to be considered an attainment plan precursor for purposes of attaining the 1997 $PM_{2.5}$ NAAQS in the SJV.[20] However, because the Plan and independent scientific studies contain substantial information indicating that VOC significantly contributes to $PM_{2.5}$ concentrations in the SJV, EPA is proposing to find that VOC is a $PM_{2.5}$ attainment plan precursor for the SJV $PM_{2.5}$ nonattainment area under 40 CFR 51.1002(c)(3) and thus must be evaluated for emissions reductions measures.[21]

4. Extension of the Attainment Date

CAA section 172(a)(2) provides that an area's attainment date "shall be the date by which attainment can be achieved as expeditiously as practicable, but no later than 5 years from the date such area was designated nonattainment * * *, except that the Administrator may extend the attainment date to the extent the Administrator determines appropriate, for a period no greater than 10 years from the date of designation as nonattainment considering the severity of nonattainment and the availability and feasibility of pollution control measures."

Because the effective date of designations for the 1997 $PM_{2.5}$ standards is April 5, 2005 (70 FR 944), the initial attainment date for $PM_{2.5}$ nonattainment areas is as expeditiously as practicable but not later than April 5, 2010. For any areas that are granted a full five-year attainment date extension under section 172, the attainment date would be not later than April 5, 2015.

Section 51.1004 of the $PM_{2.5}$ implementation rule addresses the attainment date requirement. Section 51.1004(b) requires a state to submit an attainment demonstration justifying its proposed attainment date and provides that EPA will approve an attainment date when we approve that demonstration. Thus, our approval of an extended attainment date is dependent upon a demonstration showing expeditious attainment and likewise, dependent upon proper evaluation of what constitutes RACM/RACT level controls in the area.

States that request an extension of the attainment date under CAA section 172(a)(2) must provide sufficient information to show that attainment by April 5, 2010 is impracticable due to the severity of the nonattainment problem in the area and the lack of available and feasible control measures to provide for faster attainment. 40 CFR 51.1004(b). States must also demonstrate that all RACM and RACT for the area are being implemented to bring about attainment of the standard by the most expeditious alternative date practicable for the area. 72 FR 20586 at 20601. Thus, the proper evaluation of RACM/RACT controls is an integral part of justifying an extension of the attainment date.

The 2008 $PM_{2.5}$ Plan includes a demonstration that the attainment date for the SJV should be April 5, 2015, *i.e.,* that the area qualifies for the full five-year extension of the attainment date allowable under section 172(a)(1). This demonstration is found in Chapter 9 of the 2008 $PM_{2.5}$ Plan and is derived from the air quality modeling in the Plan.

SJV's degree of $PM_{2.5}$ nonattainment can fairly be characterized as severe. The area typically records the highest ambient $PM_{2.5}$ levels in the nation, with 2007–2009 design values for the annual and 24-hour $PM_{2.5}$ levels in urban Bakersfield area of 22.6 $\mu g/m^3$ and 70 $\mu g/m^3$, respectively. *See* EPA, Air Quality System, Design Value Report, August 9, 2010. The $PM_{2.5}$ problem in the San Joaquin Valley is complex, caused by both direct and secondary $PM_{2.5}$ and compounded by the area's topographical and meteorological conditions that are particularly conducive to the formation and concentration of $PM_{2.5}$ particles. *See* 2008 $PM_{2.5}$ plan, Chapter 3.

As discussed in section IV.C.2.a. above, the District's strategy for attaining the $PM_{2.5}$ standard relies on reductions of direct $PM_{2.5}$ as well as the $PM_{2.5}$ precursor pollutants NO_X and SO_2. The SJV needs significant reductions in $PM_{2.5}$ and NO_X to demonstrate attainment. EPA believes that further reduction of these pollutants is challenging because the State and local air pollution regulations already in place include most of the

[20] EPA's proposed concurrence on excluding ammonia as an attainment plan precursor is limited to the attainment of the 1997 $PM_{2.5}$ NAAQS. EPA revised the 24-hour $PM_{2.5}$ standards in 2006 to lower them to 35 $\mu g/m^3$ and is currently reviewing both the annual and 24-hour standards to determine if they should be further revised to protect public health. *See* EPA, Policy Assessment for the Review of the Particulate Matter NAAQS, Second External Review Draft, June 2010. Evaluation of ammonia controls for the attainment of the 2006 standards and any future revised standards may show that such controls would significantly contribute to lower $PM_{2.5}$ levels in the Valley.

[21] In its approval of the SJV 2003 PM_{10} plan, EPA determined that for the purposes of section 189(b)(1)(B) and (e) and in the absence of final data from CRPAQS, VOC does not contribute significantly to PM_{10} levels which exceed the standards in the SJV. *See* 69 FR 30006, 30011 (May 26, 2004). In that determination, EPA relied on the criteria that VOC control was not shown to be absolutely necessary for PM_{10} attainment and that it had a lower effectiveness than NO_X control in reduction PM_{10}. In addition, EPA noted in its 2004 final rule the District's intention to re-examine the VOC issue when CRPAQS results were available. 69 FR 30010.

Since its 2004 finding, EPA promulgated the $PM_{2.5}$ implementation rule, which has an explicit criterion for determining which $PM_{2.5}$ precursors must be evaluated for controls, namely, that a significant change in emissions of the precursor would be projected to provide a significant change in $PM_{2.5}$ concentrations in the nonattainment area. *See* 72 FR 20586 at 20590 and 40 CFR 51.1000. This is a different criterion than the one relied on in the 2004 determination. Data and analyses from CRPAQS have also become available. These developments since 2004 support a finding different from our 2004 one.

We also note that the 2004 finding was made for the PM_{10} standards rather than the $PM_{2.5}$ standards. The levels of the 24-hour and annual $PM_{2.5}$ NAAQS (65 $\mu g/m^3$ and 15 $\mu g/m^3$) are much lower than those for the 24-hour and (revoked) annual PM_{10} standards (150 $\mu g/m^3$ and 50 $\mu g/m^3$). A given concentration change is therefore likely to be more significant for the $PM_{2.5}$ standards than for the PM_{10} standards.

readily available $PM_{2.5}$ and NO_X, control measures. Moreover, attainment in the SJV depends upon emissions reductions that offset the emissions increases associated with the projected increases in population and emissions levels for this high-growth area.

Reductions of direct $PM_{2.5}$ are achieved primarily from open burning, commercial charbroiling, and residential wood combustion control measures. These types of control measures present special implementation challenges (*e.g.,* the large number of individuals subject to regulation and the difficulty of applying conventional technological control solutions). NO_X reductions come largely from District rules for fuel combustion sources and from the State's mobile source rules.

Because of the necessity of obtaining additional emissions reductions from these source categories in the SJV and the need to conduct significant public outreach if applicable control approaches are to be effective, EPA agrees with the District and CARB that the 2008 $PM_{2.5}$ Plan reflects expeditious implementation of the available control programs during the 2008–2014 time frame. EPA also agrees that the implementation schedule for enhanced stationary source controls is expeditious, taking into account the time necessary for purchase and installation of the required control technologies. Finally, we believe that it is not feasible at this time to accelerate the emission reduction schedule for the State and Federal mobile source requirements which must rely on fleet turnover over the years to ultimately deliver the anticipated emission reductions. The District's control strategies are discussed in greater detail in Chapter 6 of the 2008 $PM_{2.5}$ Plan, and in section IV.C.2.a. above.

In addition, the State has adopted standards for many categories of on-road and off-road vehicles and engines, and gasoline and diesel fuels, and included commitments to develop rules for Smog Check Improvements, Cleaner In-Use Heavy-Duty Trucks, and Cleaner In-Use Off-Road Equipment.

EPA believes that the District and State are implementing these rules and programs as expeditiously as practicable. We anticipate, however, that the District and CARB will reevaluate this conclusion after completion of the mid-course review of the $PM_{2.5}$ attainment SIP for this area, due in April 2011. EPA also expects that the District and CARB will continue to investigate opportunities to accelerate progress toward attainment as new control opportunities arise, and that the agencies will promptly adopt and expeditiously implement any new measures found to be feasible in the future.

As discussed in section IV.D.2. above, we are proposing to disapprove the air quality modeling in the 2008 $PM_{2.5}$ plan because it is insufficiently documented for us to evaluate its adequacy. Without adequate air quality modeling, it is not possible to determine the reductions needed to attain the $PM_{2.5}$ NAAQS in the SJV and, in turn, to evaluate, as required by CAA section 172(a)(2), the availability and feasibility of controls needed to attain.

As discussed in section IV.C.3. above, we are also proposing to disapprove the RACM/RACT demonstration in the SJV 2008 $PM_{2.5}$ Plan in part because it does not consider RACM/RACT for VOC sources. As stated in the $PM_{2.5}$ implementation rule (72 FR 20586 at 20601), EPA cannot grant an extension of the attainment date beyond the initial five years provided by section 172(a)(2)(A) if the state has not adequately considered and evaluated the implementation of RACM and RACT in the area. By definition, RACM/RACT are those controls that are necessary to demonstrate attainment as expeditiously as practicable and to meet any RFP requirements. 40 CFR 51.1010(a). Without an adequate evaluation of potential RACM/RACT controls for VOC sources, EPA is unable to determine whether the State's requested attainment date is as expeditious as practicable in accordance with CAA 172(a)(2).

For these reasons, EPA is proposing to not grant California's request for an attainment date extension to April 5, 2015 for the San Joaquin Valley. Given the severity of the $PM_{2.5}$ nonattainment problem in the SJV, an extension of the attainment date would most likely be appropriate and approvable if it were supported by the necessary analysis and part of an attainment plan that meets the applicable statutory and regulatory requirements including RACM/RACT and an expeditious attainment demonstration.

5. Attainment Demonstration

Table 7 below summarizes the reductions that are relied upon in the 2008 $PM_{2.5}$ Plan to demonstrate attainment by April 5, 2015. The attainment target numbers in this table should be considered preliminary because they are derived from the Plan's air quality modeling analysis, which we are proposing to disapprove.

TABLE 7—SUMMARY OF REDUCTIONS NEEDED FOR SJV'S $PM_{2.5}$ ATTAINMENT DEMONSTRATION

(tons per average annual day)

	$PM_{2.5}$	NO_X	SO_2
A. 2005 emissions level	86.0	575.4	26.4
B. 2014 attainment target	63.3	291.2	24.6
C. Total reductions needed by 2014 (A–B)	22.7	284.2	1.8
D. Reductions from baseline (pre-2007) measures	11.0	199.2	0.9
Percent of total reductions from baseline measures	49.5%	70.8%	50%
E. Reductions needed from new measures (C–D)	11.7	85.0	0.9
Percent of total reductions needed from new measures	50.5%	29.2%	50%
New District reductions	6.7	9.0	0.9
Percent of total reductions needed from new District measures	28.5%	3.2%	50%
New State reductions	5.0	76.0	0.0
Percent of total reductions needed from new State measures	22.0%	26.7%	0%

Source: 2008 $PM_{2.5}$ Plan, pp. 8–2 and 9–3.

As shown in this table, the majority of reductions that the State projects are needed for $PM_{2.5}$ attainment in the SJV by 2015 come from baseline reductions, *i.e.,* from adopted measures that have generally been approved by EPA either through the SIP or the CAA section 209 waiver process. *See* Appendices A and B of the TSD. The remaining reductions needed for attainment are to be achieved through the District's and CARB's commitments to reduce emissions in the

SJV. Since the submittal of the 2008 $PM_{2.5}$ Plan and 2007 State Strategy, SJVAPCD has already adopted measures (summarized in Table 8 below) that can be credited toward reducing its aggregate emissions reduction in its enforceable commitments.

TABLE 8—SUMMARY OF ENFORCEABLE COMMITMENTS IN THE 2008 $PM_{2.5}$ PLAN AND SJV PORTION OF THE 2007 STATE STRATEGY

(Tons per average annual day)

	$PM_{2.5}$	NO_X	SO_X
Total reductions needed for attainment	22.7	284.2	1.8
Total State and District commitment	11.7	85.0	0.9
Less reductions from currently creditable measures	2.3	5.2	0.1
Total remaining commitments	9.4	79.8	0.8
Total remaining commitments as a percent of reductions needed for attainment	41%	28%	44%

a. Enforceable Commitments

As shown above, measures already adopted by the District and CARB (both prior to and as part of the 2008 $PM_{2.5}$ Plan) provide the majority of emissions reductions the State projects are needed to demonstrate attainment. The balance of the needed reductions is in the form of enforceable commitments by the District and CARB. This approach is consistent with past practice because the CAA allows approval of enforceable commitments that are limited in scope where circumstances exist that warrant the use of such commitments in place of adopted measures.[22] Once EPA determines that circumstances warrant consideration of an enforceable commitment, EPA considers three factors in determining whether to approve the CAA requirement that relies on the enforceable commitment: (a) Does the commitment address a limited portion of the CAA-requirement; (b) is the state capable of fulfilling its commitment; and (c) is the commitment for a reasonable and appropriate period of time.[23]

We believe that, with respect to the 2008 $PM_{2.5}$ Plan and revised 2007 State Strategy, circumstances warrant the consideration of enforceable commitments as part of the attainment demonstration for this area. As shown in Table 9 above, the majority of emissions reductions that the State currently estimates are needed to demonstrate attainment and RFP in the SJV come from rules and regulations that were adopted prior to 2007, *i.e.,* they come from the baseline measures.

As a result of these already adopted District and State measures, most sources in the San Joaquin Valley nonattainment area were already subject to stringent rules prior to the development of the 2007 State Strategy and the 2008 $PM_{2.5}$ Plan, leaving fewer and more technologically challenging opportunities to reduce emissions. In the 2008 $PM_{2.5}$ Plan and the 2007 State Strategy, the District and CARB identified potential control measures that could achieve the additional emissions reductions needed for attainment. However, the timeline needed to develop, adopt, and implement these measures went well beyond the April 5, 2008[24] deadline to submit the $PM_{2.5}$ attainment plan. As discussed above and below, since 2007, the District and State have made progress in adopting measures to meet their commitments, but have not completely fulfilled them. Given these circumstances, the 2008 $PM_{2.5}$ Plan's and 2007 State Strategy's reliance on enforceable commitments is warranted. We now consider the three factors EPA uses to determine whether the use of enforceable commitments in lieu of adopted measures to meet a CAA planning requirement is approvable.

i. The Commitment Must Represent a Limited Portion of Required Reductions

For the first factor, we look to see if the commitment addresses a limited portion of a statutory requirement, such as the amount of emissions reductions needed for attainment in a nonattainment area. As shown in Table 8 above, the remaining portion of the enforceable commitments in the 2008 $PM_{2.5}$ Plan and the 2007 State Strategy are 9.4 tpd direct $PM_{2.5}$, 79.8 tpd NO_X and 0.8 tpd SO_2. When compared to the State's current estimate of the reductions needed by 2014 for $PM_{2.5}$ attainment in the SJV, the remaining portion of the enforceable commitments represents approximately 41 percent of the needed $PM_{2.5}$ reductions, 28 percent of the needed NO_X reductions, and 44 percent of the needed SO_2 reductions. Historically, EPA has approved SIPs with enforceable commitments in the range of 10 percent or less of the total needed reductions for attainment. See, for examples, our approval of the SJV PM_{10} Plan at 69 FR 30005 (May 26, 2004), approval of the SJV 1-hour ozone plan at 75 FR 10420 (March 8, 2010), and approval of the Houston-Galveston plan at 66 FR 57160, 57161 (November 14, 2001).

We note that there are significant emissions reductions tied to the Cleaner

[22] Commitments approved by EPA under CAA section 110(k)(3) are enforceable by EPA and citizens under CAA sections 113 and 304, respectively. In the past, EPA has approved enforceable commitments and courts have enforced these actions against states that failed to comply with those commitments. *See, e.g., American Lung Ass'n of N.J.* v. *Kean,* 670 F. Supp. 1285 (D.N.J. 1987), aff'd, 871 F.2d 319 (3rd Cir. 1989); *NRDC, Inc.* v. *N.Y. State Dept. of Env. Cons.,* 668 F. Supp. 848 (S.D.N.Y. 1987); *Citizens for a Better Env't* v. *Deukmejian,* 731 F. Supp. 1448, recon. granted in par, 746 F. Supp. 976 (N.D. Cal. 1990); *Coalition for Clean Air* v. *South Coast Air Quality Mgt. Dist.,* No. CV 97–6916–HLH, (C.D. Cal. Aug. 27, 1999). Further, if a state fails to meet its commitments, EPA could make a finding of failure to implement the SIP under CAA section 179(a), which starts an 18-month period for the State to correct the non-implementation before mandatory sanctions are imposed.

CAA section 110(a)(2)(A) provides that each SIP "shall include enforceable emission limitations and other control measures, means or techniques * * * as well as schedules and timetables for compliance, as may be necessary or appropriate to meet the applicable requirement of the Act." Section 172(c)(6) of the Act, which applies to nonattainment SIPs, is virtually identical to section 110(a)(2)(A). The language in these sections of the CAA is quite broad, allowing a SIP to contain any "means or techniques" that EPA determines are "necessary or appropriate" to meet CAA requirements, such that the area will attain as expeditiously as practicable, but no later than the designated date. Furthermore, the express allowance for "schedules and timetables" demonstrates that Congress understood that all required controls might not have to be in place before a SIP could be fully approved.

[23] The U.S. Court of Appeals for the Fifth Circuit upheld EPA's interpretation of CAA sections 110(a)(2)(A) and 172(c)(6) and the Agency's use and application of the three factor test in approving enforceable commitments in the 1-hour ozone SIP for Houston-Galveston. *BCCA Appeal Group et al.* v. *EPA et al.,* 355 F.3d 817 (5th Cir. 2003).

[24] The 2007 State Strategy was developed to address both the 1997 $PM_{2.5}$ NAAQS and the 1997 8-hour Ozone NAAQS. The 8-hour ozone SIPs were due in November 2007, and the development and adoption of the State Strategy was timed to coordinate with this submittal date. 2007 State Strategy, p. 1.

In-Use Heavy-Duty Trucks measure and Cleaner In-Use Off-Road Engines listed in the 2009 State Strategy Status Report, page 6. EPA understands that the State is currently revising these rules for re-adoption in late 2010 and subsequent submittal for EPA approval. It is possible that the reductions from these measures and several outstanding District rules will reduce the percentage of the remaining portion of the enforceable commitments to below 10 percent of the total emissions reductions needed for attainment. However, until these (or other) measures are adopted, submitted, and EPA approved, we believe that the percentages of enforceable commitments for direct $PM_{2.5}$, NO_X, and SO_2 relied upon in the 2008 $PM_{2.5}$ Plan and 2007 State Strategy are too high and do not represent a limited portion of the State's current estimate of total emissions reductions needed to meet the statutory requirement for attainment in the SJV.

ii. The State Must Be Capable of Fulfilling its Commitment

For the second factor, we consider whether the District and State are capable of fulfilling their commitments. As discussed above, following the adoption and submittal of the 2007 State Strategy, CARB adopted and submitted the 2009 State Strategy Status Report which shows the State's progress in achieving its enforceable commitments for the SJV. The 2009 State Strategy Status Report shows that during 2007 and 2008, the State has adopted rules for ten measures identified in the 2007 State Strategy and three rules that were not identified in the Strategy that will contribute to the needed $PM_{2.5}$ and NO_X reductions. The 2009 State Strategy Status Report includes a table with estimates of the reductions that may fulfill the CARB's full commitment. *See* 2009 State Strategy Status Report, p. 18.

EPA believes that the District has also made good progress in meeting its enforceable commitments as shown in Table 2 above. We also believe that the District's continued efforts in committing to and adopting measures for sources under its jurisdiction will help it meet its commitments. In addition, beyond the rules discussed above, both CARB and the District have well-funded incentive grants programs to reduce emissions from the on- and off-road engine fleets.

While progress has been made by the District and State to achieve their enforceable commitments, there are still significant reductions that must be addressed in order to satisfy the commitments. As discussed above, the remaining portion of the enforceable commitments is 28 to 44 percent for the relevant pollutants. Given the evidence of the State's and District's efforts to date and their continuing efforts to reduce emissions, we believe that the State and District are capable of meeting their enforceable commitments to achieve total reductions of 11.7 tpd direct $PM_{2.5}$, 85 tpd NO_X, and 0.9 tpd SO_2 in the San Joaquin Valley by 2014.

iii. The Commitment Must Be for a Reasonable and Appropriate Timeframe

Finally, for the third factor, we consider whether the commitments are for a reasonable and appropriate period of time. In order to meet the commitments by 2014, the 2008 $PM_{2.5}$ Plan and 2007 State Strategy include an ambitious rule development, adoption, and implementation schedules. EPA considers these schedules to provide sufficient time to achieve the committed reductions by 2014. As we have noted previously, many of the scheduled measures have been adopted. *See* Tables 2 and 5 above and the 2009 State Strategy Status Report, pp. 4, 17 and 23. The State and District are continuing to evaluate their adopted measures and the need for additional emissions reductions from new measures in this area. While we believe the State and District have provided reasonable and appropriate schedules for achieving their commitments by 2014, as discussed above, EPA is not proposing to grant the attainment date extension for the San Joaquin Valley. Thus, we cannot currently conclude that the third factor is satisfied.

6. Proposed Action on the Attainment Demonstration

In order to approve a SIP's attainment demonstration, EPA must make several findings and approve the plan's proposed attainment date.

First, we must find that the demonstration's technical bases, including the emissions inventories and air quality modeling, are adequate. As discussed above in sections IV.B. and IV.D.2, we are proposing to approve the emissions inventories but to disapprove the air quality modeling on which the SJV 2008 $PM_{2.5}$ Plan's attainment demonstration and other provisions are based.

Second, we must find that the SIP submittal provides for expeditious attainment through the implementation of all RACM and RACT. As discussed above in section IV.C., we are proposing to disapprove the RACM/RACT demonstration in the SJV $PM_{2.5}$ SIP.

Third, EPA must find that the emissions reductions that are relied on for attainment are creditable. While EPA has previously accepted enforceable commitments in lieu of adopted control measures in attainment demonstrations, EPA has done so only when the circumstances warranted it and the commitments met three criteria. We believe that circumstances here warrant the consideration of enforceable commitments. We also believe that both the State and the District have demonstrated the capability to meet their commitments. However, the commitments do not constitute a limited portion of the required emissions reductions needed for attainment and are not for an appropriate timeframe. The State's and District's unfulfilled commitments currently represent 41 percent of the $PM_{2.5}$ reductions, 28 percent of the NO_X reductions, and 44 percent of the SO_2 emissions reductions (30 percent of the combined emissions reductions of all pollutants) currently estimated to be required for attainment of the 1997 $PM_{2.5}$ NAAQS in the SJV. These percentages are well above the 10 percent figure generally accepted by EPA to approve an attainment demonstration that relies in part on enforceable commitments.

Finally, for a $PM_{2.5}$ nonattainment area that cannot attain within five years of its designation as nonattainment, EPA must grant an extension of the attainment date in order to approve the attainment demonstration for the area. As discussed above in section IV.D.4., while we believe that an extension of the attainment date would be appropriate if supported by the necessary analysis, we are not at this time proposing to grant the State's request to extend the attainment date in the SJV to April 5, 2015.

For the foregoing reasons, we are proposing to disapprove the attainment demonstration in the SJV 2008 $PM_{2.5}$ Plan.

E. Reasonable Further Progress Demonstration

1. Requirements for RFP

CAA section 172(c)(2) requires that plans for nonattainment areas shall provide for reasonable further progress (RFP). RFP is defined in section 171(1) as "such annual incremental reductions in emissions of the relevant air pollutant as are required by this part or may reasonably be required by the Administrator for the purpose of ensuring attainment of the applicable [NAAQS] by the applicable date."

The $PM_{2.5}$ implementation rule requires submittal of an RFP plan at the same time as the attainment demonstration for any area for which a

state requests an extension of the attainment date beyond 2010. For areas for which the state requests an attainment date extension to 2015, such as SJV, the RFP plan must demonstrate that in the applicable milestone years of 2009 and 2012, emissions in the area will be at a level consistent with generally linear progress in reducing emissions between the base year and the attainment year. 40 CFR 51.1009(d). States may demonstrate this by showing that emissions for each milestone year are roughly equivalent to benchmark emissions levels for direct $PM_{2.5}$ and each $PM_{2.5}$ attainment plan precursor addressed in the plan. The steps for determining the benchmark emissions levels to demonstrate generally linear progress are provided in 40 CFR 51.1009(f).

The RFP plan must describe the control measures that provide for meeting the reasonable further progress milestones for the area, the timing of implementation of those measures, and the expected reductions in emissions of directly-emitted $PM_{2.5}$ and $PM_{2.5}$ attainment plan precursors. *See* 40 CFR 51.1009(c).

2. The RFP Demonstration in the SJV 2008 $PM_{2.5}$ Plan

The RFP demonstration is in Chapter 8 of the 2008 $PM_{2.5}$ Plan. The demonstration addresses direct $PM_{2.5}$, NO_X, and SO_2, uses the 2005 annual average day inventory as the base year inventory, and assumes 2014 as the attainment year. The measures that the 2008 $PM_{2.5}$ Plan depends on for RFP and the emissions reductions from each measure in each year are given in Table 6–3 of the 2008 $PM_{2.5}$ Plan.

The 2008 $PM_{2.5}$ Plan presents the RFP demonstration in terms of cumulative emissions reductions and percent of emissions reductions per year. *See* Table 8–4 in the 2008 $PM_{2.5}$ Plan. This demonstration reserves 1 percent of the direct $PM_{2.5}$ baseline (0.8 tpd) and 3 percent of the NO_X baseline (12–15 tpd NO_X) as contingency measures by decreasing the cumulative emissions reductions in each milestone year by these amounts. 2008 $PM_{2.5}$ Plan, p. 8–3. The Plan does not include a contingency reserve for SO_2. We discuss this contingency reserve below in the section on contingency measures. However, for the purposes of our evaluation of the RFP demonstration as presented in Table 9 below, we have not included it. This allows us to evaluate if the 2008 $PM_{2.5}$ Plan would demonstrate the required RFP without the contingency reserve. We note that the RFP demonstration presented in Table 9 is based on the State's current estimate of the emissions levels needed for attainment in the SJV.

TABLE 9—BENCHMARK RFP DEMONSTRATION USING PLAN DATA NO CONTINGENCY MEASURE RESERVE

(Tons per annual average day)

	$PM_{2.5}$	NO_X	SO_2
2009			
Benchmark emissions level	75.9	449.1	25.2
Projected emissions level	78.2	498.5	22.9
Emissions above benchmark emissions level	2.3	49.4	−2.2
Percent above benchmark emissions level	3.0	11.0	−8.9
2012			
Benchmark emissions level	68.3	354.4	24.2
Projected emissions level	70.3	415.8	22.9
Emissions above benchmark emissions level	2.0	61.5	−1.3
Percent above benchmark emissions level	2.9	17.3	−5.4

3. Proposed Action on the RFP Demonstration

As discussed above, EPA is proposing to disapprove the air quality modeling in the 2008 $PM_{2.5}$ Plan because there is insufficient documentation for us to determine its adequacy. Because of this, we are also proposing to disapprove the RFP demonstration in the 2008 $PM_{2.5}$ Plan. Air quality modeling establishes the emissions levels needed for attainment in an area. Thus, uncertainties about the adequacy of the air quality modeling result in uncertainties about the emissions levels needed for attainment. These uncertainties also affect the RFP demonstrations because in order to determine what constitutes "generally linear progress" towards attainment in an area, we must first know the target level of emissions that the area needs to attain.

Assuming that the State's current estimates of the emissions levels needed for attainment are correct and that EPA will ultimately be able to grant an extension of the SJV's attainment date to April 5, 2015, Table 9 shows that the SJV area is projected to be only slightly above its benchmark emissions levels for direct $PM_{2.5}$ in both 2009 and 2012 and well below the benchmark emissions levels for SO_2 in both years. However, for NO_X, the gap between the projected emissions and benchmark levels is over 10 percent in 2009 and grows to more than 17 percent in 2012.

The shortfall in RFP for NO_X is especially problematic given the nature of the $PM_{2.5}$ nonattainment problem in the SJV. Ammonium nitrate contributes 40 percent of the Valley's annual $PM_{2.5}$ levels. 2008 $PM_{2.5}$ Plan, p. H–12. Available information indicates that NO_X is one of the limiting compounds in the reaction that forms ammonium nitrate, making NO_X control an effective approach to reducing ambient $PM_{2.5}$ levels in the SJV. 2008 $PM_{2.5}$ Plan, p. 9–1. Hence, the shortfalls in NO_X emissions reductions in the RFP demonstration are likely to adversely affect progress in reducing ambient $PM_{2.5}$ levels in the SJV, an effect that will likely not be compensated for by excess reductions of SO_2.

As discussed above, we are proposing to find that VOC is a $PM_{2.5}$ attainment plan precursor for which the state must evaluate RFP, among other things. The 2008 $PM_{2.5}$ Plan does not currently include an RFP demonstration for VOC.

Based on our proposed disapproval of the air quality modeling analysis and attainment demonstration, we are proposing to disapprove the RFP demonstration in the 2008 $PM_{2.5}$ Plan for failure to meet the requirements of CAA section 172(c)(2) and 40 CFR 51.1009. We also note the lack of generally linear progress in NO_X emissions reductions, especially in

2012, and the lack of an RFP demonstration for VOC. The District and State should address both these issues in any revision to the SJV $PM_{2.5}$ Plan's RFP demonstration.

F. Contingency Measures

1. Requirements for Contingency Measures

Under CAA section 172(c)(9), all $PM_{2.5}$ attainment plans must include contingency measures to be implemented if an area fails to meet RFP (RFP contingency measures) and contingency measures to be implemented if an area fails to attain the $PM_{2.5}$ NAAQS by the applicable attainment date (attainment contingency measures). These contingency measures must be fully adopted rules or control measures that are ready to be implemented quickly without significant additional action by the state. 40 CFR 51.1012. They must also be measures not relied on in the plan to demonstrate RFP or attainment and should provide SIP-creditable emissions reductions equivalent to approximately one year of the emissions reductions needed for RFP. 72 FR 20586 at 20642–43. Finally, the SIP should contain trigger mechanisms for the contingency measures and specify a schedule for their implementation. *Id.*

Contingency measures can include Federal, State and local measures already scheduled for implementation that provide emissions reductions in excess of those reductions needed to provide for RFP or expeditious attainment. EPA has approved numerous SIPs under this interpretation. *See,* for example, 62 FR 15844 (April 3, 1997) direct final rule approving Indiana ozone SIP revision; 62 FR 66279 (December 18, 1997), final rule approving Illinois ozone SIP revision; 66 FR 30811 (June 8, 2001), direct final rule approving Rhode Island ozone SIP revision; 66 FR 586 (January 3, 2001), final rule approving District of Columbia, Maryland, and Virginia ozone SIP revisions; and 66 FR 634 (January 3, 2001), final rule approving Connecticut ozone SIP revision.

2. Contingency Measures in the SJV 2008 $PM_{2.5}$ Plan

Contingency measures are described in Section 9.2. of the 2008 $PM_{2.5}$ Plan (pp. 9–5 to 9–9) and are composed of a new commitment by the SJVAPCD to request that CARB accelerate adoption and implementation of its measures and surplus reductions from State and District measures. In late 2008, the SJVAPCD adopted a further contingency measure as part of its wood burning rule, Rule 4901. CARB identified two additional contingency measures for the SJV 2008 $PM_{2.5}$ Plan during its public hearing on the Plan. We discuss each of these contingency measures below.

The Plan does not calculate the emissions reductions that are equivalent to one year's worth of RFP. We have, however, calculated one year's worth of RFP to be 2.5 tpd $PM_{2.5}$, 31.6 tpd NO_X, and 0.3 tpd SO_2 using information in the Plan. *See* section II.I. of the TSD. This calculation is based on the State's current estimate of the emissions reductions needed for attainment by 2015.

Request CARB To Accelerate State Measure Implementation—This proposed contingency measure (which could function as both a RFP and attainment contingency measure), requires the District's Governing Board to adopt a resolution requesting CARB to accelerate the adoption and/or implementation of any remaining CARB control measures that have not yet been adopted or fully implemented. 2008 $PM_{2.5}$ Plan, p. 9–7. Under CAA section 172(c)(9) and EPA's long-standing policies [25] interpreting this section, contingency measures must require minimal additional rulemaking by the State and take effect within a few months of a failure to make RFP or to attain. This proposed contingency measure would require additional rulemaking at the District level and potentially substantial and lengthy additional rulemaking at the State level to be implemented. For these reasons, this proposed measure does not meet CAA requirements for contingency measures.

Surplus Emissions Reductions from the Ozone Nonattainment Area Fee—This proposed contingency measure (which could function as an RFP contingency measure for the 2012 milestone and as an attainment contingency measure) would use fees generated from the District Rule 3170, Ozone Nonattainment Area Fee, to achieve emissions reductions. The implementation of Rule 3170 is triggered solely by a failure of the SJV to attain the 1-hour ozone standard by its applicable attainment date (which can occur no earlier than November 15, 2010, *see* CAA section 181(a)(1)) and not by any failures to meet $PM_{2.5}$ RFP targets or to attain the 1997 $PM_{2.5}$ NAAQS, a minimum requirement for contingency measures for $PM_{2.5}$ SIPs. For this reason, this proposed measure does not meet CAA requirements for contingency measures.[26]

Surplus Emissions Reductions from Incentive Funds—As noted previously, the District has several incentive grant programs that have the potential to generate considerable emissions reductions. The 2008 $PM_{2.5}$ Plan suggests the use of these reductions as contingency measures for failure either to meet RFP or to attain. While neither the CAA nor EPA policy bar the use of emissions reductions from incentive programs to meet all or part of an area's contingency measure obligation, the incentive programs must assure that the reductions are surplus, quantifiable, enforceable, and permanent as required by EPA guidance. See "Improving Air Quality with Economic Incentive Programs," EPA–452/R–01–001 (January 2001).

The 2008 $PM_{2.5}$ Plan does not identify the incentive grant programs expected to generate the emissions reductions programs, nor the quantity of the emissions reductions, that the District intends to use to meet the contingency measure requirement. Therefore, we are unable to determine if they are SIP creditable, surplus to attainment and/or RFP needs, or sufficient to provide the one-year's worth of RFP needed. For these reasons, this proposed measure does not currently meet the CAA requirements for contingency measures.

Excess Reductions in the RFP Demonstration—The RFP demonstration in the 2008 $PM_{2.5}$ Plan reserves for RFP contingency measure purposes about 1 tpd of direct $PM_{2.5}$ and 17 tpd of NO_X reductions from the total reductions expected from the District and State measures. No reserve is needed for SO_2 because SO_2 emissions levels were projected to be below the applicable benchmarks. *See* 2008 $PM_{2.5}$ Plan, p. 8–3.

As discussed above in section IV.E., we have proposed to disapprove the RFP demonstration in part because we are unable to determine if the 2008 $PM_{2.5}$ Plan provides for RFP. We have also identified concerns with the lack of an RFP demonstration for VOC and the shortfall in NO_X emissions reductions needed to show generally linear progress toward attainment. Because of these issues, we cannot determine, at this time, if there are any excess

[25] *See* "State Implementation Plans; General Preamble for the Implementation of Title I of the Clean Air Act Amendments of 1990," 57 FR 13498 at 13510 (April 16, 1992).

[26] Should the rule's requirements be triggered and the collected fees used in an incentive program to reduce emissions of direct $PM_{2.5}$, NO_X, VOC, and/or SO_2, then the District may rely on those reductions to fulfill the contingency measure requirement for the $PM_{2.5}$ plan to the extent that the reductions meet SIP creditability requirements and are not otherwise needed for expeditious attainment or RFP for the $PM_{2.5}$ NAAQS.

reductions of direct $PM_{2.5}$ and NO_X in the RFP demonstration that can be used for RFP contingency measures.

Post-Attainment Year Emissions Reductions—Additional emissions reductions resulting from turnover in the on- and off-road mobile source fleet in 2015, the year after the attainment year of 2014, may be used to meet the attainment contingency measure requirement. No estimates of the additional emissions reductions are given in the 2008 $PM_{2.5}$ Plan. CARB estimates the NO_X reductions in 2015 from its existing (baseline) mobile source program are 21 tpd (CARB Staff Report, Analysis of the San Joaquin Valley 2008 $PM_{2.5}$ Plan, p. 29), and we have estimated an 0.7 tpd $PM_{2.5}$ reduction using information in the 2007 State Strategy, Appendix A, p. 100, although this figure is in a tons per summer planning day metric and not the average annual day metric that is used in the Plan's RFP demonstration. These emissions reductions are from already implemented, fully creditable measures and no further actions are required by the State to implement them. They are not relied on to demonstrate either attainment or RFP. For these reasons, these post-2014 emissions reductions may be used to fulfill the attainment contingency measure requirement, although based on existing estimates of the reductions needed to show one year's worth of RFP, they are insufficient by themselves to fully meet the requirement.

Contingency Provision in Rule 4901 "*Wood Burning Fireplace and Wood Burning Heaters*"—In October, 2008, the SJVAPCD revised Rule 4901 to incorporate a contingency provision in section 5.6.5. This provision requires that 60 days after EPA finds the SJV nonattainment area has failed to attain the 1997 $PM_{2.5}$ NAAQS, the District will lower the level at which mandatory curtailment of residential wood burning is required from a predicted level of 30 $\mu g/m^3$ to 20 $\mu g/m^3$. EPA approved this rule, including the contingency provision, on November 10, 2009. 74 FR 57907.

This attainment contingency provision in Rule 4901 meets the statutory and regulatory requirements for attainment contingency measures: It is triggered by a failure to attain, requires no additional rulemaking by the District, will be fully implemented within 60 days of being triggered, and is SIP approved. The District has preliminarily quantified the emissions reductions expected from this contingency provision at 1.6 tons of $PM_{2.5}$ per winter average day.[27]

Control Strategy Reductions Not Included in the RFP and/or Attainment Demonstrations

In its resolution approving the SJV $PM_{2.5}$ Plan, CARB requested that the District adopt two additional contingency measures. *See* CARB Resolution No. 08–28, Attachment A. These measures are revisions to SJVAPCD's Rule 4307 (Boilers, 2 to 5 MMBtu) and Rule 4702 (Internal Combustion Engines). While the District had already included these rule revisions as Measures S–COM–2 and S–COM–6 in the Plan's control strategy, it had not estimated or included the NO_X emissions reductions from the measures in either the Plan's RFP or attainment demonstration. The District adopted revisions to Rule 4307 in October 2008 and is scheduled to adopt revisions to Rule 4702 in December 2010.

As discussed above, EPA is proposing to disapprove both the RFP and attainment demonstrations in the 2008 $PM_{2.5}$ Plan in part because we are unable at this time to determine if the Plan provides sufficient emissions reductions to meet these requirements. Until it can be shown that the reductions from these two measures are not needed to demonstrate either RFP or attainment, EPA cannot approve them as contingency measures.

3. Proposed Action on the Contingency Measures

The 2008 $PM_{2.5}$ Plan includes suggestions for several potentially approvable contingency measures as well as several measures that do not currently meet the CAA's minimum requirements (*e.g.,* no additional rulemaking, surplus to attainment and RFP needs). The Plan does not, however, provide sufficient information for us to determine if the emissions reductions from some of the potentially approvable measures are SIP creditable (*e.g.,* those from incentive grant programs) or does not quantify the expected emissions reductions so we can gauge if they provide reductions equivalent to the current estimate of one year's worth of RFP. Therefore, we are proposing to disapprove the RFP and attainment contingency measure provisions in the 2008 $PM_{2.5}$ Plan.

[27] Personal communications, Jessica Ferrio, SJVAPCD to Frances Wicher, EPA, August 27, 2010.

G. Motor Vehicle Emissions Budgets for Transportation Conformity

1. Requirements for Motor Vehicle Emissions Budgets

CAA section 176(c) requires Federal actions in nonattainment and maintenance areas to conform to the goals of SIPs. This means that such actions will not: (1) Cause or contribute to violations of a NAAQS, (2) worsen the severity of an existing violation, or (3) delay timely attainment of any NAAQS or any interim milestone.

Actions involving Federal Highway Administration (FHWA) or Federal Transit Administration (FTA) funding or approval are subject to the EPA's transportation conformity rule, codified at 40 CFR part 93, subpart A. Under this rule, MPOs in nonattainment and maintenance areas coordinate with State and local air quality and transportation agencies, EPA, FHWA, and FTA to demonstrate that an area's regional transportation plans (RTP) and transportation improvement programs (TIP) conform to the applicable SIPs. This is typically determined by showing that estimated emissions from existing and planned highway and transit systems are less than or equal to the motor vehicle emissions budgets (budgets) contained in the SIP. An attainment or RFP SIP should include budgets for the attainment year and each required RFP year, as applicable.

Before an MPO may use budgets in a submitted SIP, EPA must first determine that the budgets are adequate. In order for us to find a budget adequate and, eventually approvable, the submittal must meet the conformity adequacy requirements of 40 CFR § 93.118(e)(4) and (5) and be approvable under all pertinent SIP requirements. The budget must reflect all of the motor vehicle control measures contained in the attainment and RFP demonstrations. *See* 40 CFR 93.118(e)(4)(v).

$PM_{2.5}$ attainment and RFP plans should identify budgets for direct $PM_{2.5}$ and $PM_{2.5}$ attainment plan precursors. All direct $PM_{2.5}$ SIP budgets should include direct $PM_{2.5}$ motor vehicle emissions from tailpipe, brake wear, and tire wear. States must also consider whether re-entrained paved and unpaved road dust or highway and transit construction dust are significant contributors and should be included in the direct $PM_{2.5}$ budget. *See* 40 CFR 93.102(b) and § 93.122(f) and the conformity rule preamble at 69 FR 40004, 40031–40036 (July 1, 2004). In determining whether the on-road mobile source emissions of a $PM_{2.5}$ attainment plan precursor are significant, state and local agencies should use the criteria for

insignificance findings provided in 40 CFR 93.109(k). *See also* 70 FR 24280, 24282–24287 (May 6, 2005).

2. Motor Vehicle Emissions Budgets in the SJV 2008 $PM_{2.5}$ Plan

The 2008 $PM_{2.5}$ Plan includes budgets for direct $PM_{2.5}$ and NO_X for the attainment year of 2014 and the RFP years of 2009 and 2012. *See* 2008 $PM_{2.5}$ Plan, Section 7.2.2 and Appendix C. The direct $PM_{2.5}$ budgets includes tailpipe, brake wear, and tire wear emissions but do not include paved road, unpaved road, and road and transit construction dust because these are considered to be insignificant contributors to $PM_{2.5}$ levels in the Valley. No budgets for SO_2 are included because on-road emissions of SO_2 are also considered insignificant. *Id.*

There are no budgets for ammonia or VOC in the Plan.

3. April 23, 2010 Budget Adequacy/ Inadequacy Finding

On April 23, 2010, we notified CARB that we had found the budgets in the 2008 $PM_{2.5}$ Plan for the RFP milestone years 2009 and 2012 adequate and for the attainment year of 2014 inadequate for transportation conformity purposes. EPA determined that the attainment year budgets are inadequate because they lack specificity and are not fully enforceable and, therefore, do not meet the criteria for adequacy in 40 CFR 93.118(e)(4).[28] We published a notice of our findings at 75 FR 26749 (May 12, 2010).

4. Proposed Action on the Budgets

Our finding that the 2009 and 2012 year RFP budgets are adequate for transportation conformity purposes was based on our preliminary review of the RFP demonstrations in the 2008 $PM_{2.5}$ Plan. After a more in-depth review of these demonstrations and the Plan as a whole, we are proposing to disapprove the Plan's RFP demonstration for the reasons discussed above in section IV.E. Based on this proposed disapproval, we are now proposing to disapprove the 2009 and 2012 year RFP budgets because they are not consistent with requirements for RFP as required by 40 CFR 93.118(e)(4)(iv). We are also proposing to disapprove the budgets for the attainment year of 2014, which we have already found to be inadequate, based on our proposed disapproval of the SJV 2008 $PM_{2.5}$ Plan's attainment demonstration. *See* section IV.D. above.

As discussed above, EPA is proposing to find that VOC is a $PM_{2.5}$ attainment plan precursor in the San Joaquin Valley. Should we finalize this determination, the State should include budgets for VOC as well as for direct $PM_{2.5}$ and other attainment plan precursors as applicable in future revisions to the Plan.

H. Mid-Course Review

Any State that submits to EPA an attainment plan for a $PM_{2.5}$ nonattainment area with an attainment date of 2014 or 2015 must also submit to EPA a mid-course review (MCR) by April 2011. 40 CFR 51.1011. The MCR for an area should include: (1) A review of emissions reductions and progress made in implementing control measures to reduce emissions of direct $PM_{2.5}$ and $PM_{2.5}$ attainment plan precursors contributing to $PM_{2.5}$ concentrations in the area; (2) an analysis of changes in ambient air quality data for the area; (3) a revised air quality modeling analysis to demonstrate attainment; and (4) any new or revised control measures adopted by the State, as necessary to ensure attainment by the attainment date in the EPA-approved SIP for the nonattainment area. 40 CFR 51.1011(b).

In its resolution adopting the 2008 $PM_{2.5}$ Plan, the SJVAPCD's Governing Board acknowledges the requirement to prepare a mid-course review consistent with 40 CFR 51.1011 by April 2011. *See* SJVAPCD Governing Board Resolution, page 4. In its resolution adopting the 2008 $PM_{2.5}$ Plan, CARB commits to submitting a MCR in 2011. *See* CARB Resolution 08–28, May 22, 2008, p. 4.

SJVAPCD is already taking the initial steps necessary to prepare its $PM_{2.5}$ MCR. EPA will work closely with the District, CARB, and other interested parties to assure that the MCR addresses the elements required by the $PM_{2.5}$ implementation rule. We encourage both agencies to use the opportunity afforded by the MCR to address the proposed disapprovals of the 2008 $PM_{2.5}$ Plan and SJV portions of the revised 2007 State Strategy.

I. Inter-Pollutant Trading for $PM_{2.5}$ Offsets

EPA has issued an implementation rule establishing the requirements for New Source Review (NSR) programs in $PM_{2.5}$ nonattainment areas. *See* 73 FR 28321 (May 16, 2008) ($PM_{2.5}$ NSR rule). Under the $PM_{2.5}$ NSR rule, during the interim period after designation of an area as nonattainment but before a state has amended its NSR SIP to address $PM_{2.5}$, the NSR permitting requirements of 40 CFR part 51, Appendix S apply for $PM_{2.5}$ purposes.[29] 40 CFR 52.24(k); 73 FR 28321 at 28342. These Appendix S requirements currently apply in the SJV area.

The NSR program requires, among other things, that new or modifying major stationary sources offset significant net emission increases with creditable emissions reductions. 40 CFR part 51, Appendix S, section IV.A.3. Under Appendix S, section IV.G.5, these offset requirements may currently be satisfied by offsetting reductions of direct $PM_{2.5}$ emissions. They may also currently be satisfied by offsetting reductions of emissions of a $PM_{2.5}$ precursor (*i.e.,* by an interpollutant trade) but only if such offsets comply with an interprecursor trading hierarchy and ratio approved by the Administrator. That is, a new $PM_{2.5}$ emission source is allowed to offset its direct $PM_{2.5}$ and/or $PM_{2.5}$ precursor emission increases with reductions in other $PM_{2.5}$ precursor emissions only in accordance with a trading ratio approved by EPA.[30]

The $PM_{2.5}$ NSR rule preamble states that precursors that are significant contributors to $PM_{2.5}$ concentrations should be considered regulated NSR pollutants. 73 FR 28321 at 28326. It then describes "significant contribution" in the same terms as are used in the $PM_{2.5}$ implementation rule, namely that emissions reductions of the precursor would be projected to provide a significant change in $PM_{2.5}$ concentrations in the area. See 72 FR 20586 at 20590 and 73 FR 28321 at 28326. The two rules also have the same presumption, for essentially the same reasons, that SO_2 and NO_X should be considered precursors, whereas ammonia and VOC should not. *See* 72 FR 20586 at 20590–20596 and 73 FR 28321 at 28326–28331.

In order for precursors to be eligible for NSR interpollutant offset trading in a $PM_{2.5}$ nonattainment area, the area's $PM_{2.5}$ SIP must state which combinations of pollutants are eligible for interpollutant trading and define and provide the basis for the trading ratios between them that will be used for interpollutant offsets. In the 73 FR 28321 at 28339, EPA stated that:

[28] *See* letter, Deborah Jordan, Air Division Director, EPA Region 9, to James M. Goldstene, Executive Officer, CARB, "RE: Adequacy Status of San Joaquin Valley $PM_{2.5}$ Reasonable Further Progress and Attainment Plan Motor Vehicle Emissions Budgets," dated April 23, 2010.

[29] A state with a $PM_{2.5}$ nonattainment area is required to submit NSR SIP revisions in accordance with the requirements of the $PM_{2.5}$ NSR rule by May 16, 2011. 73 FR 28321 at 28342.

[30] Note that several provisions of the $PM_{2.5}$ NSR rule are currently under reconsideration, including EPA's preferred interpollutant trading ratios. See Letter, from Lisa P. Jackson, Administrator, EPA, to Paul R. Cort, Earthjustice, April 24, 2009; 74 FR 26098 (June 1, 2009); 74 FR 36427 (July 23, 2009); 74 FR 48153 (September 22, 2009); and 75 FR 6827 (February 11, 2010).

[T]he final rules allow interpollutant trading [for offset purposes] only based on a trading ratio established in the SIP as part of the attainment demonstration approved for a specific nonattainment area * * *. [T]he final rules do not allow interpollutant trading on a case-by-case basis as part of an individual [nonattainment area] NSR permitting process. * * * If States choose to develop their own hierarchies/trading ratios, they will have to substantiate by modeling and/or other technical demonstrations of the net air quality benefit for $PM_{2.5}$ ambient concentrations, and such a trading program will have to be approved by EPA.

"Hierarchy" refers to an identification of which combinations of pollutants are eligible for trading, *e.g.*, SO_2 for primary $PM_{2.5}$, SO_2 for NO_X, etc.

EPA completed a technical assessment to develop preferred interpollutant trading ratios that may be used for the purposes of $PM_{2.5}$ offsets, where appropriate.[31] Based on this assessment, EPA disallowed trading directly between NO_X and SO_2 and set preferred trading ratios at 100:1 for NO_X to primary $PM_{2.5}$ trades and 40:1 for SO_2 to primary $PM_{2.5}$ trades. *See* 73 FR 28321 at 28339. The $PM_{2.5}$ NSR rule preamble also states at 28340 that:

th[e] rule allows interpollutant and interprecursor trading of offsets according to a SIP-approved trading program. To be approved, the trading program must either adopt EPA's recommended trading ratios or be supported by regional-scale modeling that demonstrates a net air quality benefit using appropriate overall offset ratios for such trades for a specified nonattainment area, State, or multi-State region.

The $PM_{2.5}$ NSR rule preamble at 28339 describes factors that should be considered by a State in developing area-specific ratios. Additional considerations for developing such ratios for the SJV are discussed in section II.K. of the TSD.

In summary, interpollutant trades for purposes of meeting the NSR offset requirement for $PM_{2.5}$ emissions are permissible only in accordance with trading ratios established in the SIP as part of the attainment demonstration approved for the nonattainment area. The SIP must explicitly identify which precursors are "regulated NSR pollutants", which combinations are eligible for interpollutant trading, and the trading ratios between the pollutants. A state may either adopt EPA's recommended trading ratios (73 FR 28321 at 28339) or seek to establish alternative ratios, using modeling and/or other technical demonstrations showing that the trading ratios provide a net air quality benefit, which must be approved by EPA. A state must establish these ratios as part of an approved attainment demonstration for its area; EPA will not allow case-by-case demonstrations on an individual source permit basis.

The SJV 2008 $PM_{2.5}$ Plan does not explicitly identify $PM_{2.5}$ precursors that are subject to NSR permitting. The Plan states, however, that:

[SJVAPCD] Rule 2201 [New and Modified Stationary Source Review] allows the use of interpollutant trading amongst criteria pollutants and their precursors upon the appropriate scientific demonstration of an adequate trading ratio. These caps [on the use of pre-baseline credits] also apply to the use of VOC, NO_X, and SO_x [emission reduction credits] in their application as offsets for direct emissions and in their use as $PM_{2.5}$ precursor interpollutant offsets.

See 2008 $PM_{2.5}$ Plan, Appendix D, p. D–4.

It appears from this discussion that the District considers VOC, NO_X, and SO_2 to be "regulated NSR pollutants" for $PM_{2.5}$ NSR purposes and that the District intends to allow for interpollutant trading to satisfy $PM_{2.5}$ permit requirements.[32] The SJV $PM_{2.5}$ Plan does not, however, provide a technical demonstration to support any conclusion as to the precursor combinations that should be eligible for interpollutant trading or the appropriate trading ratio for use in NSR permitting for $PM_{2.5}$. It also appears from the Plan (at Appendix D, p. D–4) that the District intends to allow for interpollutant trades to satisfy $PM_{2.5}$ offset requirements on a case-by-case basis, which is not permissible under the $PM_{2.5}$ NSR rule. If the District intends to seek EPA approval of alternative interpollutant offset ratios for purposes of meeting $PM_{2.5}$ NSR offset requirements, it must submit an adequate technical demonstration to support its proposed ratios, together with an approvable attainment demonstration, consistent with EPA regulatory requirements.

V. EPA's Proposed Actions and Potential Consequences

A. EPA's Proposed Approvals and Disapprovals

For the reasons discussed above, EPA is proposing to approve in part and disapprove in part California's attainment SIP for the San Joaquin Valley nonattainment area for the 1997 $PM_{2.5}$ NAAQS. This SIP is comprised of the SJVAPCD's 2008 $PM_{2.5}$ Plan and the portions of CARB's revised 2007 State Strategy that address CAA and EPA regulations for attainment of the 1997 $PM_{2.5}$ NAAQS in the SJV nonattainment area.

EPA is proposing to approve under CAA section 110(k)(3) the following elements of the SJV $PM_{2.5}$ attainment SIP:

1. The SIP's base year and baseline emissions inventories as meeting the requirements of CAA section 172(c)(3) and 40 CFR 51.1008.

2. SJVAPCD's commitments to the adoption and implementation schedule for specific control measures listed in Table 6–2 (amended June 15, 2010) of the 2008 $PM_{2.5}$ Plan to the extent that these commitments have not yet been fulfilled and to achieve specific aggregate emissions reductions of direct $PM_{2.5}$, NO_X and SO_2 by year, as listed in Table 6–3 of the $PM_{2.5}$ Plan, as a SIP strengthening; and

3. CARB's commitments to propose certain defined measures, as listed on page 23 of the 2009 State Strategy Status Report and to achieve aggregate emissions reductions of 5 tpd direct $PM_{2.5}$, 76 tpd NO_X, and 23 tpd VOC in the San Joaquin Valley by 2014, as listed in the 2009 State Strategy Status Report, p. 21, as a SIP strengthening; and to submit a mid-course review on the SJV $PM_{2.5}$ Plan as stated in the CARB Resolution 08–28, p. 4.

EPA is also proposing to find pursuant to 40 CFR 51.1002(c), that VOC is a $PM_{2.5}$ attainment plan precursor for the SJV and, therefore, controls on sources of VOC must be evaluated as part of the control strategy in the SJV $PM_{2.5}$ attainment SIP.

EPA is proposing to disapprove under CAA section 110(k)(3) the following elements of the SJV $PM_{2.5}$ attainment SIP:

1. The reasonably available control measures/reasonably available control technology demonstration as failing to meet the requirements of CAA section 172(c)(1) and 40 CFR 51.1010;

2. The reasonable further progress demonstrations for failing to meet the requirements of CAA section 172(c)(2) and 40 CFR 51.1009;

3. The attainment demonstration for failing to meet the requirements of CAA sections 172(c)(1) and (6) and 40 CFR 51.1007;

4. The contingency measures for failing to meet the requirements of CAA section 172(c)(9) and 40 CFR 51.1012; and

[31] These factors are in addition to the overall goal of the NSR permitting to show net air quality benefit and the underlying rationale for offsets to provide progress toward NAAQS attainment while allowing new sources to be constructed and existing sources to expand.

[32] This identification of VOC as a regulated NSR pollutant for $PM_{2.5}$ is contrary to the District's assertions in the Plan that controls on VOC sources are not important for $PM_{2.5}$ attainment but supports EPA's proposal to determine that VOC should be considered a $PM_{2.5}$ attainment plan precursor in addition to NO_X and SO_2. *See* section IV.C. above.

5. The RFP and attainment years motor vehicle emissions budgets because they are derived from unapprovable RFP and attainment demonstrations.

Finally, we are proposing to not grant, pursuant to CAA section 172(a)(2)(A) and 40 CFR 51.1004(a), California's request to extend the attainment date for the San Joaquin Valley $PM_{2.5}$ nonattainment area to April 5, 2015.

B. CAA Consequences of a Final Disapproval

EPA is committed to working with the SJVAPCD, CARB and the SJV MPOs to resolve the problems that make the current $PM_{2.5}$ attainment SIP for the SJV not fully approvable under the CAA and the $PM_{2.5}$ implementation rule. We firmly believe that such solutions are available and that expeditious attainment of the 1997 $PM_{2.5}$ standards in the San Joaquin Valley is achievable.

However, should we finalize the disapprovals as proposed here, a conformity freeze will take effect once the action becomes effective (usually 30 days after publication of the final action in the **Federal Register**). A conformity freeze means that only projects in the first four years of the most recent conforming RTP and TIP can proceed. During a freeze, no new RTPs, TIPs or RTP/TIP amendments can be found to conform. *See* 40 CFR 93.120.

Should we finalize the disapprovals proposed here, in addition to the effect on conformity, the offset sanction in CAA section 179(b)(2) would apply in the SJV $PM_{2.5}$ nonattainment area 18 months after the effective date of a final disapproval. The highway funding sanctions in CAA section 179(b)(1) would apply in the area six months after the offset sanction is imposed. Neither sanction will be imposed under the CAA if California submits and we approve prior to the implementation of the sanctions, SIP revisions that correct any and all disapproval issues with the 2008 $PM_{2.5}$ Plan and applicable portions of the revised 2007 State Strategy that we identify in our final action.

In addition to the sanctions, CAA section 110(c)(1) provides that EPA must promulgate a federal implementation plan addressing the deficient elements in the $PM_{2.5}$ SIP for the SJV nonattainment area, two years after the effective date of any disapproval should we not approve a SIP revision correcting the deficiencies within the two years.

VI. Statutory and Executive Order Reviews

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

A. Executive Order 12866, Regulatory Planning and Review

This action is not a "significant regulatory action" under the terms of Executive Order (EO) 12866 (58 FR 51735, October 4, 1993) and is therefore not subject to review under the EO.

B. Paperwork Reduction Act

This action does not impose an information collection burden under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq,* because this proposed SIP partial approval and partial disapproval under CAA section 110 and subchapter I, part D will not in-and-of itself create any new information collection burdens but simply disapproves certain State requirements for inclusion into the SIP. Burden is defined at 5 CFR 1320.3(b).

C. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) generally requires an agency to conduct a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small not-for-profit enterprises, and small governmental jurisdictions. For purposes of assessing the impacts of today's rule on small entities, small entity is defined as: (1) A small business as defined by the Small Business Administration's (SBA) regulations at 13 CFR 121.201; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of today's proposed rule on small entities, I certify that this action will not have a significant impact on a substantial number of small entities. This rule does not impose any requirements or create impacts on small entities. This proposed partial approval and partial disapproval of the SIP under CAA section 110 and subchapter I, part D will not in-and-of itself create any new requirements but simply disapproves certain State requirements for inclusion into the SIP. Accordingly, it affords no opportunity for EPA to fashion for small entities less burdensome compliance or reporting requirements or timetables or exemptions from all or part of the rule. The fact that the CAA prescribes that various consequences (*e.g.,* higher offset requirements) may or will flow from a final disapproval does not mean that EPA either can or must conduct a regulatory flexibility analysis for this action. Therefore, this action will not have a significant economic impact on a substantial number of small entities.

We continue to be interested in the potential impacts of this proposed rule on small entities and welcome comments on issues related to such impacts.

D. Unfunded Mandates Reform Act

This action contains no Federal mandates under the provisions of Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), 2 U.S.C. 1531–1538 for State, local, or tribal governments or the private sector." EPA has determined that the proposed partial approval and partial disapproval action does not include a Federal mandate that may result in estimated costs of $100 million or more to either State, local, or tribal governments in the aggregate, or to the private sector. This action proposes to partially approve and partially disapprove pre-existing requirements under State or local law, and imposes no new requirements. Accordingly, no additional costs to State, local, or tribal governments, or to the private sector, result from this action.

E. Executive Order 13132, Federalism

Executive Order 13132, entitled "Federalism" (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure "meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications." "Policies that have federalism implications" is defined in the Executive Order to include regulations that 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 does not have federalism implications. It will not have substantial direct effects on the States, on the

relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132, because it merely partially approves and partially disapproves certain State requirements for inclusion into the SIP and does not alter the relationship or the distribution of power and responsibilities established in the CAA. Thus, Executive Order 13132 does not apply to this action.

F. Executive Order 13175, Coordination With Indian Tribal Governments

This action does not have tribal implications, as specified in Executive Order 13175 (65 FR 67249, November 9, 2000), because the SIP EPA is proposing to partially approve and partially disapprove would not apply in Indian country located in the State, and EPA notes that it will not impose substantial direct costs on tribal governments or preempt tribal law. Thus, Executive Order 13175 does not apply to this action.

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

EPA interprets EO 13045 (62 FR 19885, April 23, 1997) as applying only to those regulatory actions that concern health or safety risks, such that the analysis required under section 5–501 of the EO has the potential to influence the regulation. This action is not subject to EO 13045 because it is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997). This proposed partial approval and partial disapproval of the SIP under CAA section 110 and subchapter I, part D will not in-and-of itself create any new regulations but simply disapproves certain State requirements for inclusion into the SIP.

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

This proposed rule is not subject to Executive Order 13211 (66 FR 28355, May 22, 2001) because it is not a significant regulatory action under Executive Order 12866.

I. National Technology Transfer and Advancement Act

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

The EPA believes that this action is not subject to requirements of Section 12(d) of NTTAA because application of those requirements would be inconsistent with the CAA.

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

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

EPA lacks the discretionary authority to address environmental justice in this proposed action. In reviewing SIP submittals, EPA's role is to approve or disapprove State choices, based on the criteria of the CAA. Accordingly, this action merely proposes to partially approve and partially disapprove certain State requirements for inclusion into the SIP under CAA section 110 and subchapter I, part D and will not in-and-of itself create any new requirements. Accordingly, it does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898.

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Nitrogen dioxide, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides, Volatile organic compounds.

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

Dated: November 8, 2010.

Jared Blumenfeld,

Regional Administrator, EPA Region IX.

[FR Doc. 2010–29248 Filed 11–29–10; 8:45 am]

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Federal Register

Tuesday,

November 30, 2010

Part V

Department of the Interior

Fish and Wildlife Service

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Final Rule Designating Critical Habitat for Ambrosia pumila (San Diego ambrosia); Final Rule

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R8–ES–2009–0054; MO 92210–0–0009–B4]

RIN 1018–AW20

Endangered and Threatened Wildlife and Plants; Final Rule Designating Critical Habitat for Ambrosia pumila (San Diego ambrosia)

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), are designating critical habitat for *Ambrosia pumila* (San Diego ambrosia) under the Endangered Species Act of 1973, as amended. Approximately 783 acres (317 hectares) are being designated as critical habitat for *A. pumila* in Riverside and San Diego counties, California.

DATES: This rule becomes effective on December 30, 2010.

ADDRESSES: The final rule, final economic analysis, and map of critical habitat will be available on the Internet at *http://www.regulations.gov* at Docket No. FWS–R8–ES–2009–0054. Supporting documentation we used in preparing this final rule will be available for public inspection, by appointment, during normal business hours, at the U.S. Fish and Wildlife Service, Carlsbad Fish and Wildlife Office, 6010 Hidden Valley Road, Suite 101, Carlsbad, CA 92011; telephone 760–431–9440; facsimile 760–431–5901.

FOR FURTHER INFORMATION CONTACT: Jim Bartel, Field Supervisor, U.S. Fish and Wildlife Service, Carlsbad Fish and Wildlife Office, 6010 Hidden Valley Road, Suite 101, Carlsbad, CA 92011; telephone 760–431–9440; facsimile 760–431–5901. If you use a telecommunications device for the deaf (TDD), call the Federal Information Relay Service (FIRS) at (800) 877–8339.

SUPPLEMENTARY INFORMATION:

Background

We intend to discuss only those topics directly relevant to the designation of critical habitat for *Ambrosia pumila* under the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq.*), in this final critical habitat designation. For more information on the taxonomy, biology, and ecology of *A. pumila,* refer to the final listing rule published in the **Federal Register** on July 2, 2002 (67 FR 44372), the proposed critical habitat designation published in the **Federal Register** on August 27, 2009 (74 FR 44238), and the Notice of Availability (NOA) of the draft economic analysis (DEA) published in the **Federal Register** on May 18, 2010 (75 FR 27690).

New Information on Species' Description, Life History, Ecology, Habitat, and Geographic Range and Status

We received no new information pertaining to the description, life history, ecology, or habitat of *Ambrosia pumila* following the 2009 proposed critical habitat designation (74 FR 44238, August 27, 2009). However, we did receive and analyze new information related to the distribution and status of *A. pumila,* which is described below.

Geographic Range and Status

As described in the proposed rule, *Ambrosia pumila* is distributed in southern California from northwestern Riverside County, south through western San Diego County, to northwestern Baja California, Mexico (CNDDB 2010). It is generally found at or below elevations of 1,600 feet (ft) (487 meters (m)) in Riverside County, and 600 ft (183 m) in San Diego County (CNDDB 2010). Since publication of the proposed rule in the **Federal Register** on August 27, 2009 (74 FR 44238), we became aware of two additional occurrences of this species, both of which fall within the previously known geographic range of the species. One occurrence (Subunit 3B) is in the City of Temecula in Riverside County near the western end of 1st Street, just west of Murrieta Creek. This occurrence is believed to have been present at the time of listing because plants with clonal growth patterns tend to be long-lived (Watkinson and White 1985, pp. 44–45; Tanner 2001, p. 1980). Although stems may die and portions of the rhizome may disintegrate over time, except under extreme conditions, enough of the rhizome survives from one growing season to the next to support continued growth of an individual plant. Additionally, because the plants produce very few if any seeds, the ability of the plant to disperse into and colonize previously unoccupied areas is diminished. The second occurrence is located just west of Lake Hodges in the western portion of central San Diego County, on and adjacent to the west side of the Crosby National Golf Club. This occurrence was included in the listing rule, but was thought to have been possibly extirpated since the species was listed. This occurrence is now known to be extant.

Previous Federal Actions

Ambrosia pumila was listed as an endangered species on July 2, 2002 (67 FR 44372). Designation of critical habitat was found to be prudent in the proposed (64 FR 72993; December 29, 1999) and final listing rules, but was deferred due to budgetary constraints and higher listing priorities. The Center for Biological Diversity filed a complaint in the U.S. District Court for the Southern District of California on December 19, 2007, challenging the Service's failure to designate critical habitat for four endangered plants, including *A. pumila* (*Center for Biological Diversity* v. *United States Fish and Wildlife, et al.,* Case No. 07–CV–2378 NLS). The April 11, 2008, settlement agreement stipulates that the Service shall submit a determination as to whether it is prudent to designate critical habitat for *A. pumila,* and if prudent, submit a proposed critical habitat designation to the **Federal Register** for publication by August 20, 2009, and submit a final critical habitat designation to the **Federal Register** for publication by before August 19, 2010. By order dated August 3, 2010, the district court approved a modification to the settlement agreement that extends to November 19, 2010, the deadline for submission of a final revised critical habitat designation to the **Federal Register**. The proposed critical habitat designation published in the **Federal Register** on August 27, 2009 (74 FR 44238).

Summary of Changes From Proposed Rule To Designate Critical Habitat

In our 2009 proposed rule (74 FR 44247, August 27, 2009), we proposed approximately 802 acres (ac) (324 hectares (ha)) as critical habitat in 7 units with 8 subunits in Riverside and San Diego Counties, California. We reevaluated our data in conjunction with information received during the comment period and information obtained after the publication of the 2009 proposed rule. Based on this reevaluation, we changed our proposal to approximately 1,140 ac (461 ha) in 7 units, which collectively consist of 13 subunits (75 FR 27690, May 18, 2010). In this final critical habitat rule, we are designating approximately 783 ac (317 ha) as critical habitat in 6 units with 13 subunits, reflecting the exclusion of approximately 329 ac (133 ha) based on consideration of relevant impacts under section 4(b)(2) of the Act. All land designated as critical habitat in this final rule was included in the 2009 proposed rule (74 FR 44247, August 27, 2009) or the Notice of Availability

(NOA) for the Draft Economic Analysis (DEA) (75 FR 27690, May 18, 2010). Changes between this designation and the 2009 proposed designation are described below and in Table 1.

(1) In the proposed rule and the NOA, we considered lands covered under the Western Riverside County Multiple Species Habitat Conservation Plan (Western Riverside County MSHCP) in Subunits 1A and 1B, Unit 2 and Subunit 3B for exclusion under section 4(b)(2) of the Act. We have analyzed each of the areas considered for exclusion under the Western Riverside County MSHCP and determined that the benefits of exclusion outweigh the benefits of inclusion of approximately 118 ac (48 ha) of land in Unit 2 covered by the Western Riverside County MSHCP. We also determined that exclusion of this area will not result in extinction of the species. Therefore, we excluded this area from this critical habitat designation under section 4(b)(2) of the Act. For a complete discussion of the benefits of inclusion and exclusion, see Exclusions Under Section 4(b)(2) of the Act section below.

(2) In the proposed rule as modified by the NOA, we considered lands in Units 5A and 6 owned by or under the jurisdiction of the City of San Diego within the City of San Diego Subarea Plan under the Multiple Species Conservation Program (City of San Diego MSCP Subarea Plan) for exclusion under section 4(b)(2) of the Act. We have analyzed each of the areas considered for exclusion under the City of San Diego MSCP Subarea Plan and determined that the benefits of exclusion outweigh the benefits of inclusion of approximately 160 ac (65 ha) of land in Unit 6 covered by the City of San Diego MSCP Subarea Plan. Exclusion of this area will not result in extinction of the species. Therefore, we excluded this area from this critical habitat designation under section 4(b)(2) of the Act (*see* Exclusions Under Section 4(b)(2) of the Act section below).

(3) In the proposed rule as modified by the NOA, we considered lands in Subunit 5B and Unit 7 (Subunits 7A, 7B and 7C) owned by or under the jurisdiction of the County of San Diego within the County of San Diego Subarea Plan under the MSCP (County of San Diego MSCP Subarea Plan) for exclusion under section 4(b)(2) of the Act. We have analyzed each of the proposed areas within the County of San Diego MSCP Subarea Plan area and determined that the benefits of exclusion outweigh the benefits of inclusion of approximately 52 ac (21 ha) of land in Subunit 5B covered by the County of San Diego MSCP Subarea Plan that are conserved and managed under the Crosby at Rancho Santa Fe Habitat Management Plan. We also determined that exclusion of this area will not result in extinction of the species. Therefore, we excluded this area from this critical habitat designation under section 4(b)(2) of the Act (*see* Exclusions Under Section 4(b)(2) of the Act section below).

(4) The boundaries of Subunits 4A, 4B, and 4C have been modified to remove habitat that is not suitable for *Ambrosia pumila* according to data received after the proposed rule was published, and to remove widened portions of State Route 76 where habitat is no longer suitable for *A. pumila* (*see* Criteria Used To Identify Critical Habitat section below).

(5) To prepare final critical habitat maps, we overlay maps of those lands we are excluding from this critical habitat designation on polygons that are delineated using physical and biological features. This process often leaves small fragments of a proposed critical habitat unit or subunit that are not excluded but that, by themselves, may not be considered essential. We evaluated these areas and removed from the final designation habitat fragments remaining after areas are excluded that were not considered essential. As a result, the sum of the areas designated and excluded is slightly reduced in this final critical habitat designation compared to the size of the total proposed designation due to removal of small artifacts or fragments created by the exclusion process.

TABLE 1—A COMPARISON OF THE AREAS IDENTIFIED AS CONTAINING FEATURES ESSENTIAL TO THE CONSERVATION OF AMBROSIA PUMILA IN THE 2009 PROPOSED CRITICAL HABITAT DESIGNATION AND THIS FINAL CRITICAL HABITAT DESIGNATION

Location	2009 Proposed critical habitat		Excluded under section 4(b)(2)		2010 Final critical habitat	
	Acres	Hectares	Acres	Hectares	Acres	Hectares
Unit 1: Santa Ana River watershed	112	45	0	0	112	45
Subunit 1A: Alberhill (Lake Street)	41	17	0	0	41	17
Subunit 1B: Nichols Road	70	29	0	0	70	29
Unit 2: Skunk Hollow Vernal Pool watershed	118	48	118	48	0	0
Unit 3: Santa Margarita River watershed	77	31	0	0	77	31
Subunit 3A: Santa Gertrudis Creek	33	13	0	0	33	13
Subunit 3B: Murrieta Creek	44	18	0	0	44	18
Unit 4: San Luis Rey River watershed	126	51	0	0	92	37
Subunit 4A: Calle de la Vuelta	30	12	0	0	15*	6
Subunit 4B: Olive Hill Road	35	14	0	0	23*	9
Subunit 4C: Jeffries Ranch	40	16	0	0	33*	13
Subunit 4D: Gird/Monserate Hill	21	9	0	0	21**	8
Unit 5: San Dieguito River watershed—Lake Hodges	294	119	52	21	249	101
Subunit 5A: Lake Hodges East (Via Rancho Pkwy)	21	9	0	0	21	9
Subunit 5B: Lake Hodges West (Crosby Estates)	279	113	52	21	228	92
Unit 6: San Diego River watershed—Mission Trails Regional Park	198	80	160	65	38	16
Unit 7: Sweetwater River watershed	215	87	0	0	215	87
Subunit 7A: Jamul Drive	39	16	0	0	39	16
Subunit 7B: San Diego National Wildlife Refuge	133	54	0	0	133	54
Subunit 7C: Steele Canyon Bridge	44	18	0	0	44	18
Total	1,146	461	329	133	783	317

Values in this table may not sum or may differ slightly from values in the proposed rule and NOA due to rounding.

* Modified to remove habitat that is not suitable for *Ambrosia pumila.*
** This number is different than the number given in the NOA due to a typographical error in the NOA.

Critical Habitat

Critical habitat is defined in section 3(5)(A) of the Act as:(1) The specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the Act, on which are found those physical or biological features

(a) essential to the conservation of the species and

(b) which may require special management considerations or protection; and (2) specific areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

Conservation, as defined under section 3(3) of the Act, means the use of all methods and procedures that are necessary to bring any endangered or threatened species to the point at which the measures provided under the Act are no longer necessary. Such methods and procedures include, but are not limited to, all activities associated with scientific resources management, such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, transplantation, and—in the extraordinary case where population pressures within a given ecosystem cannot otherwise be relieved—regulated taking.

Critical habitat receives protection under section 7(a)(2) of the Act through the prohibition against Federal agencies carrying out, funding, or authorizing the destruction or adverse modification of critical habitat. Section 7(a)(2) of the Act requires consultation on Federal actions that may affect critical habitat. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. Such designation does not allow the government or public to access private lands. Such designation does not require implementation of restoration, recovery, or enhancement measures by private landowners. Where a landowner requests Federal agency funding or authorization for an action that may affect a listed species or critical habitat, the consultation requirements of section 7(a)(2) would apply, but even in the event of a destruction or adverse modification finding, the landowner's obligation is not to restore or recover the species, but to implement reasonable and prudent alternatives to avoid destruction or adverse modification of critical habitat.

For inclusion in a critical habitat designation, the habitat within the geographical area occupied by the species at the time of listing must contain physical and biological features that are essential to the conservation of the species, and be included only if those features may require special management considerations or protection. Critical habitat designations identify, to the extent known using the best scientific data available, habitat areas that provide essential life cycle needs of the species; that is, areas on which are found the primary constituent elements (PCEs) laid out in the appropriate quantity and spatial arrangement essential to the conservation of the species. Under section 3(5)(A)(ii) of the Act, the Secretary can designate critical habitat in areas outside the geographical area occupied by the species at the time it is listed as critical habitat only when he/she determines that those areas are essential for the conservation of the species.

Section 4 of the Act requires that we designate critical habitat on the basis of the best scientific and commercial data available. Further, our Policy on Information Standards Under the Endangered Species Act (published in the **Federal Register** on July 1, 1994 (59 FR 34271)), the Information Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Pub. L. 106–554; H.R. 5658)), and our associated Information Quality Guidelines provide criteria, establish procedures, and provide guidance to ensure that our decisions are based on the best scientific data available. They require our biologists, to the extent consistent with the Act and with the use of the best scientific data available, to use primary and original sources of information as the basis for recommendations to designate critical habitat.

When we are determining which areas should be designated as critical habitat, our primary source of information is generally the information developed during the listing process for the species. Additional information sources may include the recovery plan for the species, articles in peer-reviewed journals, conservation plans developed by States and counties, scientific status surveys and studies, biological assessments, or other unpublished materials and expert opinion or personal knowledge.

Habitat is often dynamic, and species may naturally move within an area or from one area to another over time. Furthermore, we recognize that designation of critical habitat may not include all habitat areas that may eventually be determined necessary for recovery of the species, based on scientific data not now available. For these reasons, a critical habitat designation does not signal that habitat outside the designated area is unimportant or may not promote the recovery of the species. Federal activities that may affect areas outside of critical habitat are still subject to review under section 7 of the Act if they may affect *Ambrosia pumila*. The prohibitions of section 9 of the Act applicable to listed plant species also continue to apply both inside and outside of designated critical habitat.

Areas that support occurrences of the species, but are outside the critical habitat designation, will continue to be subject to conservation actions we implement under section 7(a)(1) of the Act. In these areas, the species is also subject to the regulatory protections afforded by the section 7(a)(2) jeopardy standard, as determined on the basis of the best available scientific information at the time of the agency action. Federally funded or permitted projects affecting listed species outside their designated critical habitat areas may still result in jeopardy findings in some cases. Similarly, critical habitat designations made on the basis of the best available information at the time of designation will not control the direction and substance of future recovery plans, habitat conservation plans (HCPs), or other species conservation planning efforts if new information available to these planning efforts calls for a different outcome.

Physical and Biological Features

In accordance with section 3(5)(A)(i) of the Act and regulations at 50 CFR 424.12(b), in determining which areas occupied by the species at the time of listing to propose as critical habitat, we consider those physical and biological features that are essential to the conservation of the species that may require special management considerations or protection. We consider the physical and biological features to be the PCEs laid out in the appropriate quantity and spatial arrangement essential for the

conservation of the species. The PCEs include, but are not limited to:

(1) Space for individual and population growth and for normal behavior;

(2) Food, water, air, light, minerals, or other nutritional or physiological requirements;

(3) Cover or shelter;

(4) Sites for breeding, reproduction, and rearing (or development) of offspring; and

(5) Habitats that are protected from disturbance or are representative of the historical, geographical, and ecological distributions of a species.

Little is known about the specific characteristics of *Ambrosia pumila* habitat. Therefore, the PCEs for this species are based on our assessment of the ecosystem settings in which the species has most frequently been detected. The physical and biological features essential to the conservation of *A. pumila* are derived from studies of this species' habitat, ecology, and life history as described below, in the Background section of the proposed critical habitat designation published in the **Federal Register** on August 27, 2009 (74 FR 44238), and in the final listing rule published in the **Federal Register** on July 2, 2002 (67 FR 44372).

Space for Individual and Population Growth and for Normal Behavior

Clonal Growth—Rhizome Spread and New Aerial Stems

Individual *Ambrosia pumila* plants spread by slender underground rhizomes to produce a group of genetically identical aerial (above-ground) stems—a clone. Growing rhizomes extend underground beyond the extent of the aerial stems into adjacent suitable habitat, and rhizomes of adjacent plants likely intermingle to a degree. The distance rhizomes extend beyond the standing aerial stems is difficult to measure because of the difficulty in unearthing an intact rhizome system.

The number and spatial distribution of the aerial stems of *Ambrosia pumila* patches can differ from one growing season to the next (Martin 2005, p. 3; City of San Diego 2008a, p. 1). For example, a study that monitored *A. pumila* in 2000 and 2005 observed patches of *A. pumila* differing in shape and size (up to several square meters), with some patches not producing any stems in 2005 (some of the patches that did not produce stems in 2005 were observed to produce stems in 2008 (Martin 2005, p. 8; A. Folarin 2008, pers. comm.)). Differences in patch size and shape may be due to differences in available moisture or competition from other plants (Martin 2005, p. 3; City of San Diego 2008a, p. 1). Based on these and other observations, we conclude that the rhizome system of a group of *A. pumila* stems likely occupies a greater underground area than that occupied by the aerial stems at any given time, and aerial stems may be produced only when and where conditions are appropriate. Thus, habitat occupied by *A. pumila* extends beyond that seen to be occupied by the aerial stems, and area designated as critical habitat must extend beyond the area seen to be occupied by standing aerial stems to encompass the estimated limits of the underground rhizome system.

Germination of Seeds and Spread of Seedlings

It is unknown to what extent and with what frequency *Ambrosia pumila* reproduces by seeds. Based on genetic studies described below, at least some low rate of sexual reproduction has occurred. We are not aware of any research that would provide the information needed to assess the species' germination and seedling needs.

Food, Water, Air, Light, Minerals, or Other Nutritional or Physiological Requirements

Water

Specific water needs of the species are unknown. *Ambrosia pumila* is adapted to the dry conditions which occur annually throughout its range (Keck 1959, p. 1103; Munz 1974, p. 112; Dudek 2000, Appendix A; CNLM 2008, p. 18). Service biologists have observed fresh (not desiccated) aerial stem shoots after small amounts of precipitation and after annual vegetation in the area had desiccated (A. Folarin 2008, pers. comm.), implying that either *A. pumila* requires less water than other grassland plants, that the underground perennial rhizome system has some capacity to store enough water to sustain growth, or both. Additionally, we believe that periodic flooding may be necessary at some stage of the plant population's life history (such as seed germination, dispersal of seeds and rhizomes) or to maintain some essential aspect of its habitat, because native occurrences of the plant are always found on river terraces or within the watersheds of vernal pools.

Light

Ambrosia pumila is limited to open or low-growing plant communities, which implies that the species is not shade tolerant (Dudek 2000, pp. 18–19). *Ambrosia pumila* stems amid taller vegetation obtain adequate sunlight by growing taller and more slender compared to those in more open areas (Dudek 2000, p. 19), which implies the species is not shade tolerant.

Soil

Ambrosia pumila is found primarily on sandy loam or clay soils including (but not limited to) the Placentia (sandy loam), Diablo (clay), and Ramona (sandy loam) series (Dudek 2000, Appendix A; CNDDB 2010). *Ambrosia pumila* is rarely found growing on other substrate types (such as gravel).

Chemical soil attributes and other abiotic and biotic characteristics have been measured and documented for *Ambrosia pumila* occurrences at Skunk Hollow (Riverside County), Mission Trails Regional Park, and San Diego National Wildlife Refuge (San Diego County) (Dudek 2000, Appendix A; CNLM 2008, pp. 6–7, 12, and 18), including pH, percent organic matter, soil moisture, and elemental composition. These measurements did not provide consistent results across the range of the species; thus, we are unable to make generalizations as to needs of the species as far as soil attributes are concerned.

Temperature

We have no information on the tolerance of *Ambrosia pumila* to climatic extremes. Temperature is thought to potentially play a role in inducing (or prohibiting) seed germination (Johnson 1999, p. 5), although there is limited information at this time as to how often this species currently reproduces via seed.

Sites for Breeding, Reproduction, or Rearing (or Development) of Offspring

As stated in the "Life History" section of the proposed rule, little is known about the nature and frequency of sexual reproduction in *Ambrosia pumila.* Occurrences are consistently found on the upper terraces of rivers and other waterways; consequently, periodic flooding of these waterways likely plays or likely has played a role in the life history of the plant. For example, Johnson (1999, p. 5) postulated that *A. pumila* seeds may require soaking in flood waters or scarification as they are churned about with debris in flood waters to germinate. Additionally, floods may disperse *A. pumila* rhizomes and seeds (Dudek 2003, p. P–332) and create space for new stems by removing or limiting the growth of competitors.

Presuming *Ambrosia pumila* is wind pollinated, as discussed in the "Life

History" section of the proposed rule, the species requires sufficient airflow through inflorescences to pick up and carry pollen (McGlaughlin and Friar 2007, p. 329). This is another reason (in addition to not being shade-tolerant) that *A. pumila* may require habitat containing primarily low-growing plants—low-growing plants do not block or dramatically reduce airflow to plants of *A. pumila's* stature, which is generally less than 12 inches (30 centimeters) tall (McGlaughlin and Friar 2007, p. 329).

Ambrosia pumila is presumed to be self-compatible (an individual can produce viable seed with its own pollen), but this aspect of the species' reproductive strategy has not been well-examined. In a recent study, another *Ambrosia* species previously thought to be self-compatible was found not to be self-compatible (Friedman and Barrett 2008, p. 4). If *A. pumila* likewise is not self-compatible, genetically distinct individuals in close proximity to one another may be crucial to maintaining sexual reproduction in the species (McGlaughlin and Friar 2007, p. 329).

Habitats Protected From Disturbance or Representative of the Historical, Geographical, and Ecological Distributions of the Species

Ambrosia pumila occurs most frequently on upper terraces of rivers with flat or gently sloping areas of 0 to 42 percent slopes. *A. pumila* occurrences are found near, but not directly adjacent to, the river channels and along other drainages in western Riverside County, western San Diego County, and northwestern Baja California, Mexico (Beauchamp 1986, p. 94; Johnson *et al.* 1999, p. 1; McGlaughlin and Friar 2007, p. 321; CNDDB 2008). These areas are or likely have been associated with a natural flood disturbance regime. The species is primarily associated with native and nonnative grassland and ruderal communities, and openings in coastal sage scrub (Johnson *et al.* 1999, p. 1; Dudek 2000, p. 18; Dudek 2003, p. P–330; CNDDB 2010). In Riverside County, *A. pumila* occurs in ruderal and nonnative grassland communities adjacent to creeks and other smaller drainages (for example, Temescal (Alberhill) Creek and Santa Gertrudis Creek) (Dudek 2003, p. P–326; CNDDB 2010). *Ambrosia pumila* also occurs in nonnative grassland community adjacent to and within the watershed of Skunk Hollow vernal pool in Riverside County (Dudek 2003, p. P–326; CNDDB 2010). In San Diego County, *A. pumila* is more often found adjacent to larger waterways (for example, San Luis Rey River, San Diego River, and Sweetwater River), although the species is also often found associated with smaller drainages and washes (CNDDB 2010).

Occurrences in Riverside County are found further inland and at higher elevations than in San Diego County. For example, the occurrence at Skunk Hollow in Riverside County is 1,350 ft (411 m) above sea level, while the occurrences at Mission Trails Regional Park and San Diego National Wildlife Refuge in San Diego County are about 315 ft and 360 ft (96 m and 110 m) above sea level, respectively (CNLM 2008, p. 7)).

The documented range of *Ambrosia pumila* in Mexico at the time of listing extended from Cabo Colonet south to Lake Chapala in north-central Baja California. We have no information regarding additional occurrences in Mexico, or the physical and biological features essential to the conservation of the species there.

Primary Constituent Elements for Ambrosia pumila

Under the Act and its implementing regulations at 50 CFR 424.12, we are required to identify the specific areas within the geographical area occupied by a species, at the time it is listed, on which are found those physical or biological features determined to be essential to the conservation of the species and that may require special management considerations or protection. The essential physical and biological features are those PCEs laid out in the appropriate spatial arrangement and quantity determined to be essential to the conservation of the species. Because not much is known about the specific needs and characteristics of this species, the PCEs are based on observed characteristics of the habitats in which the species is most often found. All areas designated as critical habitat for *A. pumila* were occupied at the time the species was listed, occur within the species' historical geographic range, and contain sufficient PCEs to support at least one life-history function.

Based on the above needs and our current knowledge of the life history, biology, and ecology of *Ambrosia pumila,* and the characteristics of the areas where the species is known to occur, we identified two PCEs for *A. pumila:*

1. Sandy loam or clay soils (regardless of disturbance status), including (but not limited to) the Placentia (sandy loam), Diablo (clay), and Ramona (sandy loam) soil series that occur near (up to several hundred meters from but not directly adjacent to) a river, creek, or other drainage, or within the watershed of a vernal pool, and that occur on an upper terrace (flat or gently sloping areas of 0 to 42 percent slopes are typical for terraces on which *Ambrosia pumila* occurrences are found).

2. Grassland or ruderal habitat types, or openings within coastal sage scrub, on the soil types and topography described in PCE 1, that provide adequate sunlight, and airflow for wind pollination.

Based on our current knowledge of the needs of the species, we believe the need for space for individual and population growth and normal behavior is met by PCE 2, and areas for reproduction, water, light, and soil are provided by PCEs 1 and 2. These areas provide nutrients, moisture, and proximity to water features that provide periodic flooding presumed necessary for the plant's persistence.

In designating this critical habitat, we intend to conserve the physical and biological features considered essential to support the life-history functions of the species. All units and subunits designated here as critical habitat contain sufficient PCEs in the appropriate quantity and spatial arrangement to provide for one or more of the life-history functions of *Ambrosia pumila.*

Special Management Considerations or Protection

When designating critical habitat, we assess whether the occupied areas contain the physical and biological features that are essential to the conservation of the species, and whether these features may require special management considerations or protection. The area designated as critical habitat will require some level of management to address the current and future threats to the physical and biological features essential to the conservation of the species. In all units, special management will be required to ensure that the habitat is able to provide for the growth and reproduction of the species.

Records indicate that *Ambrosia pumila* historically was known from over 50 locations in San Diego and Riverside counties, but the number of extant occurrences has been dramatically reduced because much of the species' habitat has been impacted by human activities (Burrascano and Hogan 1997, p. 7; Dudek 2000, p. 17; CNDDB 2010). A detailed discussion of threats to *A. pumila* and its habitat can be found in the final listing rule (67 FR 44372, July 2, 2002). The features essential to the conservation of *A. pumila* require special management

considerations or protection to reduce the following threats, among others:

• Habitat destruction caused by urban development, including highway and utility corridor construction and maintenance, highway expansion, and development of recreational facilities (such as golf courses and campgrounds). These activities can destroy the PCEs by removing or compacting soil, making habitat unsuitable for *Ambrosia pumila.*

• Soil compaction caused by the creation and use of trails by hikers, horses, and vehicles. *Ambrosia pumila* appears to be tolerant to some level of disturbance caused by trail creation and use; it is often found in the disturbed areas along margins of dirt trails. However, it is found less often in trailways, implying that although the appropriate soil type might be present, soil compaction can alter soil physical characteristics such that the soil can no longer support plant growth (PCE 1).

• Habitat alteration caused by invasion of nonnative plant species that may, if present in large enough numbers, change the plant assemblage or cover density to the extent that *Ambrosia pumila* plants can no longer receive adequate sunlight and airflow (PCE 2).

• Alteration of hydrological and floodplain dynamics, such as channelization and water diversions, (an additional threat not discussed in the listing rule), which can change the frequency of flooding in occupied areas or eliminate natural periodic flooding presumed necessary for the plant's long-term persistence (PCE 1).

Special management considerations or protection are required within critical habitat areas to address these threats. Management activities that could ameliorate these threats include fencing *Ambrosia pumila* occurrences and providing signage to discourage encroachment by hikers, horses, and off-road vehicle users; control of nonnative plants using methods shown to be effective (for examples, see CNLM 2008); guiding the design of development projects to avoid impacts to *A. pumila* habitat; and restoring and maintaining natural hydrology and floodplain dynamics of waterways associated with *A. pumila* occurrences where feasible. These management activities will help protect the PCEs for the species by reducing soil compaction (PCE 1), lowering the density of nonnative plants thereby maintaining the appropriate community structure (PCE 2), and maintain periodic flooding of *A. pumila* habitat where possible (PCE 1).

Criteria Used To Identify Critical Habitat

As required by section 4(b) of the Act, we used the best scientific and commercial data available in determining areas within the geographical area occupied at the time of listing that contain the features essential to the conservation of *Ambrosia pumila.* We are designating critical habitat in areas that we consider to have been occupied by the species at the time of listing and that continue to be occupied today, and that contain the PCEs laid out in the appropriate quantity and spatial arrangement essential to the conservation of the species (*see* the "*Geographic Range and Status*" section of the proposed critical habitat rule (74 FR 44241, August 27, 2009) for more information). We are not designating any areas outside the geographical range occupied at the time of listing. All units and subunits contain the PCEs of *A. pumila* habitat.

We also reviewed available information that pertains to the habitat requirements of this species, although *A. pumila* has not been well-studied and little is known about its breeding system or habitat requirements and characteristics. Additionally, some data from different information sources conflict, further complicating the task of discerning species' habitat requirements. We used sources of information, such as reports submitted to the Service during section 7 consultations and other project reviews, and by biologists holding section 10(a)(1)(A) recovery permits; research published in peer-reviewed articles; research presented in academic theses and agency reports; regional Geographic Information System (GIS) coverages; and data collected in the field by Service biologists.

Ambrosia pumila was first detected after listing of the species in two of the areas we are designating as critical habitat. We concluded these areas were occupied at the time the species was listed because individuals of species with a clonal growth habit like *A. pumila* are usually long-lived (Watkinson and White 1985, pp. 44–45; Tanner 2001, p. 1980). The occurrence at the intersection of State Route 76 and Olive Hill Road in San Diego County (Subunit 4B) was found during a general survey for *A. pumila* in 2006 (CNDDB 2010). The occurrence near the intersection of State Route 76 and Gird Road in San Diego County (Subunit 4D) was mapped during a survey for a State Route 76 road widening project (GIS data provided to the Service by California Department of Transportation in 2009; USFWS 2008). To our knowledge, these two areas had not been adequately, if at all, surveyed for *A. pumila* prior to discovery, and we have no reason to believe the plant was imported, or had dispersed into these areas from other locations after listing because the plants produce very few if any seeds and, consequently, the ability of the plant to disperse into and colonize previously unoccupied areas is diminished. It is unlikely that the species would be able to disperse great distances and colonize new areas (*see* Index Map below). We believe that the occurrences identified since listing were in existence for many years and were only recently detected due to increased awareness of this species.

We are also designating critical habitat in some areas where Ambrosia pumila was thought to be extirpated and where an occurrence exists that was not considered viable at the time of listing. We conducted surveys of historical occurrences as part of the background research for this rule. Based on information provided by a local biological consultant, we were able to verify one occurrence east of Lake Hodges in San Diego County that was previously thought to be extirpated because it had not been seen since 1999. During our development of the proposed rule, we were unable to verify this site because the available records contained minimal site location information. However, our recent survey (2009) of the site east of Lake Hodges in San Diego County found a viable, relatively large *A. pumila* occurrence and we determined this site meets the definition of critical habitat (*see* criteria below). All units and subunits contain the physical and biological features believed to be essential to the conservation of this species.

As required by section 4(b)(1)(A) of the Act, we used the best scientific and commercial data available in trying to determine areas that contain the physical and biological features that are essential to the conservation of *Ambrosia pumila,* and that may require special management considerations or protection.

After identifying the PCEs, we followed these steps to delineate critical habitat:

(1) We identified all extant, natural occurrences of *Ambrosia pumila,* which consist of those known to exist at the time of listing, and those subsequently detected that we believe existed at the time of listing. We compiled data from the following sources to create our database of *A. pumila* occurrences: (1) Data used in the 2002 listing rule for *A. pumila* (67 FR 44372, July 2, 2002); (2)

the current CNDDB element occurrence data report for *A. pumila* and accompanying GIS references (CNDDB 2010, pp. 1–50); (3) data from the on-line Consortium of California Herbaria and accompanying Berkeley Mapper GIS records (Consortium of California Herbaria 2010); (4) the Western Riverside County Multiple Species Habitat Conservation Plan (Western Riverside County MSHCP) species GIS database; and (5) the Carlsbad Fish and Wildlife Office's (CFWO) internal GIS species database, which includes the species data used for the San Diego Multiple Species Conservation Program (MSCP) and the San Diego Multiple Habitat Conservation Plan (MHCP), reports from section 7 consultations, and Service observations of *A. pumila* (CFWO internal species GIS database). We used these data to delineate GIS polygons around *A. pumila* occurrences.

First, we reviewed the data that we compiled to ensure its accuracy. We checked each data point to ensure it represented a site documented by a herbarium voucher or reported observation of *Ambrosia pumila* and was not a duplicate occurrence in the database. Any duplicates detected were removed from the database. Secondly, we checked each data point to ensure that it was correctly mapped. Data points that did not match the description for the original herbarium collection or observation were remapped in the correct location, if possible. We removed occurrences where the location could not be determined from available data or site visits. Third, we determined occupancy status. For areas where we have past occupancy data for *A. pumila,* we assumed the area remained occupied unless: (1) Multiple surveys for the species did not find *A. pumila;* (2) the site was significantly disturbed (for example, developed) since the last observation of the species; or (3) records lacked specific location information, and field surveys carried out in conjunction with this critical habitat determination could not locate the occurrence.

(2) We determined there are no specific areas outside the geographical area occupied by *Ambrosia pumila* at the time it was listed that are essential for the conservation of the species. Information obtained during the Service's research in connection with this action indicates that the geographical area occupied by the species at the time it was listed provides sufficient resources for the conservation of the species. For example, McGlaughlin and Friar (2007, p. 329) conducted an analysis of genetic diversity within and among populations of *A. pumila* and determined that the existing occurrences could support recovery of the species. We do not have sufficient information regarding the specific needs of the species to determine if any areas outside the geographical area occupied by *Ambrosia pumila* at the time it was listed are essential for the conservation of the species.

(3) We removed areas where *Ambrosia pumila* occurs in habitat of low quality for growth and propagation (such as paved areas, or relatively small urban lots surrounded by residential development and continuously subjected to impacts of urbanization such as mowing or foot and vehicle traffic). For example, we did not include one occurrence in the City of El Cajon on a site composed of two residential lots less than half an acre in size, one mowed and landscaped, the other with highly disturbed and compacted soil. Although occupied, we did not consider these locations for critical habitat because they likely do not contribute to the long-term conservation of the species. We made this determination using site descriptions in the CNDDB, satellite imagery, and by talking with Service biologists, other researchers, and land managers familiar with the areas in question.

(4) Using data from studies that mapped the aerial stems of *Ambrosia pumila,* we estimated the distance the rhizome system likely extends beyond aerial stems clusters by calculating the average distance between aerial stems clusters within a CNDDB occurrence polygon. An occurrence is defined by CNDDB as an occupied habitat area separated by 0.25 mi (0.40 km) or more from the next nearest occupied habitat area. Using this method we estimated the average distance of underground rhizome expansion beyond the above-ground aerial stems as approximately 1,181 ft (260 m). Therefore, we expanded the outer boundary of the above-ground extent of each CNDDB occurrence polygon by 1,181 ft (260 m) to account for the underground rhizome system extending beyond the area occupied by visible stems. We believe this distance adequately captures the extent of individual occurrences.

(5) We removed any areas within the boundary mapped in step (4) above where vegetation type was not grassland, ruderal, or coastal sage scrub, using the vegetation types in our GIS database and personal observations by Service biologists and other researchers or land managers.

When determining the critical habitat boundaries, we made every effort to map precisely only the areas that contain the PCEs and provide for the conservation of *Ambrosia pumila.* However, we cannot guarantee that every fraction of critical habitat contains the PCEs due to the mapping scale we use to identify critical habitat boundaries. We made every attempt to avoid including developed areas such as lands underlying buildings, paved areas, and other structures that lack PCEs for *A. pumila.* The scale of maps prepared under the parameters for publication within the Code of Federal Regulations may not reflect the exclusion of such developed areas. Any developed structures and the land under them inadvertently left inside critical habitat boundaries shown on the maps of this final critical habitat designation are excluded by text in this rule and are not designated as critical habitat. Therefore, Federal actions involving these lands would not trigger section 7 consultation with respect to critical habitat and the requirement of no adverse modification unless the specific actions may affect the species or PCEs in adjacent critical habitat.

Critical Habitat Designation

We are designating 783 ac (317 ha) of critical habitat for *Ambrosia pumila* in 6 units that include 13 subunits. The critical habitat areas outlined in Table 2 and described below constitute our best assessment of areas occupied at the time of listing that contain the PCEs laid out in the appropriate quantity and spatial arrangement essential to the conservation of the species that may require special management considerations or protection. We are not designating any areas outside the geographic area occupied by the species at the time of listing because we determined that occupied lands within the species' known geographical range are sufficient for the conservation of *A. pumila.* Each unit and subunit include suitable habitat that will allow for population growth and growth of individual plants represented by aerial stems and the associated rhizome system.

TABLE 2—AREA ESTIMATES (ACRES) (HECTARES) AND LAND OWNERSHIP FOR AMBROSIA PUMILA FINAL CRITICAL HABITAT

Unit #: Unit name (CNDDB element occurrence number)	Federally owned land		State or local government-owned land		Privately-owned land		Total area	
	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares
RIVERSIDE COUNTY								
Unit 1: Santa Ana River watershed	.....	.....	26	11	85	35	112	45
1A. Alberhill (58)	.....	.....	23	10	18	7	41	17
1B. Nichols Road (44)	.....	.....	3	1	67	27	70	29
Unit 3: Santa Margarita River watershed	.....	.....	8	3	69	28	77	31
Subunit 3A: Santa Gertrudis Creek	.....	.....	8	3	25	10	33	13
Subunit 3B: Murrieta Creek	.....	.....	.....	.....	44	18	44	18
Subtotal:	.....	.....	34	14	154	62	189	76
SAN DIEGO COUNTY								
Unit 4: San Luis Rey River watershed	.....	.....	17	7	75	30	92	37
4A. Calle de la Vuelta (43)	.....	.....	1	0	14	6	15	6
4B. Olive Hill Road (16)	.....	.....	16	6	8	3	23	9
4C. Jeffries Ranch (45)	.....	.....	0	0	33	13	33	13
4D. Gird/Monserate Hill (n/a)	.....	.....	1	0	20	8	21	8
Unit 5: San Dieguito River watershed	.....	.....	129	52	121	49	249	101
5A. Lake Hodges East (Via Rancho Pkwy) (14)	.....	.....	16	6	5	2	21	9
Subunit 5B: Lake Hodges West (Crosby Estates)	.....	.....	113	46	115	47	228	92
Unit 6: San Diego River watershed—Mission Trails Regional Park	.....	.....	6	3	32	13	38	15
Unit 7: Sweetwater River watershed	146	59	13	5	57	23	215	87
Subunit 7A: Jamul Road	.....	.....	3	1	36	15	39	16
7B. SDNWR (48)	118	48	.....	.....	15	6	133	54
7C. Steele Canyon Bridge (34)	28	11	10	4	6	2	44	18
Subtotal	146	59	164	67	284	115	594	240
Total	146	59	199	81	438	178	783	316

Values in this table may not sum due to rounding.

Critical Habitat Units

Presented below are brief descriptions of all subunits included in the final critical habitat designation and reasons why they meet the definition of critical habitat for *Ambrosia pumila.* The subunits are listed in order geographically north to south and east to west.

Unit 1: Santa Ana River Watershed

Unit 1 is located in western Riverside County and consists of two subunits totaling approximately, 26 ac (11 ha) of State or local government-owned land, and 85 ac (35 ha) of private land for a total of approximately 112 ac (45 ha) (values do not sum due to rounding).

Subunit 1A: Alberhill

Subunit 1A is located near Alberhill, north of Lake Elsinore and just west of Interstate Highway 15 in Riverside County, California. This subunit is near the northern base of Alberhill Mountain, and near the intersection of Lake Street and Temescal Canyon Road. Subunit 1A consists of approximately 23 ac (10 ha) of County-owned land, and 18 ac (7 ha) of privately owned land for a total of approximately 41 ac (17 ha). The approximately 23 ac (10 ha) of County-owned land in Subunit 1A are conserved and currently managed by the Western Riverside County Regional Conservation Authority; transfer of ownership by the County of Riverside to the Western Riverside County Regional Conservation Authority is planned for the near future. This conserved area is not yet receiving active management. This subunit was occupied at the time of listing and remains occupied and, like all other extant occurrences, we also believe this subunit is essential to the conservation of this species because of its contribution to the genetic diversity of the species (McGlaughlin and Friar 2007, p. 329; see Genetics section of the proposed rule (74 FR 44241, August 27, 2009)). Subunit 1A contains the physical and biological features essential to the conservation of *Ambrosia pumila,* including sandy loam or clay soils located on an upper terrace of a water source, which provide nutrients, moisture, and potentially periodic flooding presumed necessary for the plant's persistence (PCE 1); and coastal sage scrub vegetation, which allows adequate sunlight and airflow for *A. pumila* (PCE 2). The PCEs in this subunit require special management considerations or protection to address threats from nonnative plant species in situations where nonnative species are outcompeting *A. pumila* for resources, and from human encroachment and development. Please see the Special Management Considerations or Protection section of this rule for a discussion of the threats to *A. pumila* habitat and potential management considerations.

Subunit 1B: Nichols Road

Subunit 1B is located about 2.1 mi (3.5 km) southeast of Subunit 1A (Alberhill), on the north and south sides

of Nichols Road, in Riverside County, California. This subunit is near the southeastern base of Alberhill Mountain, just west of Durant Road and Temescal Creek. Subunit 1B consists of approximately 3 ac (1 ha) of State or local government-owned land, and 67 ac (27 ha) of privately owned land for a total of approximately 70 ac (29 ha) (values do not sum due to rounding). No lands in Subunit 1B are conserved or managed for biological resources. This subunit was occupied at the time of listing and remains occupied, and is essential to the conservation of this species because this subunit (along with Subunit 1A) represents the northernmost occurrences of this species, which is geographically situated to potentially assist this species expand its range northward. Like all other extant occurrences, this subunit is also essential to the conservation of this species because of its contribution to the genetic diversity of the species (McGlaughlin and Friar 2007, p. 329; see Genetics section of the proposed rule (74 FR 44241, August 27, 2009)). However, due to impacts from unauthorized grading and disking, and a permitted road realignment project, *Ambrosia pumila* within this subunit may be in imminent danger of extirpation. Subunit 1B contains physical and biological features that are essential to the conservation of *A. pumila,* including sandy loam or clay soils located on an upper terrace of a water source, which provide nutrients, moisture, and periodic flooding presumed necessary for the plant's persistence (PCE 1), and ruderal habitat type, which allows adequate sunlight and airflow for *A. pumila* (PCE 2). The physical and biological features essential to the conservation of the species in this subunit may require special management considerations or protection to address threats from nonnative plant species in situations where nonnative species are outcompeting *A. pumila* for resources, and from activities (grading, construction, human encroachment) that occur in the area. Please see the Special Management Considerations or Protection section of this rule for a discussion of the threats to *A. pumila* habitat and potential management considerations.

Unit 3: Santa Margarita River Watershed

Unit 3 is located in western Riverside County and consists of two subunits totaling approximately, 8 ac (3 ha) of State or local government-owned land, and 69 ac (28 ha) of private land for a total of 77 ac (31 ha).

Subunit 3A: Santa Gertrudis Creek

Subunit 3A is located about 1 mile (1.6 km) southwest of Unit 2, along the San Diego Aqueduct, south of the intersection of Chandler and Suzi Roads and north of Santa Gertrudis Creek in Riverside County. Subunit 3A consists of approximately 8 ac (3 ha) of State-owned land and 25 ac (10 ha) of privately owned land for a total of approximately 33 ac (13 ha). No lands in Subunit 3A are conserved or managed for biological resources. This unit was occupied at the time of listing and remains occupied, and like all other extant occurrences, is essential to the conservation of this species because of its contribution to the genetic diversity of the species (McGlaughlin and Friar 2007, p. 329; see Genetics section of the proposed rule (74 FR 44241, August 27, 2009)). Subunit 3A contains physical and biological features that are essential to the conservation of *Ambrosia pumila,* including sandy loam or clay soils located on an upper terrace of a water source, which provide nutrients, moisture, and periodic flooding presumed necessary for the plant's persistence (PCE 1), and ruderal habitat type, which allows adequate sunlight and airflow for *A. pumila* (PCE 2). The physical and biological features essential to the conservation of the species in this unit may require special management considerations or protection to address threats from nonnative plant species in situations where nonnative species are outcompeting *A. pumila* for resources, human encroachment, and utility maintenance activities. Please see the Special Management Considerations or Protection section of this rule for a discussion of the threats to *A. pumila* habitat and potential management considerations.

Subunit 3B: Murrieta Creek

Subunit 3B is located in the City of Temecula in southwestern Riverside County, California. This subunit is near the western end of 1st Street, just west of Murrieta Creek. Subunit 3B consists of approximately 44 ac (18 ha) of privately owned land. No lands in Subunit 3B are conserved or managed for biological resources. This subunit meets the definition of critical habitat for this species because of its contribution to the genetic diversity of the species (McGlaughlin and Friar 2007, p. 329; see Genetics section of the proposed rule (74 FR 44241, August 27, 2009)). Subunit 3B contains physical and biological features that are essential to the conservation of *Ambrosia pumila,* including sandy loam or clay soils located on an upper terrace of a water source, which provide nutrients, moisture, and periodic flooding presumed necessary for the plant's persistence (PCE 1), and nonnative grassland habitat type, which allows adequate sunlight and airflow for *A. pumila* (PCE 2). The physical and biological features essential to the conservation of the species in this subunit may require special management considerations or protection to address threats from nonnative plant species in situations where nonnative species are out-competing *A. pumila* for resources, from human foot and vehicle traffic that may occur in the area, and from development. Please see the Special Management Considerations or Protection section of this rule for a discussion of the threats to *A. pumila* habitat and potential management considerations.

Unit 4: San Luis Rey River Watershed

Unit 4 is located in northwestern San Diego County and consists of four subunits of approximately 17 ac (7 ha) of State or local government-owned land and approximately 74 ac (30 ha) of privately owned land, for a total of approximately 91 ac (37 ha).

Subunit 4A: Calle de la Vuelta

Subunit 4A is located near junction of State Route 76 and Calle de la Vuelta in unincorporated San Diego County. Subunit 4A consists of approximately 0.8 ac (0.3 ha) of State or local government-owned land and 14 ac (6 ha) of privately owned land, for a total of approximately 15 ac (6 ha). No lands in Subunit 4A are conserved or managed for biological resources. This subunit was occupied at the time of listing and, like all other extant occurrences, we also believe this subunit is essential to the conservation of this species because of its contribution to the genetic diversity of the species (McGlaughlin and Friar 2007, p. 329; see Genetics section of the proposed rule (74 FR 44241, August 27, 2009)). Subunit 4A contains physical and biological features that are essential to the conservation of *Ambrosia pumila,* including sandy loam or clay soils located on an upper terrace of a water source, which provide nutrients, moisture, and periodic flooding presumed necessary for the plant's persistence (PCE 1), and ruderal vegetation, which allows adequate sunlight and airflow for *A. pumila* (PCE 2). The PCEs in this subunit may require special management considerations or protection to address threats from nonnative plant species in situations

where nonnative species are outcompeting *A. pumila* for resources, human encroachment, road maintenance activities, and future widening of State Route 76. Please see the Special Management Considerations or Protection section of this rule for a discussion of the threats to *A. pumila* habitat and potential management considerations.

Subunit 4B: Olive Hill Road

Subunit 4B is located on the west side of State Route 76, south of Olive Hill Road in unincorporated San Diego County. Subunit 4B consists of approximately 16 ac (6 ha) of State or local government-owned land and approximately 8 ac (3 ha) of privately owned land, for a total of approximately 23 ac (9 ha) (values do not sum due to rounding). No lands in Subunit 4B are conserved (a portion of Subunit 4B is within the Groves mitigation preserve, managed by the California Department of Transportation (Caltrans); this area has not yet been conserved). The occurrence in this subunit was erroneously considered extirpated at the time of listing, but has since been found to be extant. Like all other extant occurrences, we also believe this subunit is essential to the conservation of this species because of its contribution to the genetic diversity of the species (McGlaughlin and Friar 2007, p. 329; see Genetics section of the proposed rule (74 FR 44241, August 27, 2009)). Subunit 4B contains physical and biological features that are essential to the conservation of *Ambrosia pumila,* including sandy loam or clay soils located on an upper terrace of a water source, which provide nutrients, moisture, and flooding presumed necessary for the plant's persistence (PCE 1), and grassland vegetation which allow adequate sunlight and airflow for *A. pumila* (PCE 2). The PCEs in this subunit may require special management considerations or protection to address threats from nonnative plant species in situations where nonnative species are outcompeting *A. pumila* for resources, human encroachment, road maintenance activities, and future widening of State Route 76. Please see the Special Management Considerations or Protection section of this rule for a discussion of the threats to *A. pumila* habitat and potential management considerations.

Subunit 4C: Jeffries Ranch

Subunit 4C is located approximately 0.7 mi (1 km) southwest of Bonsall Bridge, adjacent to the south side of State Route 76 in the City of Oceanside, San Diego County. Subunit 4C consists of approximately 0.1 ac (0.05 ha) of State or local government-owned land and approximately 33 ac (13 ha) of privately owned land for a total of approximately 33 ac (13 ha). No lands in Subunit 4C are conserved. This subunit was occupied at the time of listing and, like all other extant occurrences, we believe this subunit is essential to the conservation of this species because of its contribution to the genetic diversity of the species (McGlaughlin and Friar 2007, p. 329; see Genetics section of the proposed rule (74 FR 44241, August 27, 2009)). Subunit 4C contains physical and biological features that are essential to the conservation of *Ambrosia pumila,* including sandy loam or clay soils located on an upper terrace of a water source, which provide nutrients, moisture, and periodic flooding presumed necessary for the plant's persistence (PCE 1), and nonnative grassland vegetation, which allows adequate sunlight and airflow for *A. pumila* (PCE 2). The PCEs in this subunit may require special management considerations or protection to address threats from nonnative plant species in situations where nonnative species are outcompeting *A. pumila* for resources, human encroachment, road and utility maintenance activities, future widening of State Route 76, and potential development. Please see the Special Management Considerations or Protection section of this rule for a discussion of the threats to *A. pumila* habitat and potential management considerations.

Subunit 4D: Gird/Monserate Hill

Subunit 4D is located in the Fallbrook area of northern San Diego County, California. This subunit is adjacent to the north side of State Route 76, almost equidistant from Gird Road (to the west) and Monserate Hill Road (to the east). Subunit 4D consists of 0.7 ac (0.3 ha) of State-owned land and 20 ac (8 ha) of privately owned land, for a total of 21 ac (9 ha) (values do not sum due to rounding). No lands in Subunit 4D are conserved or managed for biological resources. This subunit was occupied at the time of listing and, like all other extant occurrences, we believe this subunit is also essential to the conservation of this species because of its contribution to the genetic diversity of the species (McGlaughlin and Friar 2007, p. 329; see Genetics section of the proposed rule (74 FR 44241, August 27, 2009)). Subunit 4D contains physical and biological features that are essential to the conservation of *A. pumila,* including sandy loam or clay soils located on an upper terrace of a water source, which provide nutrients, moisture, and periodic flooding presumed necessary for the plant's persistence (PCE 1); and nonnative grassland vegetation, which allows adequate sunlight and airflow for *A. pumila* (PCE 2). The PCEs in this subunit may require special management considerations or protection to address threats from nonnative plant species in situations where nonnative species are outcompeting *A. pumila* for resources, from human encroachment that may occur in the area, and from development and road maintenance. Please see the Special Management Considerations or Protection section of this rule for a discussion of the threats to *A. pumila* habitat and potential management considerations.

Unit 5: San Dieguito River Watershed—Lake Hodges

Unit 5 is located in central San Diego County and consists of two subunits comprised of approximately 129 ac (52 ha) of State or local government-owned land and approximately 121 ac (49 ha) of privately owned land, for a total of approximately 249 ac (101 ha) (values do not sum due to rounding). This total does not include a portion of Subunit 5B (52 ac (21 ha)) that we have excluded from this designation under section 4(b)(2) of the Act (*see* the Exclusions under Section 4(b)(2) of the Act section of this rule).

Subunit 5A: Lake Hodges East (Via Rancho Pkwy)

Subunit 5A is located on the west side of Interstate 15, just north of Lake Hodges and south of Via Rancho Parkway in San Diego County. Subunit 5A consists of approximately 16 ac (6 ha) of State or local government owned land and approximately 5 ac (2 ha) of privately owned land, for a total of approximately 21 ac (9 ha) (values do not sum due to rounding). No lands in Subunit 5A are conserved or managed for biological resources. This subunit was occupied at the time of listing and, like all other extant occurrences, we also believe this subunit is essential to the conservation of this species because of its contribution to the genetic diversity of the species (McGlaughlin and Friar 2007, p. 329; see Genetics section of the proposed rule (74 FR 44241, August 27, 2009)). Subunit 5A contains physical and biological features that are essential to the conservation of *Ambrosia pumila,* including sandy loam or clay soils located on an upper terrace of a water

source, which provide nutrients, moisture, and periodic flooding presumed necessary for the plant's persistence (PCE 1), and nonnative grassland vegetation, which allows adequate sunlight and airflow for *A. pumila* (PCE 2). The PCEs in this unit may require special management considerations or protection to address threats from nonnative plant species in situations where nonnative species are outcompeting *A. pumila* for resources, human encroachment, utility maintenance activities, and potential development. Please see the Special Management Considerations or Protection section of this rule for a discussion of the threats to *A. pumila* habitat and potential management considerations.

Subunit 5B: Lake Hodges West—Crosby Estates

Subunit 5B is located just west of Lake Hodges in the western portion of central San Diego County, California. This subunit is on and adjacent to the west side of the Crosby National Golf Club. Subunit 5B consists of approximately 113 ac (46 ha) of State or local government owned land, 115 ac (47 ha) of privately owned land for a total of approximately 228 ac (92 ha) (values do not sum due to rounding). This subunit meets the definition of critical habitat for this species because of its contribution to the genetic diversity of the species (McGlaughlin and Friar 2007, p. 329; see Genetics section of the proposed rule (74 FR 44241, August 27, 2009)). Subunit 5B contains physical and biological features that are essential to the conservation of *Ambrosia pumila,* including sandy loam or clay soils located on an upper terrace of a water source, which provide nutrients, moisture, and periodic flooding presumed necessary for the plant's persistence (PCE 1), and nonnative grassland habitat type, which allows adequate sunlight and airflow for *A. pumila* (PCE 2). The physical and biological features essential to the conservation of the species in this subunit may require special management considerations or protection to address threats from nonnative plant species in situations where nonnative species are outcompeting *A. pumila* for resources, from human encroachment that may occur in the area, and from golf course maintenance. Please see the Special Management Considerations or Protection section of this rule for a discussion of the threats to *A. pumila* habitat and potential management considerations.

Unit 6: San Diego River Watershed—Mission Trails Regional Park

Unit 6 is located in Mission Trails Regional Park in the City of San Diego. Unit 6 consists of approximately 6 ac (3 ha) of State or local government owned land, and approximately 32 ac (13 ha) of privately owned land, for a total of 38 ac (15 ha) (values do not sum due to rounding). This total does not include a portion of Unit 6 (160 ac (65ha)) that we have excluded from this designation under section 4(b)(2) of the Act (*see* the Exclusions under Section 4(b)(2) of the Act section of this rule). This unit was occupied at the time of listing and remains occupied, and like all other extant occurrences, is essential to the conservation of this species because of its contribution to the genetic diversity of the species (McGlaughlin and Friar 2007, p. 329; see Genetics section of the proposed rule (74 FR 44241, August 27, 2009)). Unit 6 contains physical and biological features that are essential to the conservation of *A. pumila,* including sandy loam or clay soils located on an upper terrace of a water source, which provide nutrients, moisture, and periodic flooding presumed necessary for the plant's persistence (PCE 1), and nonnative grassland habitat type, which allows adequate sunlight and airflow for *A. pumila* (PCE 2). The physical and biological features essential to the conservation of the species in this unit may require special management considerations or protection to address threats from nonnative plant species in situations where nonnative species are outcompeting *A. pumila* for resources, and human encroachment. Please see the Special Management Considerations or Protection section of this rule for a discussion of the threats to *A. pumila* habitat and potential management considerations.

Unit 7: Sweetwater River Watershed

Unit 7 is located in southwestern San Diego County and consists of three subunits containing approximately 146 ac (60 ha) of federally owned land (San Diego National Wildlife Refuge), approximately 13 ac (5 ha) of State or local government owned land, and approximately 57 ac (23 ha) of privately owned land, for a total of approximately 215 ac (87 ha) (values do not sum due to rounding).

Subunit 7A: Jamul Road

Subunit 7A is located southeast of the City of El Cajon at and near junction of Jamul Road and Steele Canyon Road, on the north and south sides of Jamul Road. Subunit 7A consists of approximately 3 ac (1 ha) of State or local government owned land, and approximately 36 ac (15 ha) of privately owned land, for a total of approximately 39 ac (16 ha). No lands in Subunit 7A are conserved or managed for biological resources. This subunit was occupied at the time of listing and remains occupied. This subunit, like all other extant occurrences, is essential to the conservation of this species because of its contribution to the genetic diversity of the species (McGlaughlin and Friar 2007, p. 329; see Genetics section of the proposed rule (74 FR 44241, August 27, 2009)). Subunit 7A contains physical and biological features that are essential to the conservation of *A. pumila,* including sandy loam or clay soils located on an upper terrace of a water source, which provide nutrients, moisture, and periodic flooding presumed necessary for the plant's persistence (PCE 1), and nonnative grassland habitat type, which allows adequate sunlight and airflow for *A. pumila* (PCE 2). The physical and biological features essential to the conservation of the species in this subunit may require special management considerations or protection to address threats from nonnative plant species in situations where nonnative species are outcompeting *A. pumila* for resources, alterations of site hydrology, and off-highway vehicle use. Please see the Special Management Considerations or Protection section of this rule for a discussion of the threats to *A. pumila* habitat and potential management considerations.

Subunit 7B: San Diego National Wildlife Refuge (SDNWR)

Subunit 7B is located on the San Diego National Wildlife Refuge, south of Sweetwater River between Rancho San Diego Golf Course and the hills to the south, and on the north and south sides of a dirt trail adjoining the end of Par Four Drive in unincorporated San Diego County. Subunit 7B consists of approximately 118 ac (48 ha) of Federal land owned and managed by the Service, and approximately 15 ac (6 ha) of privately owned land, for a total of approximately 133 ac (54 ha). No private lands in Subunit 7B are conserved or managed for biological resources. This subunit was occupied at the time of listing and, like all other extant occurrences, we also believe this subunit is essential to the conservation of this species because of its contribution to the genetic diversity of the species (McGlaughlin and Friar 2007, p. 329 see Genetics section of the proposed rule (74 FR 44241, August 27, 2009)). Subunit 7B contains physical

and biological features that are essential to the conservation of *A. pumila,* including sandy loam or clay soils located on an upper terrace of a water source, which provide nutrients, moisture, and periodic flooding presumed necessary for the plant's persistence (PCE 1), and nonnative grassland vegetation, which allows adequate sunlight and airflow for *A. pumila* (PCE 2). The PCEs in this subunit may require continued management and protection on federally owned lands to address threats from nonnative plant species in situations where nonnative species are outcompeting *A. pumila* for resources, and human encroachment. Please see the Special Management Considerations or Protection section of this rule for a discussion of the threats to *A. pumila* habitat and potential management considerations.

Subunit 7C: Steele Canyon Bridge

Subunit 7C is located mainly on the east side of State Route 94 on a slope between a concrete-lined ditch and a fence adjacent and parallel to State Route 94, approximately 0.7 mi (1.1 km) southeast of Subunit 7B, in unincorporated San Diego County. A small portion of the subunit is located on the opposite side of State Route 94 just south of Steele Canyon Bridge in a split-rail exclosure. Subunit 7C consists of approximately 28 ac (11 ha) of federally owned land managed by the Service, approximately 10 ac (4 ha) of State or local government owned land, and approximately 6 ac (2 ha) of privately owned land, for a total of approximately 44 ac (18 ha) (values do not sum due to rounding). No private or state/local government owned lands in Subunit 7C are conserved or managed for biological resources. This subunit was occupied at the time of listing and, like all other extant occurrences, we also believe this subunit is essential to the conservation of this species because of its contribution to the genetic diversity of the species (McGlaughlin and Friar 2007, p. 329; see Genetics section of the proposed rule (74 FR 44241, August 27, 2009)). Subunit 7C contains physical and biological features that are essential to the conservation of *Ambrosia pumila,* including sandy loam or clay soils located on an upper terrace of a water source, which provide nutrients, moisture, and flooding presumed necessary for the plant's persistence (PCE 1), and nonnative grassland vegetation, which allows adequate sunlight and airflow for *A. pumila* (PCE 2). The PCEs in this subunit may require continued management and protection on federally owned lands to address threats from nonnative plant species in situations where nonnative species are outcompeting *A. pumila* for resources, and human encroachment. Please see the Special Management Considerations or Protection section of this rule for a discussion of the threats to *A. pumila* habitat and potential management considerations.

Effects of Critical Habitat Designation

Section 7 Consultation

Section 7(a)(2) of the Act requires Federal agencies, including the Service, to ensure that actions they fund, authorize, or carry out are not likely to destroy or adversely modify critical habitat. Decisions by the 5th and 9th Circuit Courts of Appeals have invalidated our definition of "destruction or adverse modification" (50 CFR 402.02) (*see Gifford Pinchot Task Force* v. *U.S. Fish and Wildlife Service,* 378 F. 3d 1059 (9th Cir 2004) and *Sierra Club* v. *U.S. Fish and Wildlife Service et al.,* 245 F.3d 434, 442F (5th Cir 2001)), and we do not rely on this regulatory definition when analyzing whether an action is likely to destroy or adversely modify critical habitat. Under the statutory provisions of the Act, we determine destruction or adverse modification on the basis of whether, with implementation of the Federal action, the affected critical habitat would remain functional (or retain the current ability for the PCEs to be functionally established) to serve its intended conservation role for the species (Service 2004a, p. 3).

Section 7(a)(2) of the Act requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency (action agency) must enter into consultation with us in most cases. As a result of this consultation, we document compliance with the requirements of section 7(a)(2) through our issuance of:

(1) A concurrence letter for Federal actions that may affect, but are not likely to adversely affect, listed species or designated critical habitat; or

(2) A biological opinion for Federal actions that are likely to adversely affect listed species or designated critical habitat.

An exception to the concurrence process referred to in (1) above occurs in consultations involving National Fire Plan projects on lands managed by the U.S. Bureau of Land Management (BLM) or the U.S. Forest Service (USFS). However, none of the lands we are designating as critical habitat are located on BLM or USFS lands.

If we issue a biological opinion concluding that a project is likely to jeopardize the continued existence of a listed species or destroy or adversely modify critical habitat, we also provide reasonable and prudent alternatives to the project, if any are identifiable. We define "Reasonable and prudent alternatives" at 50 CFR 402.02 as alternative actions identified during consultation that:

- Can be implemented in a manner consistent with the intended purpose of the action,
- Can be implemented consistent with the scope of the Federal agency's legal authority and jurisdiction,
- Are economically and technologically feasible, and
- Would, in the Director's opinion, avoid jeopardizing the continued existence of the listed species or destroying or adversely modifying its critical habitat.

Reasonable and prudent alternatives can vary from slight project modifications to extensive redesign or relocation of the project. Costs associated with implementing a reasonable and prudent alternative are similarly variable.

When we issue a biological opinion concluding that a project is not likely to jeopardize a listed species or adversely modify its critical habitat but may result in incidental take of listed animals, we provide an incidental take statement that specifies the impact of such incidental taking on the species. We then define "Reasonable and Prudent Measures" considered necessary or appropriate to minimize the impact of such taking. Reasonable and prudent measures are binding measures the action agency must implement to receive an exemption to the prohibition against take contained in section 9 of the Act. These reasonable and prudent measures are implemented through specific "Terms and Conditions" that must be followed by the action agency or passed along by the action agency as binding conditions to an applicant. Reasonable and prudent measures, along with the terms and conditions that implement them, cannot alter the basic design, location, scope, duration, or timing of the action under consultation and may involve only minor changes (50 CFR 402.14). The Service may provide the action agency with additional conservation recommendations, which are advisory and not intended to carry binding legal force.

Regulations at 50 CFR 402.16 require Federal agencies to reinitiate consultation on previously reviewed actions in instances where we have listed a new species or subsequently designated critical habitat that may be affected and the Federal agency has retained discretionary involvement or control over the action (or the agency's discretionary involvement or control is authorized by law). Consequently, Federal agencies may sometimes need to request reinitiation of consultation with us on actions for which formal consultation has been completed, if those actions with discretionary involvement or control may affect subsequently listed species or designated critical habitat.

Federal activities that may affect *Ambrosia pumila* or its designated critical habitat will require section 7 consultation under the Act. Activities on State, tribal, local, or private lands requiring a Federal permit (such as a permit from the U.S. Army Corps of Engineers under section 404 of the Clean Water Act or a permit under section 10(a)(1)(B) of the Act from the Service) or involving some other Federal action (such as funding from the Federal Highway Administration, Federal Aviation Administration, or the Federal Emergency Management Agency) will also be subject to the section 7 consultation process. Federal actions not affecting listed species or critical habitat, and actions on State, tribal, local, or private lands that are not federally funded, authorized, or permitted, do not require section 7 consultations.

Application of the "Adverse Modification" Standard

The key factor related to the adverse modification determination is whether, with implementation of the proposed Federal action, the affected critical habitat would continue to serve its intended conservation role for the species, or would retain its current ability for the primary constituent elements to be functionally established. Activities that may destroy or adversely modify critical habitat are those that alter the physical and biological features to an extent that appreciably reduces the conservation value of critical habitat for *Ambrosia pumila.* Generally, the conservation role of the *A. pumila* critical habitat units is to support viable occurrences in appropriate habitat areas.

Section 4(b)(8) of the Act requires us to briefly evaluate and describe in any proposed or final regulation that designates critical habitat those activities involving a Federal action that may destroy or adversely modify such habitat, or that may be affected by such designation.

Activities that, when carried out, funded, or authorized by a Federal agency, may adversely affect critical habitat and therefore should result in consultation for *Ambrosia pumila* include, but are not limited to, the following:

(1) Actions that would alter the configuration of the water sources associated with *Ambrosia pumila* habitat or the upper terraces where *A. pumila* habitat is found. Such activities could include, but are not limited to, water impoundment, stream channelization, water diversion, water withdrawal, and development activities. These activities could alter the biological and physical features that provide the appropriate habitat for *A. pumila* by altering or eliminating flooding events that this species may rely on for dispersal, seed germination, and control of competitors; reducing or increasing the availability of groundwater that may result in a shift of habitat type to a community unsuitable for *A. pumila* (shrub- or tree-dominated habitat, which would inhibit exposure to needed sunlight and airflow); or causing increased erosion that could remove soils appropriate for *A. pumila* growth.

(2) Activities that cover or remove soils appropriate for *A. pumila* growth such as development, plowing or grading, or activities that change the characteristics of soils so that *A. pumila* growth is impeded, such as soil compaction due to hiking and off-highway vehicle use.

Exemptions Under Section 4(a)(3) of the Act

No lands meet the criteria for being exempted from the designation of critical habitat for *Ambrosia pumila* pursuant to section 4(a)(3) of the Act.

Exclusions Under Section 4(b)(2) of the Act

Application of Section 4(b)(2) of the Act

Section 4(b)(2) of the Act states that the Secretary must designate and revise critical habitat on the basis of the best available scientific data after taking into consideration the economic impact, national security impact, and any other relevant impact of specifying any particular area as critical habitat. The Secretary may exclude an area from critical habitat if he determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless he determines, based on the best scientific data available, that the failure to designate such area as critical habitat will result in the extinction of the species. In making that determination, the legislative history is clear that the Secretary has broad discretion regarding which factor(s) to use and how much weight to give to any factor.

In the following paragraphs we address a number of general issues that are relevant to our analysis under section 4(b)(2) of the Act.

Under section 4(b)(2) of the Act, we may exclude an area from designated critical habitat based on economic impacts, impacts on national security, or any other relevant impacts. In considering whether to exclude a particular area from the designation, we must identify the benefits of including the area in the designation, identify the benefits of excluding the area from the designation, and determine whether the benefits of exclusion outweigh the benefits of inclusion. If based on this analysis, we make this determination, then we can exclude the area only if such exclusion would not result in the extinction of the species.

When considering the benefits of inclusion for an area, we consider the additional regulatory benefits that area would receive from the protection from adverse modification or destruction as a result of actions with a Federal nexus; the educational benefits of mapping essential habitat for recovery of the listed species; and any benefits that may result from a designation due to State or Federal laws that may apply to critical habitat. The designation of critical habitat may strengthen or reinforce some of the provisions in other State and Federal laws, such as the California Environmental Quality Act (CEQA) or the National Environmental Policy Act (NEPA). These laws analyze the potential for projects to significantly affect the environment. Critical habitat may signal the presence of sensitive habitat that could otherwise be missed in the review process for these other environmental laws.

When considering the benefits of exclusion, we consider, among other things, whether exclusion of a specific area is likely to result in long-term conservation; the continuation, strengthening, or encouragement of partnerships that result in conservation of listed species; or implementation of a management plan that provides equal to or more conservation than a critical habitat designation would provide. Specifically, when evaluating a conservation plan we consider, among other factors:

(1) Whether the plan is complete and provides a benefit for the species by conserving and managing the features

essential for the conservation of the species;

(2) Whether the plan provides conservation strategies and measures consistent with currently accepted principles of conservation biology; and

(3) Whether there is a reasonable expectation that the conservation management strategies and actions will be implemented for the foreseeable future, and effective based on past practices, written guidance, or regulations.

After evaluating the benefits of inclusion and the benefits of exclusion, we carefully weigh the two sides to determine whether the benefits of exclusion outweigh those of inclusion. If we determine that they do, we then determine whether exclusion would result in extinction. If exclusion of an area from critical habitat will result in extinction, we will not exclude it from the designation.

In the case of *Ambrosia pumila,* the areas proposed and ultimately designated as critical habitat do not include any tribal lands or tribal trust resources or DOD lands. However, this designated critical habitat does include some lands covered by HCPs, specifically, the Western Riverside County MSHCP, the City of San Diego MSCP Subarea Plan, and the County of San Diego MSCP Subarea Plan.

The information provided above applies to the following discussions of exclusions under section (4)(b)(2) of the Act. *Ambrosia pumila* is covered under the Western Riverside County MSHCP, the County of San Diego MSCP Subarea Plan, and the City of San Diego MSCP Subarea Plan. After considering the following areas under section 4(b)(2) of the Act, we are exercising our discretion to exclude from critical habitat designation: Subunit 2 within the Western Riverside County MSHCP; a portion of Subunit 5B within the County of San Diego MSCP Subarea Plan area and conserved and managed under the Crosby at Rancho Santa Fe Habitat Management Plan; and a portion of Subunit 6 within the City of San Diego MSCP Subarea Plan. As described in the following exclusion analyses for the three HCPs, we made this determination because we believe that the value of the excluded lands for *A. pumila* conservation will be preserved for the foreseeable future by existing protective actions and they are appropriate for exclusion under the "other relevant factor" provisions of section 4(b)(2) of the Act. We concluded that the benefits of excluding these areas from critical habitat outweigh the benefits of including the areas. With regard to the remaining portions of essential habitat covered by the Western Riverside County MSHCP, the City of San Diego MSCP Subarea Plan, and the County of San Diego MSCP Subarea Plan, we concluded that the benefits of inclusion outweigh the benefits of exclusion; therefore we are not exercising our discretion to exclude these lands from critical habitat designation. Brief descriptions of each plan and lands excluded from critical habitat covered by each plan are described below. The areas where we determined the benefits of exclusion outweigh the benefits of inclusion are listed in Table 3. Additional details on these areas can be found in the proposed critical habitat rule (74 FR 44238, August 27, 2009) and the NOA (75 FR 27690, May 18, 2010).

TABLE 3—AREAS EXCLUDED FROM AMBROSIA PUMILA CRITICAL HABITAT DESIGNATION UNDER SECTION 4(B)(2) OF THE ACT

Subunit	Excluded under section 4(b)(2) of the Act	
	Acres	*Hectares*
Western Riverside County MSHCP		
2. Skunk Hollow	118	48
County of San Diego MSCP Subarea Plan (The Crosby at Rancho Santa Fe Habitat Management Plan)		
5B. Lake Hodges west—Crosby estates	52	21
City of San Diego MSCP Plan		
6. Mission Trails Regional Park	160	65
Total	329	133

Values in this table may not sum due to rounding.

Western Riverside County Multiple Species Habitat Conservation Plan (Western Riverside County MSHCP)

We determined that approximately 298 ac (121 ha) of land in Subunits 1A and 1B, Unit 2, and Subunits 3A and 3B that are within the Western Riverside County MSHCP planning area meet the definition of critical habitat under the Act (approximately 9 ac (3 ha) in Subunit 1A are not covered by the Western Riverside County MSHCP as a result of a legal settlement reached between certain landowners and the County of Riverside in 2004 exempting the landowners from the HCP (Murdock Settlement, 2004)). In making our final decision with regard to these lands, we considered several factors including our relationships with participating jurisdictions and other stakeholders, existing consultations, conservation measures and management that are in place on these lands, and impacts to current and future partnerships. Under section 4(b)(2) of the Act, we have determined to exercise our delegated discretion to exclude 118 ac (48 ha) of land within Unit 2 from this final critical habitat designation. We are including 189 ac (76 ha) of land within Subunits 1A, 1B, 3A, and 3B in this critical habitat designation (including approximately 9 ac (3 ha) in Subunit 1A not covered by the Western Riverside County MSHCP). As described in our analysis below, we reached this conclusion by weighing the benefits of exclusion against the benefits of including each area in the final critical habitat designation.

The Western Riverside County MSHCP is a regional, multijurisdictional HCP encompassing approximately 1.26 million ac (510,000 ha) of land in western Riverside County. The Western Riverside County MSHCP addresses 146

listed and unlisted "covered species," including *Ambrosia pumila.* The Western Riverside County MSHCP includes a multispecies conservation program designed to minimize and mitigate the expected loss of habitat and associated incidental take of covered species, while allowing development to occur. On June 22, 2004, the Service issued a single incidental take permit (Service 2004b, TE–088609–0) under section 10(a)(1)(B) of the Act to 22 permittees under the Western Riverside County MSHCP to be in effect for a period of 75 years (Service 2004, TE–088609–0). We concluded in our biological opinion (Service 2004b, p. 342) that implementation of the plan, as proposed, was not likely to jeopardize the continued existence of *A. pumila.* Our determination was based on our conclusion that 62 percent of *A. pumila* suitable habitat and at least 2 (Nichols Road (Subunit 1B) and Skunk Hollow (Unit 2)) of the 3 extant occurrences known at that time would be protected or remain within the Western Riverside County MSHCP Conservation Area (lands conserved under the Western Riverside County MSHCP). We also noted that the surveys required by the HCP (*see* Narrow Endemic Plant Species survey area discussed below) could result in newly discovered occurrences of *A. pumila.* These potentially new occurrences would be conserved by being added to the Western Riverside County MSHCP Conservation Area.

The Western Riverside County MSHCP, when fully implemented, will establish approximately 153,000 ac (61,917 ha) of new conservation lands (Additional Reserve Lands) to complement the approximate 347,000 ac (140,426 ha) of preexisting natural and open space areas (Public/Quasi-Public (PQP) lands). These PQP lands include those under ownership of public or quasi-public agencies, primarily the United States Forest Service (USFS) and Bureau of Land Management (BLM), as well as permittee-owned or controlled open-space areas managed by the State of California and Riverside County. Collectively, the Additional Reserve Lands and PQP lands form the overall Western Riverside County MSHCP Conservation Area. The configuration of the 153,000 ac (61,916 ha) of Additional Reserve Lands (ARL) is not mapped or precisely delineated ("hard-lined") in the Western Riverside County MSHCP. Instead, the ARL are textual descriptions of habitat conservation necessary to meet the conservation goals for all covered species within the bounds of the approximately 310,000-ac (125,453-ha) Criteria Area and is determined as implementation of the Western Riverside County MSHCP takes place.

Three species-specific conservation objectives are included in the Western Riverside County MSHCP for *Ambrosia pumila.* The first objective is to conserve at least 21,800 ac (8,822 ha) of occupied or suitable habitat for the species. This objective can be attained through acquisition or other dedications of land assembled from within the Criteria Area (*i.e.,* the ARL) or Narrow Endemic Plant Species Survey Area and through coordinated management of existing PQP. We mapped a "Conceptual Reserve Design" that illustrates existing PQP lands and predicts the geographic distribution of the ARL based on our interpretation of the textual descriptions of habitat conservation necessary to meet Western Riverside County MSHCP conservation goals. Our Conceptual Reserve Design is the Service's estimate of one possible future configuration of 153,000 ac (61,916 ha) of ARL in conjunction with the existing PQP lands, including approximately 21,800 ac (8,822 ha) of "suitable" *A. pumila* habitat that will be conserved to meet the goals and objectives of the plan (Service 2004b, p. 73). Preservation and management of approximately 21,800 ac (8,822 ha) of suitable *A. pumila* habitat under the Western Riverside County MSHCP will contribute to conservation and ultimate recovery of this species.

The second species-specific conservation objective included in the Western Riverside County MSHCP for *Ambrosia pumila* is to include within the Conservation Area at least two of the three occupied locations identified at the time the Western Riverside County MSHCP was permitted. *Ambrosia pumila* is threatened in the plan area primarily by habitat loss due to urbanization, flood control activities, and nonnative species competition (Service 2004b, pp. 334–342). The Western Riverside County MSHCP is designed to remove or reduce threats to this species as the plan is implemented by placing large blocks of occupied and unoccupied habitat into preservation throughout the Conservation Area. The two areas identified for inclusion in the Conservation Area are the occurrences at the Barry Jones (Skunk Hollow) Wetland Mitigation Bank (in Unit 2), and the occurrence near Temescal Creek at Nichols Road (in Subunit 1B).

The third species-specific conservation objective included in the Western Riverside County MSHCP for *Ambrosia pumila* is the requirement of surveys for *A. pumila* as part of the project review process for public and private project proposals where suitable habitat is present within a defined Narrow Endemic Plant Species survey area (*see* Narrow Endemic Plant Species Survey Area Map, Figure 6–1 of the Western Riverside County MSHCP, Volume I in Dudek 2003). For locations with positive survey results, 90 percent of those portions of the property that provide long-term conservation value for the species will be avoided; when it is demonstrated the conservation objectives for the species under the HCP are met, avoided areas will be evaluated to determine whether they will be open for development or considered for inclusion into the MSHCP Conservation Area (*see* Additional Survey Needs and Procedures; Western Riverside County MSHCP, Volume 1, section 6.3.2 in Dudek 2003). The Western Riverside County MSHCP anticipated inclusion of a third occurrence, near Temescal Creek east of Lake Street (in Subunit 1A), into the MSHCP Conservation Area in accordance with its Narrow Endemics Policy (Dudek 2003, pp. P–327–P–328). This area has been conserved but is not currently managed to benefit *A. pumila* and its habitat.

Below is a brief analysis of the relative benefits of inclusion and exclusion of Unit 2, which we have exercised our discretion to exclude from critical habitat designation and our analysis of the relative benefits of inclusion and exclusion of Subunits 1A, 1B, 3A and 3B which we have not exercised our discretion to exclude from critical habitat designation.

Benefits of Inclusion—Western Riverside County MSHCP

The principal benefit of including an area in a critical habitat designation is the requirement of Federal agencies to ensure actions they fund, authorize, or carry out are not likely to result in the destruction or adverse modification of any designated critical habitat, the regulatory standard of section 7(a)(2) of the Act under which consultation is completed. Federal agencies must consult with the Service on actions that may affect critical habitat and must avoid destroying or adversely modifying critical habitat. Federal agencies must also consult with us on actions that may affect a listed species and refrain from undertaking actions that are likely to jeopardize the continued existence of such species. The analysis of effects to critical habitat is a separate and different analysis from that of the effects to the species. Therefore, the difference in outcomes of these two analyses represents the regulatory benefit of critical habitat. For some species (including *Ambrosia pumila*), and in some locations, the outcome of these

analyses will be similar, because effects to habitat will often also result in effects to the species. However, the regulatory standard is different, as the jeopardy analysis investigates the action's impact on the survival and recovery of the species, while the adverse modification analysis focuses on the action's effects on the designated habitat's contribution to conservation. This will, in many instances, lead to different results and different regulatory requirements. Thus, critical habitat designations may provide greater benefits to the recovery of a species than would listing alone.

Critical habitat may provide a regulatory benefit for *Ambrosia pumila* when there is a Federal nexus present for a project that might adversely modify critical habitat. A Federal nexus generally exists where land is federally owned, or where actions proposed on non-Federal lands require a Federal permit or Federal funding. In the absence of a Federal nexus, the regulatory benefit provided through Section 7 consultation under the Act does not exist. Clearly, any activities affecting designated critical habitat on Federal land would trigger a duty to consult under Section 7. In contrast, the potential for a Federal nexus for activities proposed on non-Federal lands varies widely and depends on the particular circumstances of each case. Nevertheless, because the breadth of potential Federal actions that may trigger a duty to consult under Section 7 is quite broad, we cannot say with certainty that future development of, or activities on non-Federal lands will always lack a Federal nexus. However, where there is no discernable Federal nexus on non-Federal lands we propose to designate as critical habitat, we consider the regulatory benefit of designation of those non-Federal lands to be small.

Any protections provided by critical habitat that are redundant with protections already in place on lands proposed for designation also reduce the benefits of inclusion in critical habitat. Protections provided by HCPs or other conservation and management, may prevent the destruction or adverse modification of habitat to the same or greater extent as would the consultation provisions under section 7(a) of the Act for critical habitat.

None of the land in Unit 2 is Federal land. The majority of Unit 2 is within the Barry Jones (Skunk Hollow) Wetland Mitigation Bank on privately owned lands owned and managed by Center for Natural Lands Management (CNLM) and protected by a conservation easement held by the California Department of Fish and Game. Two smaller portions of this unit are adjacent to the Barry Jones (Skunk Hollow) Wetland Mitigation Bank, one to the east on Johnson Ranch and Metropolitan Water District lands, and the other to the west on lands conserved as part of the Rancho Bella Vista HCP. All land in Unit 2 is conserved under conservation easement and actively managed by CNLM in accordance with the Western Riverside County MSHCP. We consider the likelihood of a Federal nexus for activities occurring on lands in Unit 2 to be remote. It is possible that the Army Corps of Engineers may take jurisdiction over portions of Unit 2 if a project were to occur in that area; however, the probability of project impacts in Unit 2 is slight because the area is conserved and managed and thus protected from direct development impacts. Because Unit 2 is already permanently conserved and managed to benefit *Ambrosia pumila,* the regulatory benefit of designating this area as critical habitat would be redundant with the protections already in place. Because the existence of a future Federal nexus in Unit 2 is remote and the protections afforded by designation would be redundant with protections already in place, we believe the regulatory benefit of designation of Unit 2 is negligible and not significant.

Similar to Unit 2, none of the land in Units 1 and 3 is federally owned, and we consider the likelihood of a future Federal nexus in Units 1 and 3B to be remote. There is a potential that Federal funds may be applied to future projects related to the San Diego Aqueduct in Subunit 3A (*see* Comment 14 in the Summary of Comments and Recommendations section below); however the probability of a project with a Federal nexus occurring in Subunit 3A is uncertain. The absence of a discernable Federal nexus in Unit 1 and Subunit 3B, and the uncertainty regarding a future Federal nexus in Subunit 3A reduce the potential regulatory benefits of designation of these areas.

In contrast to Unit 2, Subunits 1B, 3A, and 3B are not currently protected or managed under the Western Riverside MSHCP for the benefit of *A. pumila* and its essential habitat. Subunit 1A is largely conserved, but it is not currently managed to protect the species and its habitat.

As summarized above, under the Western Riverside County MSHCP on lands within the Narrow Endemic Plant Species survey area with positive survey results for *Ambrosia pumila,* impacts to 90 percent of portions of the property that provide long-term conservation value for the species are to be avoided until it is demonstrated that the conservation objectives for the species have been met, at which time avoidance is no longer be required (*see* Protection of Narrow Endemic Plant Species; Western Riverside County MSHCP, Volume 1, section 6.1.3, in Dudek 2003). Also, projects proposed in areas within the Western Riverside County MSHCP Criteria Area (Criteria Area) are to be implemented through the Joint Project Review Process to ensure that the requirements of the Western Riverside County MSHCP permit and the Implementing Agreement are properly met and are protecting essential habitat for *A. pumila* (Western Riverside County MSHCP, Volume 1, section 6.6.2 in Dudek 2003, p. 82).

Portions of Subunits 1A, 1B, and 3B are within the Narrow Endemic Plant Species Survey Area or the Criteria Area under the Western Riverside County MSHCP, and we anticipate that these areas will eventually be protected and managed under the plan. As noted above, a large portion of Subunit 1A is already conserved, but it is not actively managed for the benefit of *Ambrosia pumila.* Because none of these areas are both conserved and managed, they remain vulnerable to threats from nonnative species, human encroachment and development related impacts as discussed above in the Special Management Considerations or Protection section. We recognize that the regulatory benefit of designating Subunits 1A, 1B, and 3B is partially redundant with existing and anticipated protection (conservation) and management of these areas under the Western Riverside County MSHCP; however because such protection is not yet fully in place, we believe there is some regulatory benefit to designation of these areas. Subunit 3A is neither within the Narrow Endemic Plant Species survey area or the Criteria Area and is not targeted for conservation and management under the Western Riverside County MSHCP. As a result, the regulatory benefit provided by the designation of critical habitat within Subunit 3A would not be redundant with conservation measures outlined in the plan. We conclude that the regulatory benefit of designating Subunits 1A, 1B and 3B is partially redundant with the anticipated protection of these areas under the Western Riverside County MSHCP, while the regulatory benefit of designating Subunit 3A would not be redundant with conservation provided under the plan. However, because the likelihood of a future Federal nexus on any of these lands is remote we consider

the regulatory benefit of designation of the entirety of Units 1 and 3 to be small and not significant.

Designating critical habitat also can be beneficial because the process of proposing critical habitat provides the opportunity for peer review and public comment on lands we propose to designate as critical habitat, our criteria to assess those lands, potential impacts from the proposal, and information on the taxon itself. We believe the designation of critical habitat may generally provide previously unavailable information to the public. Public education regarding the potential conservation value of an area may also help focus conservation and management efforts on areas of high conservation value for certain species. Information about *Ambrosia pumila* and its habitat that reaches a wide audience, including parties concerned about and engaged in conservation activities, is valuable because the public may not be aware of documented (or undocumented) *A. pumila* occurrences that have not been conserved or are not being managed.

Because Unit 2 is already permanently conserved and actively managed for the benefit of *Ambrosia pumila,* we believe there is little educational benefit to designation of this area. The education benefit of designation is somewhat lower for Subunits 1A and 1B because educational information regarding the importance of the *A. pumila* occurrences in these two areas to the conservation of the species has been presented to the public during development and implementation of the Western Riverside County MSHCP. However, this critical habitat rule provides more specific information regarding the entire habitat area in Subunits 1A and 1B (not just the above-ground portions of the occurrences) that we consider essential to the conservation of the species. Therefore, we believe the education benefit to including Subunits 1A and 1B in this designation is still significant.

Subunits 3A and 3B were unknown at the time the Western Riverside County MSHCP was finalized, and therefore educational information regarding the *Ambrosia pumila* occurrences in Subunits 3A and 3B was not presented to the public during development and implementation of the Western Riverside County MSHCP. Designating as critical habitat for *Ambrosia pumila* Subunits 3A and 3B will identify these specific areas as essential for the conservation and recovery of *Ambrosia pumila* and in doing so, provide an educational component that is a significant benefit to the conservation of this species. The educational information contained in this rule provides information that can be used by the public to learn about *A. pumila* and its essential habitat in Subunits 3A and 3B and that can refine the broader conservation goals for *A. pumila* under the Western Riverside County MSHCP by focusing conservation on the specific areas essential for the recovery of the species.

The designation of *Ambrosia pumila* critical habitat may also strengthen or reinforce some of the provisions in other State and Federal laws, such as the California Environmental Quality Act (CEQA) or the National Environmental Policy Act (NEPA). These laws analyze the potential for projects to significantly affect the environment. In Riverside County, the additional protections associated with critical habitat may be beneficial in areas not currently conserved. Critical habitat may signal the presence of sensitive habitat that could otherwise be missed in the review process for these other environmental laws. In the case of CEQA, this could be a benefit, since CEQA may require additional review of projects that may affect critical habitat and protection of essential habitat if its destruction would constitute a significant environmental effect. However, this benefit is a minor benefit in the case of NEPA, because NEPA does not require project proponents to protect sensitive habitat. The potential ancillary benefits under other laws of critical habitat designation would be higher in Subunits 1A, 1B, 3A, and 3B where the species and its habitat are not currently conserved. The benefits would be negligible in Unit 2 because *A. pumila* and its essential habitat are protected and managed.

In summary, we believe that the regulatory benefit of designating critical habitat under section 7(a) of the Act is small in Subunits 1A, 1B, and 3B because the likelihood of a future Federal nexus in these areas is remote. There is a higher potential for a Federal nexus in Subunit 3A, but it is still uncertain. Overall, we believe the regulatory benefit of designation of Subunits 1A, 1B, 3A and 3B is not significant. We believe that the educational benefit of designation is significant in Subunits 1A, 1B, 3A, and 3B because these areas are not conserved and managed and designation may help focus conservation efforts for this species under the Western Riverside County MSHCP on these specific essential habitat areas. There are also potential ancillary benefits under other laws that would result from designation of Subunits 1A, 1B, 3A, and 3B. In Unit 2, which is conserved and managed, we believe the benefits of critical habitat designation are not significant. The regulatory benefit of designation in Unit 2 is likely redundant with protection provided by the conservation and management of the area, and because this area is already conserved and managed, the public education and ancillary benefits are also insignificant in Unit 2. We conclude that among lands proposed as critical habitat that are covered by the Western Riverside County MSHCP, the educational benefit of designation in Subunits 1A, 1B, 3A, and 3B is significant, and the regulatory and ancillary benefits of designating these areas are small and not significant. The regulatory, educational and ancillary benefits of designating Unit 2 as critical habitat are negligible.

Benefits of Exclusion—Western Riverside County MSHCP

We believe benefits could be realized by forgoing designation of critical habitat for *Ambrosia pumila* on lands covered by the Western Riverside County MSHCP including:

(1) Continuance and strengthening of our effective working relationships with all Western Riverside County MSHCP jurisdictions and stakeholders to promote conservation of *Ambrosia pumila,* its habitat, and 145 other species covered by the HCP and their habitat;

(2) Allowance for continued meaningful collaboration and cooperation in working toward protecting and recovering this species and the many other species covered by the HCP, including conservation benefits that might not otherwise occur;

(3) Encouragement for local jurisdictions to fully participate in the Western Riverside County MSHCP; and

(4) Encouragement of additional HCP and other conservation plan development in the future on other private lands for this and other federally listed and sensitive species, including incorporation of protections for plant species which is voluntary because the Act does not prohibit take of plant species.

The Western Riverside County MSHCP provides substantial protection and management for *Ambrosia pumila* and the physical and biological features essential to the conservation of the species, and addresses conservation issues from a coordinated, integrated perspective rather than a piecemeal, project-by-project approach (as would occur under sections 7 of the Act or smaller HCPs), thus resulting in coordinated landscape-scale

conservation that can contribute to genetic diversity by preserving covered species populations, habitat, and interconnected linkage areas that support recovery of *Ambrosia pumila* and other listed species. It is important that we encourage participation in such plans and encourage voluntary coverage of listed plant species in such plans. Additionally, many landowners perceive critical habitat as an unfair and unnecessary regulatory burden given the expense and time involved in developing and implementing complex regional and jurisdiction-wide HCPs, such as the Western Riverside County MSHCP. Exclusion of Western Riverside County MSHCP lands would help preserve the partnerships we developed with the County of Riverside and other local jurisdictions in the development of the HCP, and foster future partnerships and development of future HCPs, and in particular HCPs that include protections for listed plants, such as *A. pumila.*

In summary, we believe excluding land covered by the Western Riverside County MSHCP from critical habitat could provide the significant benefit of maintaining existing regional HCP partnerships and fostering new ones.

Weighing Benefits of Exclusion Against Benefits of Inclusion—Western Riverside County MSHCP

We reviewed and evaluated the benefits of inclusion and the benefits of exclusion for all lands owned by or under the jurisdiction of Western Riverside County MSHCP permittees as critical habitat for *Ambrosia pumila.* The benefits of including conserved and managed lands in the critical habitat designation are small. All of the approximately 118 ac (48 ha) of land in Unit 2 at the Barry Jones (Skunk Hollow) Wetland Mitigation Bank are already conserved and managed. Therefore we do not believe critical habitat designation for *A. pumila* will provide significant regulatory, educational or ancillary benefits for this area. In contrast to Unit 2, the designation as critical habitat of essential habitat for *Ambrosia pumila* in Subunits 1A, 1B, 3A, and 3B will provide a significant educational benefit and may also result in small regulatory and ancillary benefits for *A. pumila* and its essential habitat. None of these subunits are currently both conserved and managed to benefit *A. pumila* (a large portion of Subunit 1A is conserved, but not actively managed), the broad conservation goals for this species under the Western Riverside County MSHCP do not explicitly require and assure protection of the specific lands included in Subunits 1A, 1B, and 3B, and the plan does not identify the lands in Subunit 3A for conservation. Therefore designation of these units will provide a significant educational benefit by focusing attention on the specific lands within Western Riverside County MSHCP that are essential for the species' recovery so that conservation efforts are directed toward those areas. We also anticipate a potential regulatory benefit from designation in the unlikely circumstance that a Federal nexus exists in connection with activities on these lands and some ancillary benefit from other laws such as CEQA and NEPA from designating these areas as critical habitat.

Excluding Subunits 1A, 1B, Unit 2, and Subunits 3A and 3B from critical habitat designation will further our existing partnerships with permittees under the Western Riverside County MSHCP and encourage future voluntary conservation efforts for this species by relieving landowners of the any additional regulatory burden stemming from designation. We consider this a significant benefit of excluding these lands.

In summary, we find that excluding from critical habitat areas that are receiving long-term conservation and management for the purpose of protecting *Ambrosia pumila* (Unit 2) will preserve our partnership with the County of Riverside and other permittees in the Western Riverside County MSHCP and encourage the conservation of lands associated with development and implementation of future HCPs. These partnership benefits are significant and outweigh the small potential regulatory, educational, and ancillary benefits of including Unit 2 in critical habitat for *A. pumila.* We find that including lands as critical habitat that are not yet receiving long-term conservation and management (Subunits 1A, 1B, 3A, and 3B) will provide additional regulatory protection under section 7(a) of the Act if there is a Federal nexus, and will provide a significant educational benefit by focusing conservation efforts by the Western Riverside County MSHCP permittees on conservation and management of these specific essential habitat areas for *A. pumila* and educating the public about importance of these areas for the conservation of this species. Designation may also result in some ancillary benefits under other laws. Therefore, designating these areas as critical habitat for *A. pumila* will provide significant educational as well as some regulatory and ancillary benefits to the species. While we acknowledge that excluding these areas under section 4(b)(2) of the Act would provide a significant benefit to the partnership that we have with the County of Riverside and other permittees under the Western Riverside MSHCP, we believe that the significant educational along with the potential regulatory and ancillary benefits to conservation of the species and its essential habitat in Subunits 1A, 1B, 3A, and 3B of including these lands as critical habitat outweighs the benefit of exclusion. Therefore we have not exercised our delegated discretion to exclude these areas.

Exclusion Will Not Result in Extinction of the Species—Unit 2, Western Riverside County MSHCP

We determined that exclusion of 118 ac (48 ha) of land in Unit 2 within the Western Riverside County MSHCP planning area from the final critical habitat designation for *Ambrosia pumila* will not result in extinction of the species. This area is permanently conserved and managed to provide a benefit to *A. pumila* and its habitat. The jeopardy standard of section 7 of the Act provides assurances the species will not go extinct as a result of exclusion from critical habitat designation where habitat is occupied by *A. pumila* or other federally listed species. Therefore, based on the above discussion, we have determined to exercise our delegated discretion to exclude approximately 118 ac (48 ha) of land in Unit 2 owned by or under the jurisdiction of Western Riverside County MSHCP permittees from this critical habitat designation.

San Diego Multiple Species Conservation Program (MSCP)—City and County of San Diego MSCP Subarea Plans

We determined that approximately 207 ac (84 ha) of habitat in Subunit 5A and Unit 6 within the City of San Diego MSCP Subarea Plan, and approximately 488 ac (198 ha) of habitat in Subunits 5B, 7A, 7B, and 7C within the County of San Diego MSCP Subarea Plan meet the definition of *Ambrosia pumila* critical habitat under the Act. In making our decision with regard to designating lands within these two subarea plans as critical habitat, we considered several factors, including our relationship with the participating MSCP jurisdictions, our relationship with other MSCP stakeholders, non-covered activities, existing consultations, conservation measures in place that benefit *A. pumila,* and impacts to current and future partnerships. We recognize that *A. pumila* conservation efforts required under the City and County of San Diego MSCP Subarea Plans will continue regardless of whether covered areas are

designated as critical habitat. Under section 4(b)(2) of the Act, we have decided to exercise our delegated discretion to exclude approximately 160 ac (65 ha) of non-Federal land in Unit 6 covered by the City of San Diego MSCP Subarea Plan, and approximately 52 ac (21 ha) of non-Federal land in Subunit 5B covered by the County of San Diego MSCP Subarea Plan from this critical habitat designation. The remaining approximately 228 ac (92 ha) of land in Subunit 5B in the County of San Diego MSCP Subarea Plan area and the remaining 38 ac (15 ha) of land covered by the City of San Diego MSCP Subarea Plan in Unit 6, and all lands covered by the City of San Diego MSCP Subarea Plan in Subunit 5A (9 ac (4 ha)), and all lands covered by the County of San Diego MSCP Subarea Plan in Subunits 7A, 7B, and 7C (215 ac (87 ha)) are being designated as critical habitat for *A. pumila.*

The MSCP is a subregional HCP made up of several subarea plans that has been in place for more than a decade. The subregional plan area encompasses approximately 582,243 ac (235,626 ha) (MSCP 1998, pp. 2–1, and 4–2 to 4–4) and provides for conservation of 85 federally listed and sensitive species ("covered species") through the existing preserve lands and establishment and management of approximately 171,920 ac (69,574 ha) of preserve lands within the Multi-Habitat Planning Area (MHPA) (City and County) and Pre-Approved Mitigation Areas (PAMA) (County of San Diego). The MSCP was developed in support of applications for incidental take permits for several federally listed species by 12 participating jurisdictions and included many other stakeholders in southwestern San Diego County. Under the umbrella of the MSCP, each of the 12 participating jurisdictions is required to prepare a subarea plan that implements the goals of the MSCP within that particular jurisdiction. *Ambrosia pumila* was evaluated in the MSCP subregional plan, the City of San Diego MSCP Subarea Plan, and the County of San Diego MSCP Subarea Plan.

Upon completion of preserve assembly, approximately 171,920 ac (69,574 ha) of the 582,243 ac (235,626 ha) MSCP plan area will be preserved (MSCP 1998, pp. 2–1 and 4–2 to 4–4). The MSCP identifies areas where mitigation activities should be focused to assemble its preserve areas (*i.e.,* MHPA and PAMA). Those areas of the MSCP preserve that are already conserved, as well as those areas that are designated for inclusion in the preserve under the plan, are referred to as the "preserve area" in this critical habitat designation. When the preserve is completed, the public sector (*i.e.,* Federal, State, and local government, and general public) will have contributed 108,750 ac (44,010 ha) (63 percent) to the preserve, of which 81,750 ac (33,083 ha) (48 percent) was existing public land when the MSCP was established and 27,000 ac (10,927 ha) (16 percent) will have been acquired. At completion, the private sector will have contributed 63,170 ac (25,564 ha) (37 percent) to the preserve as part of the development process, either through avoidance of impacts or as compensatory mitigation for impacts to biological resources outside the preserve. Currently and in the future, Federal and State governments, local jurisdictions and special districts, and managers of privately owned lands will manage and monitor their lands in the preserve for species and habitat protection (MSCP 1998, pp. 2–1 and 4–2 to 4–4).

Private lands within the MHPA (City and County of San Diego) and PAMA (County of San Diego) are subject to special restrictions on development, and lands that are dedicated to the preserve must be permanently protected and managed to conserve the covered species. Public lands owned by the cities, county, State of California, and the Federal Government that are identified for conservation under the MSCP must also be protected and permanently managed to conserve the covered species. Numerous processes are incorporated into the MSCP that allow Service oversight of the MSCP implementation. For example, the MSCP imposes annual reporting requirements, provides for Service review and approval of proposed subarea plan amendments and preserve boundary adjustments, and for Service review and comment on projects during CEQA review process. We also chair the MSCP Habitat Monitoring Subcommittee (MSCP 1998, pp. 5–11 to 5–23). Each MSCP subarea plan must account annually for the progress it is making in assembling conservation areas and show that preserve assembly is in rough step with the development allowed in each jurisdiction. We receive annual reports that detail the habitat acreage lost and conserved within the subareas by project and cumulatively. This accounting process ensures habitat conservation proceeds in rough proportion to habitat loss and in compliance with the MSCP subarea plans and the plans' associated implementing agreements.

The City of San Diego MSCP Subarea Plan and the County of San Diego MSCP Subarea Plan contain requirements to monitor and adaptively manage *Ambrosia pumila* habitats and provide for the conservation of this species. The framework and area-specific management plans are required to be comprehensive and address a broad range of management needs at the preserve and species levels intended to reduce the threats to covered species and thereby contribute to recovery. These plans are to include the following: (1) Fire management; (2) public access control; (3) fencing and gates; (4) ranger patrol; (5) trail maintenance; (6) visitor, interpretive, and volunteer services; (7) hydrological management; (8) signage and lighting; (9) trash and litter removal; (10) access road maintenance; (11) enforcement of property and homeowner requirements; (12) removal of invasive species; (13) nonnative predator control; (14) species monitoring; (15) habitat restoration; (16) management for diverse age classes of covered species; (17) use of herbicides and rodenticides; (18) biological surveys; (19) research; and (20) species management conditions (MSCP 1998, p. 49–97).

City of San Diego MSCP Subarea Plan

In addition to the protections described above, the City of San Diego MSCP Subarea Plan requires preservation of over 90 percent of the occurrence of *Ambrosia pumila* at Mission Trails Regional Park, additional impact avoidance and other measures required under the MSCP narrow endemic species policy, and area-specific management directives designed to maintain long-term survival in the planning area (Service 1997, pp. 104–105; Dudek 2000, p. 28). Under the City of San Diego MSCP Subarea Plan, impacts to narrow endemic plants, including *A. pumila,* inside the MHPA will be avoided, and outside the MHPA will be protected as appropriate by management, enhancement (for example, removing nonnative species), restoration, or transplantation to areas identified for preservation (City of San Diego 1997, pp. 105–106; Service 1997, p. 15). These measures help protect *Ambrosia pumila,* whether located on lands targeted for preserve status within the MHPA or located outside of the MHPA in the City of San Diego MSCP Subarea Plan area. Within the MHPA, the narrow endemic policy for the City of San Diego MSCP Subarea Plan requires *in situ* conservation of *A. pumila* or mitigation to ameliorate any habitat loss.

Below is a brief analysis of the benefits of inclusion and exclusion of a portion of Unit 6 which we have

exercised our delegated discretion to exclude from critical habitat designation under section 4(b)(2) of the Act and our analysis of the relative benefits of inclusion and exclusion of the remaining portion of Unit 6 and the portions of Subunit 5A covered under the City of San Diego MSCP Subarea Plan which we have not exercised our delegated discretion to exclude from critical habitat designation.

Benefits of Inclusion—City of San Diego MSCP Subarea Plan

As discussed above in our section 4(b)(2) analysis of lands within the Western Riverside County MSHCP, the principal benefit of including an area in a critical habitat designation is the requirement of Federal agencies to ensure actions they fund, authorize, or carry out are not likely to result in the destruction or adverse modification of any designated critical habitat, the regulatory standard of section 7(a)(2) of the Act under which consultation is completed. Federal agencies must consult with the Service on actions that may affect critical habitat and must avoid destroying or adversely modifying critical habitat. Federal agencies must also consult with us on actions that may affect a listed species and refrain from undertaking actions that are likely to jeopardize the continued existence of such species. The analysis of effects to critical habitat is a separate and different analysis from that of the effects to the species. Therefore, the difference in outcomes of these two analyses represents the regulatory benefit of critical habitat. For some species (including *Ambrosia pumila*), and in some locations, the outcome of these analyses will be similar, because effects to habitat will often also result in effects to the species. However, the regulatory standard is different, as the jeopardy analysis investigates the action's impact to survival and recovery of the species, while the adverse modification analysis investigates the action's effects to the designated habitat's contribution to conservation. This will, in many instances, lead to different results and different regulatory requirements. Thus, critical habitat designations may provide greater benefits to the recovery of a species than would listing alone.

Critical habitat may provide a regulatory benefit for *Ambrosia pumila* when there is a Federal nexus present for a project that might adversely modify critical habitat. A Federal nexus generally exists where land is federally owned, or where actions proposed on non-Federal lands require a Federal permit or Federal funding. In the absence of a Federal nexus, the regulatory benefit provided through Section 7 consultation under the Act does not exist. Clearly, any activities affecting designated critical habitat on Federal land would trigger a duty to consult under Section 7. In contrast, the potential of a Federal nexus for activities proposed on non-Federal lands varies widely and depends on the particular circumstances of each case. Nevertheless, because the breadth of potential Federal actions that may trigger a duty to consult under Section 7 is quite broad, we cannot say with certainty that future development of, or activities on non-Federal lands will always lack a Federal nexus. However where there is no discernable Federal nexus on non-Federal lands we propose to designate as critical habitat, we consider the regulatory benefit of designation of those non-Federal lands to be small.

Any protections provided by critical habitat that are redundant with protections already in place also reduce the benefits of inclusion in critical habitat. Other protections, such as may be provided by HCPs or conservation and management, may prevent the destruction or adverse modification of habitat to the same or greater extent as would the consultation provisions under section 7(a) of the Act for critical habitat.

None of the land in Subunit 5A or Unit 6 is federally owned. In Subunit 5A, which lies adjacent to Interstate 15, there is the potential of Federal funding for future projects related to the interstate (*see* Comment 14 in the Summary of Comments and Recommendations section below). However the probability of a project with a Federal nexus occurring in Subunit 5A is uncertain. We are not aware of any current or potential future Federal nexus on the lands in Unit 6.

A portion of Unit 6, 160 ac (65 ha) lies within the Mission Trails Regional Park and is conserved and managed in accordance with the City of San Diego MSCP Subarea Plan and the City of San Diego Mission Trails Regional Park San Diego Ambrosia Management Plan (Dudek 2000), which includes ongoing monitoring (City of San Diego 2000, 2001, 2003, 2006, and 2008b) and management, including building and maintaining fencing and rerouting or closing trails to protect plants (Dudek 2000, pp. 29–30). Because this 160 ac (65 ha) portion of Unit 6 is already permanently conserved and managed to benefit *Ambrosia pumila,* we believe the regulatory benefit of designating this area as critical habitat is redundant with the protections already in place. As noted above, there is also little likelihood of a future Federal nexus in the conserved portion of Unit 6. The lack of a discernable Federal nexus combined with the redundancy of Federal protections afforded by designation with those already in place in this area, render the regulatory benefit of designating the conserved portion of Unit 6 negligible and insignificant.

In contrast to the 160 ac (65 ha) conserved and managed portion of Unit 6, neither the remaining portion of Unit 6 nor Subunit 5A is currently conserved and managed under the City of San Diego MSCP Subarea Plan.

As discussed above, the City of San Diego MSCP Subarea Plan provides for protection of *Ambrosia pumila* habitat considered necessary for survival and recovery of the species. Areas that we have identified as essential for the conservation of *A. pumila* (portion of Subunit 5A and Unit 6) that occur with the MHPA are targeted for conservation under the City of San Diego MSCP Subarea Plan, and as noted above, a 160 ac (65 ha) portion of Unit 6 is already conserved and managed. Also, under the City of San Diego MSCP Subarea Plan, impacts to narrow endemic plants, including *A. pumila,* inside the MHPA must be avoided. Outside of the MHPA *A. pumila* may be afforded protection as appropriate by management, enhancement (such as removing nonnative species), or restoration (City of San Diego 1997, pp. 105–106; Service 1997, p. 15).

The portion of Unit 6 that is not conserved and a portion of Subunit 5A are both within the MHPA, and we anticipate that these areas may eventually be conserved under the City of San Diego MSCP Subarea Plan. However, the areas are not currently conserved or managed and remain more vulnerable to threats, including competition from non-native plant species and human encroachment as discussed above in the Special Management Considerations or Protection section. That portion of Subunit 5A within the City of San Diego MSCP Subarea Plan area, but outside of the MHPA, will also be protected to the extent practicable under the City of San Diego MSCP Subarea Plan, but the plan allows for the transplantation of *Ambrosia pumila* individuals to areas identified for preservation under the subarea plan's narrow endemic policy if impacts outside of the MHPA cannot be avoided. We recognize that the regulatory benefit of designating Subunit 5A, and in particular that portion of Subunit 5A within the MHPA, and the currently unconserved portion of Unit 6 is partially redundant

with the anticipated conservation and management of these areas under the City of San Diego MSCP Subarea Plan. However, because such protections are not yet in place, and are not certain to occur, we believe there is some regulatory benefit to designation of these areas notwithstanding the existing and anticipated protections under the City of San Diego MSCP Subarea Plan. Because the likelihood of a future Federal nexus on Subunit 5A is uncertain and on Unit 6 is remote, we believe this regulatory benefit is small and not significant.

Designating critical habitat also can be beneficial because the process of proposing critical habitat provides the opportunity for peer review and public comment on lands we propose to designate as critical habitat, our criteria to assess those lands, potential impacts from the proposal and information on the taxon itself. We believe the designation of critical habitat may generally provide previously unavailable information to the public. Public education regarding the potential conservation value of an area may also help focus conservation and management efforts on areas of high conservation value for certain species. Information about *Ambrosia pumila* and its habitat that reaches a wide audience, including parties concerned about and engaged in conservation activities, is also valuable because the public may not be aware of documented (or undocumented) *A. pumila* occurrences that have not been conserved or are not being managed.

Because the 160 ac (65 ha) portion of Unit 6 is already permanently conserved and is actively managed for the benefit of *Ambrosia pumila,* there is little educational benefit to designation of this area.

Designating as critical habitat for *Ambrosia pumila* Subunit 5A and the portions of Unit 6 that are not conserved will identify areas essential for the conservation and recovery of *A. pumila* and in doing so, provide an educational component that is a significant benefit to the conservation of *A. pumila.* The educational information contained in this rule provides information that can be used by the public to learn about *A. pumila* and its essential habitat in the currently unconserved portion of Unit 6 and in Subunit 5A and that can refine the broader conservation goals for *A. pumila* under the City of San Diego MSCP Subarea Plan by focusing conservation on the specific areas essential for the recovery of the species.

The designation of *Ambrosia pumila* critical habitat may also strengthen or reinforce some of the provisions in other State and Federal laws, such as CEQA or NEPA. These laws analyze the potential for projects to significantly affect the environment. In the City of San Diego, the additional protections associated with critical habitat would be beneficial in areas not currently conserved. Critical habitat signals the presence of sensitive habitat that could otherwise be missed in the review process for these other environmental laws. In the case of CEQA, this could be a benefit, since CEQA may require protection of essential habitat if its destruction would constitute a significant environmental effect. However, this benefit is a minor benefit in the case of NEPA, because NEPA does not require project proponents to protect sensitive habitat. The potential ancillary benefits under other laws of critical habitat designation would be higher in the currently unconserved portion of Unit 6 and in Subunit 5A because *A. pumila* and its habitat are not protected and managed in these areas. The ancillary benefits of designation would be negligible in the 160 ac (65 ha) conserved portion of Unit 6 because the species and its essential habitat in that area are protected and managed.

In summary, we believe that the regulatory benefit of designating critical habitat under section 7(a) of the Act is small in Subunit 5A and in the portion of Unit 6 that is not conserved and managed. The likelihood of a future Federal nexus in the unconserved portion of Unit 6 is remote; there is a higher potential for a Federal nexus in Subunit 5A, but it is still uncertain. While the regulatory benefit of designation in these areas is only partially redundant with existing protections for *Ambrosia pumila* provided under the City of San Diego MSCP Subarea Plan, the regulatory benefit is lower because of the uncertainty of a future Federal nexus for activities that could adversely affect essential habitat for *A. pumila* on these lands. We believe that the regulatory benefit of designation in Subunit 5A and in the unconserved and unmanaged portion of Unit 6 is not significant. We consider the educational benefit of designation of Unit 5A and the unconserved and unmanaged portion of Unit 6 to be significant because designation will help focus conservation efforts for this species under the City of San Diego MSCP Subarea Plan on these specific essential habitat areas and educate the public about the importance of these areas for the conservation of this species. There are also potential ancillary benefits under other laws that would result from designation of Subunit 5A and the portion of Unit 6 that is not conserved or managed. In the 160-ac (65-ha) portion of Unit 6 that is conserved and managed, we believe the benefits of critical habitat designation are not significant. The regulatory benefit of designation in this area is redundant with protection provided by the conservation and management of the area, and because this area is already conserved and managed, the public education and ancillary benefits are also insignificant. We conclude that among lands proposed as critical habitat that are covered by the City of San Diego MSCP Subarea Plan, the educational benefit of designation of Subunit 5A and the portion of Unit 6 that is not conserved and managed is significant, and the regulatory and ancillary benefits of designating these areas are small and not significant. The regulatory, educational and ancillary benefits of designating the 160 ac (65-ha) conserved portion of Unit 6 as critical habitat are negligible.

Benefits of Exclusion—City of San Diego MSCP Subarea Plan

We believe benefits would be realized by forgoing designation of critical habitat for *Ambrosia pumila* on lands covered by the City of San Diego MSCP Subarea Plan including:

(1) Continuance and strengthening of our effective working relationships with all MSCP jurisdictions and stakeholders to promote conservation of *Ambrosia pumila* and its habitat;

(2) Allowance for continued meaningful collaboration and cooperation in working toward protecting and recovering this species and the many other species covered by the Subarea plan, including conservation benefits that might not otherwise occur;

(3) Encouragement for local jurisdictions to fully participate in the MSCP; and

(4) Encouragement of additional HCP and other conservation plan development in the future on other private lands for this and other federally listed and sensitive species, including incorporation of protections for plant species which is voluntary because the Act does not prohibit take of plant species.

The City of San Diego MSCP Subarea Plan provides substantial protection and management for *Ambrosia pumila* and the physical and biological features essential to the conservation of the species, and addresses conservation issues from a coordinated, integrated perspective rather than a piecemeal, project-by-project approach (as would

occur under sections 7 and 9 of the Act or smaller HCPs); therefore, it is important that we encourage participation in such plans and encourage voluntary coverage of listed plant species in such plans. Many landowners perceive critical habitat as an unfair and unnecessary regulatory burden given the expense and time involved in developing and implementing complex regional and jurisdiction-wide HCPs, such as the City of San Diego MSCP Subarea Plan. Exclusion of the City of San Diego MSCP Subarea Plan lands from critical habitat would help preserve the partnerships we developed with the City of San Diego in the development of the MSCP and the City of San Diego MSCP Subarea Plan, and foster future partnerships and development of future HCPs, and in particular HCPs that include protections for listed plants, such as *A. pumila.*

In summary, we believe excluding land covered by the City of San Diego MSCP Subarea Plan from critical habitat will provide the significant benefit of maintaining existing regional HCP partnerships and fostering new ones.

Weighing Benefits of Exclusion Against Benefits of Inclusion—City of San Diego MSCP Subarea Plan

We reviewed and evaluated the benefits of inclusion and benefits of exclusion for all lands within the City of San Diego MSCP Subarea Plan (approximately 207 ac (84 ha)) as critical habitat for *Ambrosia pumila.* The benefits of including conserved and managed lands in the critical habitat designation are small. Approximately 160 ac (65 ha) of land in Unit 6 are conserved and managed. We do not believe critical habitat designation for *A. pumila* will provide significant regulatory, educational or ancillary benefits for this area. In contrast, the designation as critical habitat of essential habitat for *A. pumila* in Subunit 5A and the unconserved portion of Unit 6 will provide a significant educational benefit and may provide some regulatory and ancillary benefits for the species and its habitat. Neither of these areas is currently conserved and managed to benefit *A. pumila.* Therefore designation of these areas will provide a significant educational benefit by focusing conservation efforts under the City of San Diego MSCP Subarea Plan on habitat for *A. pumila,* both within and outside the MHPA, that is essential for the recovery of the species. We also anticipate some regulatory benefit from designation of Subunit 5A and the unconserved portion of Unit 6 in the unlikely circumstance that a Federal nexus exists in connection with activities on these lands and some ancillary benefit from other laws such as CEQA and NEPA.

Excluding the portion of Subunit 5A covered under the City of San Diego MSCP Subarea Plan and all of Unit 6 from critical habitat designation will further our existing partnerships with permittees under the City of San Diego MSCP Subarea Plan and encourage future voluntary conservation efforts for this species by relieving landowners of any additional regulatory burden stemming from designation. We consider this a significant benefit of excluding these lands.

In summary, we find that the benefits of excluding lands from critical habitat that are receiving long-term conservation and management for the purpose of protecting *Ambrosia pumila* (160 ac (65 ha) in Unit 6) will preserve our partnership with the City of San Diego and other permittees of the MSCP and encourage the conservation of lands associated with development and implementation of future HCPs. These partnership benefits are significant and outweigh the small potential regulatory, educational, and ancillary benefits of including those lands as critical habitat for *A. pumila.* We find that including lands as critical habitat that are not yet receiving long-term conservation and management (Subunit 5A and portions of Unit 6 that are not conserved) will provide additional regulatory protection under section 7(a) of the Act if there is a Federal nexus and will provide a significant educational benefit by focusing conservation efforts by the City of San Diego under the City of San Diego MSCP Subarea Plan on conservation and management of these specific essential habitat areas for *A. pumila* and educating the public about the importance of these areas for the conservation of this species. Designation may also result in some ancillary benefits under other laws. Therefore, designating these areas as critical habitat for *A. pumila* will provide significant educational as well as some regulatory and ancillary benefits to the species. While we acknowledge that excluding these areas under section 4(b)(2) of the Act would provide a significant benefit to the partnership that we have with the City of San Diego and other permittees under the MSCP, we believe that the significant educational benefit along with the potential regulatory and ancillary benefits to conservation of the species and its essential habitat in Subunit 5A and in the unconserved portion of Unit 6 of including these lands as critical habitat outweighs the benefits of exclusion. Therefore we have not exercised our delegated discretion to exclude these areas.

Exclusion Will Not Result in Extinction of the Species—Portions of Unit 6, City of San Diego MSCP Subarea Plan

We determined that exclusion of 160 ac (65 ha) of land in Unit 6 within the City of San Diego MSCP Subarea Plan planning area from the final critical habitat designation for *Ambrosia pumila* will not result in extinction of the species. This area is permanently conserved and managed to provide a benefit to *A. pumila* and its habitat. The jeopardy standard of section 7 of the Act provides assurances that the species will not go extinct as a result of exclusion from critical habitat designation where habitat is occupied by *A. pumila* or other federally listed species. Therefore, based on the above discussion, we have determined to exercise our delegated discretion to exclude approximately 160 ac (65 ha) of land in Unit 6 covered under the City of San Diego MSCP Subarea Plan.

County of San Diego MSCP Subarea Plan

In addition to the protections described above under the "*San Diego Multiple Species Conservation Program (MSCP)—City and County of San Diego's Subarea Plans*" section, the County of San Diego MSCP Subarea Plan dictates that all occurrences (including any newly discovered occurrences) of *A. pumila* will be protected by impact avoidance measures required under the County's Biological Mitigation Ordinance (BMO; County of San Diego 1997, p. 11). Narrow endemic plants, including *A. pumila,* are conserved under the BMO using a process that: (1) Requires avoidance to the maximum extent feasible, (2) restricts encroachment into a population not already conserved to a maximum of 20 percent if total avoidance is not feasible, and (3) requires in-kind mitigation at 1-to-1 to 3-to-1 ratios for impacts if avoidance and minimization of impacts would preclude reasonable use of the property (County of San Diego 1997, p. 11; USFWS 1998, p. 12). Thus, the narrow endemic species policy for the County of San Diego MSCP Subarea plan requires *in situ* conservation of *A. pumila* or mitigation to ameliorate any habitat loss.

Below is a brief analysis of the relative benefits of inclusion and exclusion of that portion of Subunit 5B which we have exercised our delegated discretion to exclude from critical habitat designation under section 4(b)(2)

of the and our analysis of the relative benefits of inclusion and exclusion of the remaining portion of Unit 5B and all of Unit 7 which we have not exercised our delegated discretion to exclude from critical habitat designation.

Benefits of Inclusion—County of San Diego MSCP Subarea Plan

As discussed above in our section 4(b)(2) analysis of lands within the Western Riverside County MSHCP, the principle benefit of including an area in a critical habitat designation is the requirement of Federal agencies to ensure actions they fund, authorize, or carry out are not likely to result in the destruction or adverse modification of any designated critical habitat, the regulatory standard of section 7(a)(2) of the Act under which consultation is completed. Federal agencies must consult with the Service on actions that may affect critical habitat and must avoid destroying or adversely modifying critical habitat. Federal agencies must also consult with us on actions that may affect a listed species and refrain from undertaking actions that are likely to jeopardize the continued existence of such species. The analysis of effects to critical habitat is a separate and different analysis from that of the effects to the species. Therefore, the difference in outcomes of these two analyses represents the regulatory benefit of critical habitat. For some species (including *Ambrosia pumila*), and in some locations, the outcome of these analyses will be similar, because effects to habitat will often also result in effects to the species. However, the regulatory standard is different, as the jeopardy analysis investigates the action's impact to survival and recovery of the species, while the adverse modification analysis investigates the action's effects to the designated habitat's contribution to conservation. This will, in many instances, lead to different results and different regulatory requirements. Thus, critical habitat designations may provide greater benefits to the recovery of a species than would listing alone.

Critical habitat may provide a regulatory benefit for *Ambrosia pumila* when there is a Federal nexus present for a project that might adversely modify critical habitat. A Federal nexus generally exists where land is federally owned, or where actions proposed on non-Federal lands require a Federal permit or Federal funding. In the absence of a Federal nexus, the regulatory benefit provided through Section 7 consultation under the Act does not exist. Clearly, any activities affecting designated critical habitat on Federal land would trigger a duty to consult under Section 7. In contrast, the potential of a Federal nexus for activities proposed on non-Federal lands varies widely and depends on the particular circumstances of each case. Nevertheless, because the breadth of potential Federal actions that may trigger a duty to consult under Section 7 is quite broad, we cannot say with certainty that future development of, or activities on non-Federal lands will always lack a Federal nexus. However where there is no discernable Federal nexus on non-Federal lands we propose to designate as critical habitat, we consider the regulatory benefit of designation of those non-Federal lands to be small.

Any protections provided by critical habitat that are redundant with protections already in place also reduce the benefits of inclusion in critical habitat. Other protections, such as may be provided by HCPs or conservation and management, may prevent the destruction or adverse modification of habitat to the same or greater extent as would the consultation provisions under section 7(a) of the Act for critical habitat.

The County of San Diego MSCP Subarea Plan dictates that occurrences of *A. pumila* will be protected by impact avoidance measures required under the County's BMO. Narrow endemic plants, including *A. pumila,* are conserved under the BMO using a process that:

(1) Requires avoidance to the maximum extent feasible;

(2) Restricts encroachment into a population not already conserved to a maximum of 20 percent if total avoidance is not feasible; and

(3) Requires in-kind mitigation at 1-to-1 to 3-to-1 ratios for impacts if avoidance and minimization of impacts would preclude reasonable use of the property (County of San Diego 1997, p. 11; Service 1998, p. 12).

None of the lands in Subunit 5B are federally owned and only a portion of the lands in Unit 7 are federally owned. (We are not considering exercising our discretion to exclude the federally owned portions of Unit 7.) We are not aware of any current or future Federal nexus on the non-Federal lands in Subunit 5B and Unit 7.

Approximately 52 ac (21 ha) of Subunit 5B are within the Crosby at Rancho Santa Fe preserve area and have been conserved and are managed in accordance with the Crosby at Rancho Santa Fe Habitat Management Plan (Rincon Consultants, Inc. 2008, pp. 1–6), which includes ongoing monitoring and management (such as conducting regular surveys of sensitive species including *Ambrosia pumila,* managing weeds, conducting erosion control activities, installing and maintaining fencing and signage, removing trash, and enhancing public awareness of the preserve). Because this 52 ac (21 ha) portion of Subunit 5B is already permanently protected and managed to benefit *A. pumila,* we believe the regulatory benefit of designating this area as critical habitat is redundant with the protections already in place. As noted above, there is also little likelihood of a future Federal nexus in the conserved portion of Subunit 5B. The lack of a discernable Federal nexus combined with the redundancy of Federal protections afforded by designation with those already in place under the Crosby at Rancho Santa Fe Habitat Management Plan, render the regulatory benefit of designating the conserved portion of Subunit 5B negligible and insignificant.

In contrast to the 52 ac (21 ha) conserved and managed portion of Subunit 5B, neither the remaining portion of Unit 5B nor the portion of Unit 7 that is not federally owned is currently conserved and managed under the County of San Diego's MSCP Subarea Plan. As discussed above, the County of San Diego MSCP Subarea Plan dictates that occurrences of *A. pumila* both inside and outside of the PAMA will be protected by impact avoidance measures required under the County's BMO using a process that requires avoidance to the maximum extent feasible; restricts encroachment into a population not already conserved to a maximum of 20 percent if total avoidance is not feasible; and requires in-kind mitigation if avoidance and minimization of impacts would preclude reasonable use of the property (County of San Diego 1997, p. 11; Service 1998, p. 12).

We anticipate that the portions of Unit 7 that are not federally owned and the unconserved portion of Subunit 5B may eventually be protected under the County of San Diego MSCP Subarea Plan as the BMO is applied to future development. However, these areas are currently not conserved and managed and remain vulnerable to threats, including competition from non-native plant species and human encroachment as discussed above in the Special Management Considerations or Protection section. In addition, the County of San Diego MSCP Subarea Plan does allow for some impacts to the species and its habitat where avoidance is not feasible. We recognize that the regulatory benefit of designating the portion of Unit 7 that is not federally owned and the currently unconserved portion of Subunit 5B is partially

redundant with the anticipated protection and management of these areas for the benefit of *A. pumila* under the County of San Diego MSCP Subarea Plan. However, because conservation and management are not yet in place and protection under the County's BMO may not be coextensive with the protections afforded by critical habitat in these areas, we believe there is some regulatory benefit to designation of these areas notwithstanding the existing and anticipated protections under the County of San Diego MSCP Subarea Plan. Because the likelihood of a future Federal nexus in these areas is remote, we believe this regulatory benefit is small and not significant.

Designating critical habitat also can be beneficial because the process of proposing critical habitat provides the opportunity for peer review and public comment on lands we propose to designate as critical habitat, our criteria to assess those lands, potential impacts from the proposal and information on the taxon itself. We believe the designation of critical habitat may generally provide previously unavailable information to the public. Public education regarding the potential conservation value of an area may also help focus conservation and management efforts on areas of high conservation value for certain species. Information about *Ambrosia pumila* and its habitat that reaches a wide audience, including parties concerned about and engaged in conservation activities, is also valuable because the public may not be aware of documented (or undocumented) *A. pumila* occurrences that have not been conserved or are not being managed.

Because the 52 ac (21 ha) portion of Subunit 5B is already permanently conserved and is actively managed for the benefit of *Ambrosia pumila,* there is little educational benefit to designation of this area.

Designating as critical habitat for *Ambrosia pumila* Unit 7 and the portion of Subunit 5B that is not conserved will identify areas essential for the conservation and recovery of *A. pumila* and in doing so, provide an educational component that is a significant benefit to the conservation of *A. pumila.* The educational information contained in this rule provides information that can be used by the public to learn about *A. pumila* and its essential habitat in Unit 7 and the currently unconserved portion of Unit 5B and that can refine the broader conservation goals for *A. pumila* under the County of San Diego MSCP Subarea Plan by focusing conservation on the specific areas essential for the recovery of the species.

The designation of *Ambrosia pumila* critical habitat may also strengthen or reinforce some of the provisions in other State and Federal laws, such as CEQA or NEPA. These laws analyze the potential for projects to significantly affect the environment. In the County of San Diego, the additional protections associated with critical habitat may be beneficial in areas not currently conserved. Critical habitat would signal the presence of sensitive habitat that could otherwise be missed in the review process for these other environmental laws. In the case of CEQA, this could be a benefit, since CEQA may require protection of essential habitat if its destruction would constitute a significant environmental effect. However, this benefit is a minor benefit in the case of NEPA, because NEPA does not require project proponents to protect sensitive habitat. The potential ancillary benefits under other laws of critical habitat designation would be higher in Unit 7 and the currently unconserved portion of Subunit 5B because *A. pumila* and its habitat are not protected and managed in these areas. The ancillary benefits of designation would be negligible in the 52 ac (21 ha) conserved portion of Subunit 5B because the species and its essential habitat in that area are protected and managed.

In summary, we believe that the regulatory benefit of designating critical habitat under section 7(a) of the Act is small in Unit 7 and in the portion of Subunit 5B that is not conserved and managed. While the regulatory benefits of designation in these areas are only partially redundant with existing and anticipated protections for *Ambrosia pumila* provided under the County of San Diego MSCP Subarea Plan, the regulatory benefit is lower because of the uncertainty of a future Federal nexus for activities that could adversely affect essential habitat for *A. pumila* on these lands. We believe that the regulatory benefit of designation in Unit 7 and in the portion of Subunit 5B that is not conserved and managed is not significant. We consider the educational benefit of designation of Unit 7 and the unconserved and unmanaged portion of Subunit 5B to be significant because designation will help focus conservation efforts for this species under the County of San Diego MSCP Subarea Plan on these specific essential habitat areas and educate the public about the importance of these areas for the conservation of *A. pumila.* There are also potential ancillary benefits from other laws that would result from designation of Unit 7 and the unconserved portion of Unit 5B. In the 52 ac (21 ha) portion of Subunit 5B that is conserved and managed, we believe the benefits of critical habitat designation are not significant. The regulatory benefit of designation in this area is redundant with protection provided by the conservation and management of the area, and because this area is already conserved and managed, the public education and ancillary benefits are also insignificant. We conclude that among the lands proposed as critical habitat that are covered by the County of San Diego MSCP Subarea Plan, the educational benefit of designation of Unit 7 and the portion of Subunit 5B that is not conserved and managed is significant, and the regulatory and ancillary benefits of designating these areas are small and not significant. The regulatory, educational and ancillary benefits of designating the 52 ac (21 ha) conserved and managed portion of Subunit 5B are negligible.

Benefits of Exclusion—County of San Diego MSCP Subarea Plan

We believe benefits would be realized by forgoing designation of critical habitat for *Ambrosia pumila* on lands covered by the County of San Diego MSCP Subarea Plan including:

(1) Continuance and strengthening of our effective working relationships with all MSCP jurisdictions and stakeholders to promote conservation of *Ambrosia pumila* and its habitat;

(2) Allowance for continued meaningful collaboration and cooperation in working toward protecting and recovering this species and the many other species covered by the subarea plan, including conservation benefits that might not otherwise occur;

(3) Encouragement for local jurisdictions to fully participate in the MSCP; and

(4) Encouragement of additional HCP and other conservation plan development in the future on other private lands for this and other federally listed and sensitive species, including incorporation of protections for plant species which is voluntary because the Act does not prohibit take of plant species.

The County of San Diego MSCP Subarea Plan provides substantial protection and management for *Ambrosia pumila* and the physical and biological features essential to the conservation of the species, and addresses conservation issues from a coordinated, integrated perspective rather than a piecemeal, project-by-project approach (as would occur under sections 7 and 9 of the Act or smaller

HCPs). Therefore it is important that we encourage participation in such plans and encourage voluntary coverage of listed plant species in such plans. Many landowners perceive critical habitat as an unfair and unnecessary regulatory burden given the expense and time involved in developing and implementing complex regional and jurisdiction-wide HCPs, such as the MSCP and County of San Diego MSCP Subarea Plan. Exclusion of the County of San Diego MSCP Subarea Plan lands from critical habitat would help preserve the partnerships we developed with the County of San Diego in the development of the MSCP and the County of San Diego MSCP Subarea Plan, and foster future partnerships and development of future HCPs, and in particular HCPs that include protections for listed plants, such as *A. pumila.*

In summary, we believe that excluding land covered by the County of San Diego MSCP Subarea Plan from critical habitat will provide the significant benefit of maintaining existing regional HCP partnerships and fostering new ones.

Weighing Benefits of Exclusion Against Benefits of Inclusion—County of San Diego MSCP Subarea Plan

We reviewed and evaluated the benefits of inclusion and benefits of exclusion for lands within the County of San Diego MSCP Subarea Plan area (approximately 494 ac (200 ha) in Subunits 5B, 7A, 7B, and 7C) as critical habitat for *Ambrosia pumila.* The benefits of including conserved and managed lands in the critical habitat designation are small. Approximately 52 ac (21 ha) of land in Subunit 5B are conserved and managed. We do not believe that critical habitat designation for *A. pumila* will provide significant regulatory, educational, or ancillary benefits for this area. In contrast, the designation as critical habitat of essential habitat for *A. pumila* in the non-federally owned portions of Unit 7 and the unconserved portion of Subunit 5B will provide a significant educational benefit and may provide some regulatory and ancillary benefits for the species and its habitat. Neither of these areas is currently both conserved and managed to benefit *A. pumila.* Therefore designation of these areas may provide a significant educational benefit by focusing conservation efforts under the County of San Diego Subarea Plan on habitat for *A. pumila,* both within and outside the PAMA, which is essential for the recovery of the species. We also anticipate some regulatory benefit from designation of Unit 7 and the unconserved portion of Subunit 5B in the unlikely circumstance that a Federal nexus exists in connection with activities on these lands and some ancillary benefit from other laws such as CEQA and NEPA.

Excluding Unit 7 and all of Subunit 5B from critical habitat designation will further our existing partnerships with permittees under the City of San Diego MSCP Subarea Plan and encourage future voluntary conservation efforts for this species by relieving landowners of any additional regulatory burden stemming from designation. We consider this a significant benefit of excluding these lands.

In summary, we find that excluding lands from critical habitat areas that are receiving long-term conservation and management for the purpose of protecting *Ambrosia pumila* (52 ac (21 ha) in Subunit 5B) will preserve our partnership with the County of San Diego and other permittees of the MSCP and encourage the conservation of lands associated with development and implementation of future HCPs. These partnership benefits are significant and outweigh the small potential regulatory, educational, and ancillary benefits of including those lands in critical habitat for *A. pumila.* We find that including lands as critical habitat that are not yet receiving long-term conservation and management (Subunits 7A, 7B, and 7C, and portions of Subunit 5B that are not conserved) will provide additional regulatory protection under section 7(a) of the Act if there is a Federal nexus, and will provide a significant educational benefit by focusing conservation efforts by the County of San Diego under the County of San Diego MSCP Subarea Plan on conservation and management of these specific essential habitat areas for *A. pumila* and educating the public about the importance of these areas for the conservation of this species. Designation may also result in some ancillary benefits under other laws. Therefore, designating these areas as critical habitat for *A. pumila* will provide significant educational as well as some regulatory and ancillary benefits to the species. While we acknowledge that excluding these areas under section 4(b)(2) of the Act would provide a significant benefit to the partnership that we have with the County of San Diego and other permittees under the MSCP, we believe that the significant educational along with the potential regulatory and ancillary benefits to conservation of the species and its essential habitat in Unit 7 and the unconserved portion of Subunit 5B of including these lands as critical habitat outweighs the benefit of exclusion. Therefore we have not exercised our delegated discretion to exclude these areas.

Exclusion Will Not Result in Extinction of the Species—Portions of Subunits 5B, County of San Diego MSCP Subarea Plan

We determined that exclusion of 52 ac (21 ha) of land in Subunit 5B within the County of San Diego MSCP Subarea Plan planning area from the final critical habitat designation for *Ambrosia pumila* will not result in extinction of the species. This area is permanently conserved and managed to provide a benefit to *A. pumila* and its habitat. The jeopardy standard of section 7 of the Act provides assurances that the species will not go extinct as a result of exclusion from critical habitat designation where habitat is occupied by *A. pumila* or other federally listed species. Therefore, based on the above discussion, we have determined to exercise our delegated discretion to exclude approximately 52 ac (21 ha) of land in Subunit 5B covered under the County of San Diego MSCP Subarea Plan.

Economics

Under section 4(b)(2) of the Act, we consider the economic impacts of specifying any particular area as critical habitat. In order to consider economic impacts, we prepared a draft economic analysis, which we made available for public review on (May 18, 2010; 75 FR 27690), based on the August 27, 2009, proposed rule (74 FR 44238). We accepted comments on the draft analysis until May 17, 2010. Following the close of the comment period, a final analysis of the potential economic effects of the designation was developed taking into consideration the public comments and any new information.

The intent of the final economic analysis (FEA) is to quantify the economic impacts of all potential conservation efforts for *Ambrosia pumila;* some of these costs will likely be incurred regardless of whether we designate critical habitat (baseline). The economic impact of the final critical habitat designation is analyzed by comparing scenarios both "with critical habitat" and "without critical habitat." The "without critical habitat" scenario represents the baseline for the analysis, considering protections already in place for the species (*e.g.,* under the Federal listing and other Federal, State, and local regulations). The baseline, therefore, represents the costs incurred regardless of whether critical habitat is designated. The "with critical habitat"

scenario describes the incremental impacts associated specifically with the designation of critical habitat for the species. The incremental conservation efforts and associated impacts are those not expected to occur absent the designation of critical habitat for the species. In other words, the incremental costs are those attributable solely to the designation of critical habitat above and beyond the baseline costs; these are the costs we consider in the final designation of critical habitat. The analysis looks retrospectively at baseline impacts incurred since the species was listed, and forecasts both baseline and incremental impacts likely to occur during the 20 year period following the designation of critical habitat. This period was determined to be the appropriate period for analysis because limited planning information was available for most activities to forecast activity levels for projects beyond a 20-year timeframe.

The FEA also addresses how potential economic impacts are likely to be distributed, including an assessment of any local or regional impacts of habitat conservation and the potential effects of conservation activities on government agencies, private businesses, and individuals. The FEA measures lost economic efficiency associated with residential and commercial development and public projects and activities, such as economic impacts on water management and transportation projects, Federal lands, small entities, and the energy industry. Decision-makers can use this information to assess whether the effects of the designation might unduly burden a particular group or economic sector.

The final economic analysis determined that the costs associated with critical habitat for *A. pumila,* across the entire area considered for designation (both designated and excluded areas), are primarily a result of residential and commercial development and transportation and utility projects. The incremental economic impact of designating critical habitat was estimated to be $8,990 over the next 20 years using a 7 percent discount rate (Industrial Economics, Inc. 2010, p. ES–9). Based on the 2010 final economic analysis, we concluded that the designation of critical habitat for *A. pumila,* as proposed in 2009 and as finalized in this rule, would not result in significant small business impacts and no areas are expected to experience disproportionate economic impacts as a result of the designation. We have not exercised our delegated discretion to exclude any areas from this critical habitat designation for economic reasons. A copy of the final economic analysis with supporting documents may be obtained by contacting the Carlsbad Field Office (*see* **ADDRESSES**) or for downloading from the Internet at *http://www.regulations.gov.*

Summary of Comments and Recommendations

We requested written comments from the public on the proposed rule to designate critical habitat for *Ambrosia pumila* during two comment periods. The first comment period opened with the publication of the proposed rule in the **Federal Register** on August 27, 2009 (74 FR 44238), and closed on October 26, 2009. The second comment period opened with the publication of the notice of availability of the Draft Economic Analysis (DEA) in the **Federal Register** on May 18, 2010 (75 FR 27690) and closed on June 17, 2010. During the public comment periods, we contacted appropriate Federal, State, and local agencies; scientific organizations; and other interested parties and invited them to comment on the proposed rule to designate critical habitat for *A. pumila* and the associated DEA. During the comment periods, we requested all that interested parties submit comments or information related to the proposed critical habitat, including (but not limited to) the following: Reasons why we should or should not designate habitat as "critical habitat"; information that may assist us in clarifying or identifying more specific PCEs; the appropriateness of designating critical habitat for this species; the amount and distribution of *A. pumila* habitat included in this proposed rule; what areas are essential to the conservation of the species; unit boundaries and methodology used to delineate the areas proposed as critical habitat; land use designations and current or planned activities in the areas proposed as critical habitat; economic, national security, or other relevant impacts of designating any area; issues with the exclusions being considered under section 4(b)(2) of the Act; special management considerations; how to improve public outreach during the critical habitat designation process; and whether the benefit of an exclusion of any particular area outweighs the benefit of inclusion under section 4(b)(2) of the Act.

During the first comment period, we received nine comment letters, two from peer reviewers and seven from public organizations or individuals. During the second comment period we received 4 comment letters addressing the proposed critical habitat designation and the DEA. All four of these latter comment letters were from public organizations or individuals. We did not receive any requests for a public hearing. We appreciate all peer reviewer and public comments submitted and their contributions to the improvement of the content and accuracy of this document.

Peer Review

In accordance with our Policy for Peer Review in Endangered Species Act Activities, published on July 1, 1994 (59 FR 34270), we solicited expert opinions from four knowledgeable individuals with scientific expertise that includes familiarity with *Ambrosia pumila,* the geographic region in which it occurs, and conservation biology principles. Two peer reviewers submitted responses that included additional information, clarifications, and suggestions that we incorporated into the final critical habitat rule.

We reviewed all comments received from the peer reviewers and the public for substantive issues and new information regarding the designation of critical habitat for *Ambrosia pumila.* All comments are addressed in the following summary and incorporated into the final rule as appropriate.

Peer Reviewer's Comments

Comment 1: One peer reviewer noted that it is important to be careful and conservative in our designation of the critical habitat for *Ambrosia pumila* to protect as many occurrences as possible to ensure the long-term viability of the species. This is important because there are critical questions about the ecology and habitat requirements that remain unanswered, and we do not have enough information to confidently extend the critical habitat designation far beyond the known occurrences of this species.

Our Response: The approach recommended in this peer reviewer's comment mirrors the approach we used in designating critical habitat for *Ambrosia pumila.* See Criteria Used To Identify Critical Habitat section above.

Comment 2: One peer reviewer suggested that data such as distance to water source could help expand the critical habitat of this species to areas outside of where it is known to occur, and pointed out that these data are available for three of the seven proposed critical habitat units (CNLM 2008, p. 7).

Our Response: According to our GIS analysis conducted during the development of the proposed critical habitat rule, distance to water source is very inconsistent throughout the range of the species. Using GIS data we estimated the distance between

Ambrosia pumila and associated waterways for over 30 *A. pumila* patches, and the results ranged from approximately 330 ft (100 m) to over 2,400 ft (750 m). Because of the wide range of results, distance to water source was not included as part of the finalized criteria or methodology used to designate critical habitat.

Comment 3: One peer reviewer stated that it would be helpful to know how many and which occurrences were removed in step (3) of the Methods section in the proposed critical habitat rule (74 FR 44245).

Our Response: The CNDDB Element Occurrence numbers that were removed in step (3) of the Criteria Used To Identify Critical Habitat section above are Element Occurrence numbers 11, 24, and 29.

Comment 4: One peer reviewer noted that there may be some particular circumstances where an occurrence should be protected even if it does not protect the full life history of the species.

Our Response: We attempted to designate sites that protect the full life history of *Ambrosia pumila,* as such sites will provide the greatest conservation benefit for the species. Some of the sites we designated may not provide for all life history requirements of the species. Also, sites occupied by the species that did not meet the criteria set forth for this critical habitat designation may still contribute to the conservation and recovery of the species.

Comment 5: One peer reviewer noted that to better make an informed decision about the process of the critical habitat delineation, it would be helpful to know the extent to which each step refined the critical habitat.

Our Response: After eliminating many CNDDB Element Occurrences from consideration in step (1) of our methodology due to these being extirpated or nonnatural occurrences (transplants), we further refined the proposed critical habitat by removing three areas (CNDDB Element Occurrence numbers 11, 24, and 29) where the species occurs in habitat of low quality for growth and propagation. After adding area to each unit or subunit to account for the underground rhizomes that extend beyond the visible extent of the above-ground stems, we further refined the proposed critical habitat by removing habitat types inappropriate for the species and developed areas. See the Criteria Used To Identify Critical Habitat section above for a more detailed description of the steps we followed to delineate critical habitat for *Ambrosia pumila.*

Comment 6: One peer reviewer stated that there should be a clear goal of how many occurrences will be protected.

Our Response: In accordance with section 3(5)(A)(i) of the Act and regulations at 50 CFR 424.12(b), in determining which areas within the geographical area occupied by the species at the time of listing to propose as critical habitat, we consider those physical and biological features essential to the conservation of the species that may require special management considerations or protection. We consider the physical and biological features to be the PCEs laid out in the appropriate quantity and spatial arrangement for the conservation of the species. Although the peer reviewer's request is to protect a certain number or percentage of occurrences, such an approach would not be consistent with the conservation purpose of critical habitat designation. Therefore, goals of how many occurrences will be protected are not outlined in this rule.

Comment 7: One peer reviewer requested information on how many of the known extant *Ambrosia pumila* occurrences are protected in the seven critical habitat units, what percentage of the existing *Ambrosia pumila* occurrences will be protected by this critical habitat designation, and what percentage of the existing population (percent of total stems) will be protected by this critical habitat designation.

Our Response: Each critical habitat subunit corresponds with one CNDDB Element Occurrence of *Ambrosia pumila;* thus, the final critical habitat designation for this species includes all or portions of 9 occurrences of *A. pumila* (or 63 percent of the 16 currently known extant occurrences of *A. pumila*) (some portions of the area containing occurrences have been excluded under section 4(b)(2) of the Act). Although critical habitat designation does not guarantee protection of a species in an area designated as critical habitat, it is a regulatory mechanism that can aid in the recovery of a species. All or portions of 9 occurrences of *A. pumila* will receive additional regulatory protection. We do not have range-wide data sufficient to estimate the total number of *Ambrosia pumila* aerial stems in 2010 or any year prior; therefore, we are unable to determine what percent of total stems are included in this critical habitat designation.

Comment 8: One peer reviewer noted that on p. 44248 of the proposed critical habitat rule, under the heading "Unit 2: Skunk Hollow Vernal Pool Watershed," sentence three should read, "Unit 2 consists of approximately 118 ac (48 ha) of privately owned land owned and managed by Center for Natural Lands Management that is also protected by a Conservation Easement held by the California Department of Fish and Game."

Our Response: We have revised this sentence in the unit description in this final rule.

Comment 9: One peer reviewer noted that the USGS 7.5′ quadrangle maps used as a base layer for the maps published with the proposed critical habitat for *A. pumila* are obsolete due to recent urban development that has occurred since the maps were published. The peer reviewer suggested we use a more recent road map or aerial photograph that they believe would better depict the boundaries of the units and allow photos for a more constructive evaluation of the units.

Our Response: We use the most recent data available to create our critical habitat maps. However, we may remove some roads and other features to avoid creating maps that are too complex or unclear. If roads appear to be missing from critical habitat maps, it is not because we have used outdated maps that do not have more recently built roads, but rather because we removed those roads in order to maintain clarity.

Comment 10: One peer reviewer noted that the description of basic biology and current knowledge about *Ambrosia pumila* is detailed and accurate.

Our Response: We appreciate the peer reviewer's comment.

Comment 11: One peer reviewer agreed with our determination that including unoccupied habitat in the critical habitat designation for *Ambrosia pumila* is not warranted. The peer reviewer stated they believe there are too many gaps in the knowledge of habitat requirements for this species, and that adding unoccupied habitat to that designated as critical habitat would potentially far exceed what is necessary to adequately protect this species.

Our Response: We appreciate the peer reviewer's insight and critical review of our analysis of areas considered essential to the conservation of the species.

Comment 12: One peer reviewer expressed concern that the methodology for determining potential habitat for *Ambrosia pumila* does not adequately account for the down-slope, stream, or drainage dispersal of seeds or rhizomes. The peer reviewer noted that although it is reasonable to assume that flooding or runoff would carry seeds and rhizomes beyond the designated areas, the amount is difficult to quantify.

Alternatively, the peer reviewer stated that accounting for the down-slope, stream, or drainage dispersal of seeds or rhizomes may not be an issue if the down-slope areas are adequately protected under a local HCP.

Our Response: Not enough information is available to determine what down-slope, stream, or drainage areas might be essential to the conservation of this species or to what extent current drainage systems affect the distribution and survival of the species. We likewise have no direct evidence that seeds or rhizomes are currently dispersed (or are dispersible in the case of the rhizomes) by current annual drainage events. Therefore, we did not specifically include these areas in the critical habitat designation (although some down-slope or drainage areas may overlap with areas included in the designation), and we were not able to assess whether relevant HCPs adequately protected the physical and biological features essential to the conservation of *A. pumila* in these unoccupied areas.

Comment 13: One peer reviewer expressed concern that some of the proposed exclusion areas contained within the Western Riverside County MSHCP may overstate the degree of protection that any area is likely to receive since the protected areas are not clearly defined at this time.

Our Response: Section 4(b)(2) of the Act authorizes the Secretary to designate critical habitat after taking into consideration the economic impacts, national security impacts, and any other relevant impacts of specifying any particular area as critical habitat. An area may be excluded from critical habitat if it is determined that the benefits of exclusion outweigh the benefits of designating a particular area as critical habitat, unless the failure to designate will result in the extinction of the species. We believe the exclusions made in this final rule are legally supported under section 4(b)(2) of the Act and scientifically justified. After analyzing the benefits of inclusion and exclusion of proposed critical habitat units and subunits on lands covered under the Western Riverside County MSHCP, we determined that the benefits of exclusion outweighed the benefits of inclusion for Unit 2 because this area is conserved and managed (*see* Weighing Benefits of Exclusion Against Benefits of Inclusion—Western Riverside County MSHCP section above). Service biologists continue to work with the County of Riverside and permittees of the HCP to ensure that *A. pumila* and its habitat receive the full extent of protections anticipated by the Western Riverside County MSHCP.

Comment 14: One peer reviewer expressed concern regarding the potential exclusion of Subunit 3A (Santa Gertrudis Creek) because they believe this area could potentially be eligible for Federal funds related to the San Diego Aqueduct. The peer reviewer also expressed concern regarding the exclusion of Unit 5A, which the reviewer believes may conflict with necessary conservation associated with Federal funds directed toward the adjacent Interstate 15.

Our Response: The probability of a project with a Federal nexus occurring in Subunit 3A is uncertain; we do not know if Federal funds will be used for future maintenance of the San Diego Aqueduct (*see* Weighing Benefits of Exclusion Against Benefits of Inclusion—Western Riverside County MSHCP); however, we have not excluded Subunit 3A from this critical habitat designation. We have not excluded any part of Subunit 5A from this critical habitat designation; therefore, the peer reviewer's concern regarding potential conflicts with necessary conservation associated with Federal funds directed toward the adjacent Interstate 15 is no longer an issue.

Comments From Representatives of Local Jurisdictions

Comment 15: One commenter stated that since *Ambrosia pumila* is a covered species under the Western Riverside County MSHCP, lands covered by this HCP should be excluded from the critical habitat designation because the HCP provides adequate protection for the species. The commenter asserted that including land covered by the Western Riverside County MSHCP in the critical habitat designation for *Ambrosia pumila* would be in violation of section 6.9 of the Western Riverside County MSHCP and section 14.10 of the associated Implementing Agreement, while exclusion of these lands would be consistent with *Home Builders Association of Northern California* v. *U.S. Fish and Wildlife Service* (E.D. Cal. Nov. 11, 2006) Case No. 05–629–WBS–KJMA, which upheld the exclusion of Western Riverside County MSHCP lands from critical habitat for 15 vernal pool species, finding that the exclusion was a reasonable exercise of Service discretion.

Our Response: With regard to the commenter's assertion that lands owned or under the jurisdiction of the Western Riverside County MSHCP should be excluded because the HCP provides adequate protection for the species, the adequacy of an HCP to protect a species and its essential habitat is one consideration taken into account in our evaluation under Section 4(b)(2) of the Act. Exclusion of an area from critical habitat is based on our determination that the benefits of exclusion outweigh the benefits of inclusion, and that exclusion of an area will not result in extinction of a species, which is a more complex analysis process. We have examined the protections afforded *Ambrosia pumila* by the Western Riverside County MSHCP during our exclusion analysis in this critical habitat designation, and have determined that the benefits of excluding in areas owned by or under the jurisdiction of Western Riverside County MSHCP permittees do not outweigh the benefits of including Unit 1 and 3 because these areas are not conserved and managed. However, we also determined that the benefits of excluding lands in areas owned by or under the jurisdiction of Western Riverside County MSHCP permittees that are conserved and managed (Unit 2) outweigh the benefits of including those lands as critical habitat for *A. pumila* (*see* Weighing Benefits of Exclusion Against Benefits of Inclusion—Western Riverside County MSHCP section above).

With regard to the commenter's belief that critical habitat should not be designated in the Western Riverside County MSHCP Plan Area based on language in section 6.9 of the HCP and section 14.10 of the associated Implementing Agreement, the Implementing Agreement does not preclude critical habitat designation within the plan area (Dudek 2003, p. 6–109; Western Riverside County Regional Conservation Authority *et al.,* p. 51). Consistent with our commitment under the Implementing Agreement, and after public review and comment on the proposed critical habitat for *Ambrosia pumila,* we determined through our analysis under section 4(b)(2) of the Act that exclusions under the Western Riverside County MSHCP are limited to the exclusion of lands owned by or under the jurisdiction of the permittees of the Western Riverside County MSHCP that are both conserved and managed (Unit 2). The Western Riverside County MSHCP does not specifically identify which lands will be conserved and managed and allows lands which may be essential for *A. pumila* to be developed as long as the Plan's overall goals for conservation are achieved over the term of the permit. As a result, the exclusion from critical habitat of all lands within the boundary of the Western Riverside County

MSHCP would be premature and potentially not assist in conservation of *A. pumila* (*see* Benefits of Exclusion—Western Riverside County MSHCP section above for a detailed discussion of the exclusion analysis).

Comment 16: One commenter asserted that since the Service has maintained in previous critical habitat rules that the benefits of excluding Western Riverside County MSHCP lands outweigh the benefits of including this HCP in the designation, not excluding lands covered by this HCP in the designation of critical habitat for *Ambrosia pumila* would be arbitrary and capricious under the Administrative Procedure Act (5 U.S.C. 701 *et seq.*). Further, the commenter cited several examples of past critical habitat designations wherein the Service has excluded lands covered by the Western Riverside County MSHCP, and detailed the reasoning used by the Service to justify these exclusions.

Our Response: We agree that the Service has in the past excluded Western Riverside County MSHCP lands from critical habitat designations. We do not agree that designating critical habitat on lands covered under the Western Riverside County MSHCP is arbitrary and capricious under the Administrative Procedure Act because we have a reasoned basis for our decision. Section 3(5)(A) of the Endangered Species Act defines critical habitat, in part, as areas containing physical or biological features that may require special management considerations or protection, while section 4(b)(2) directs the Secretary to consider the impacts of designating such areas as critical habitat and provides the Secretary with discretion to exclude particular areas if he determines that the benefits of exclusion outweigh the benefits of inclusion. In this rule, we considered the protection and management of particular areas covered by the Western Riverside County MSHCP that meet the definition of critical habitat in our exclusion analyses under section 4(b)(2) of the Act.

Upon weighing the benefits of inclusion against benefits of exclusion, we determined the benefits of excluding 118 ac (48 ha) owned by or under the jurisdiction of permittees of the Western Riverside County MSHCP in Unit 2 outweigh the benefits of including this area in the final critical habitat designation. Further, we determined that exclusion of this area will not result in extinction of *Ambrosia pumila.* Therefore, we excluded Unit 2 from this final critical habitat designation (*see* the "Western Riverside County Multiple Species Habitat Conservation Plan (Western Riverside County MSHCP)" subsection under the Exclusions Under Section 4(b)(2) of the Act section above).

Comment 17: One commenter stated that the establishment of the Western Riverside County MSHCP was intended, in part, to replace the need for critical habitat, not to implement an additional layer of regulation. The commenter stated that this was the reason all of these stakeholders, including private parties such as the Building Industry Association, agreed to support the establishment of this HCP. If the Service includes lands covered by the Western Riverside County MSHCP in the critical habitat designation for *Ambrosia pumila,* the commenter believes the Service would be establishing a precedent that there was no reason behind the work and effort that the County of Riverside and other stakeholders invested in initially creating the Western Riverside County MSHCP. Thus, the commenter believes that not excluding lands covered by the Western Riverside County MSHCP from the critical habitat designation for *A. pumila* would dissuade creation of future HCPs.

Our Response: We appreciate the efforts of the many local jurisdictions and other stakeholders in developing the Western Riverside County MSHCP. Those efforts are anticipated to result in significant protection for numerous species including *Ambrosia pumila* under the plan, including conservation of *A. pumila* habitat in a reserve system (the Conservation Area), protection for *A. pumila* habitat within the Criteria Area and the Narrow Endemic Plant Species survey area), avoidance and minimization measures, and management for *A. pumila* and its habitat on lands covered by the Western Riverside County MSHCP in Units 1, 2, and 3. However, we have examined the current protections afforded *A. pumila* by the Western Riverside County MSHCP during our exclusion analysis in this critical habitat designation, and have determined that the benefits of excluding Units 1 and 3 from critical habitat do not outweigh the benefits of including Unit 1 and 3 because these areas are not conserved and managed, and therefore the regulatory, educational and ancillary benefit of critical habitat designation of these areas outweighs the partnership benefits furthered by their exclusion. We also determined that the benefits of excluding lands in Unit 2 which are conserved and managed outweigh the benefits of including those lands as critical habitat for *A. pumila* (*see* Weighing Benefits of Exclusion Against Benefits of Inclusion—Western Riverside County MSHCP section above).

Comment 18: One commenter submitted comments opposing the designation of critical habitat for *Ambrosia pumila* on lands covered by the County of San Diego MSCP Subarea Plan under the MSCP. The commenter asserted that sensitive plant and wildlife species covered by the County of San Diego MSCP Subarea Plan and their habitats are conserved to the maximum extent practicable under this HCP, and that designation of critical habitat on lands covered by the County of San Diego MSCP Subarea Plan would not add more protection for *A. pumila,* but could add economic burdens on County of San Diego MSCP Subarea Plan participants. The commenter goes on to state that portions of Unit 7 that are not already preserved are covered by the County of San Diego MSCP Subarea Plan.

Our Response: We appreciate the commenter's concerns regarding what the commenter believes is the maximum protection afforded to *Ambrosia pumila* under the County of San Diego MSCP Subarea Plan and realize that Unit 7 (and portions of Subunit 5B that are not already preserved) are covered by the County of San Diego MSCP Subarea Plan. Although not specifically stated by the commenter, their comment indicates they believe:

(1) The benefits of exclusion would be higher than the benefits of inclusion because the existing protections provide adequate protection to *Ambrosia pumila* to date, and the economic burden on participants would be high; and

(2) The benefits of inclusion (nonredundant protections provided by critical habitat designation) are less because conservation actions mandated by the HCP are already in place and are being implemented.

Conservation benefits provided by existing HCPs are not considered a benefit of exclusion because they would remain in place regardless of critical habitat designation; however, they do minimize the benefits of inclusion to the extent they are redundant with protection measures that would be provided by a critical habitat designation. With regard to the commenter's assertion that lands owned or under the jurisdiction of the County of San Diego MSCP Subarea Plan should be excluded because the HCP provides adequate protection for the species, the adequacy of an HCP to protect a species and its essential habitat is one consideration taken into account in our evaluation under Section 4(b)(2) of the Act. Exclusion of an area from critical

habitat is based on our determination that the benefits of exclusion outweigh the benefits of inclusion, and that exclusion of an area will not result in extinction of a species, which is a more complex analytical process.

We have examined the protections afforded *Ambrosia pumila* by the County of San Diego MSCP Subarea Plan during our exclusion analysis in this critical habitat designation, and have determined that the benefits of exclusion in areas covered under the County of San Diego MSCP Subarea Plan do not outweigh the regulatory, educational and ancillary benefits of including Unit 7 and the portion of Subunit 5B that is not conserved because these areas are not conserved and managed. However, we also determined that the benefits of excluding lands in areas under the County of San Diego MSCP Subarea Plan that are conserved and managed (portion of Subunit 5B) outweigh the benefits of including those lands as critical habitat for *A. pumila* (*see* Weighing Benefits of Exclusion Against Benefits of Inclusion—County of San Diego MSCP Subarea Plan section above).

With regard to the commenter's statement that critical habitat designation for *Ambrosia pumila* could add economic burdens on County of San Diego MSCP Subarea Plan participants, section 4(b)(2) of the Act states that the Secretary shall designate critical habitat, and make revisions thereto, under subsection (a)(3) on the basis of the best scientific data available and after taking into consideration the economic impact, the impact to national security, and any other relevant impact, of specifying any particular area as critical habitat. In accordance with 50 CFR 424.19, in conducting an impact analysis of critical habitat, the Secretary shall identify any significant activities that would either affect an area considered for designation as critical habitat or be likely to be affected by the designation, and shall, after proposing designation of such an area, consider the probable economic and other impacts of the designation on proposed or ongoing activities. The Secretary may exclude any area from critical habitat if he determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless he determines, based on the best scientific and commercial data available, that the failure to designate such area as critical habitat will result in the extinction of the species concerned. Therefore, consistent with the Act and our implementing regulations, we must consider the relevant impacts of designating areas that meet the definition of critical habitat prior to finalizing a critical habitat designation.

After determining which areas met the definition of critical habitat for *Ambrosia pumila* under section 3(5)(A) of the Act, we took into consideration the economic impact, the impact on national security, and other relevant impacts of specifying any particular area as critical habitat for this species. In this final designation, we recognize that designating critical habitat in areas where we have partnerships with landowners that have led to conservation or management of listed species on non-Federal lands has a relevant, perceived impact to landowners and a relevant impact to future partnerships and conservation efforts on non-Federal lands. Economic impacts are benefits of exclusion that are evaluated in an exclusion analysis. The commenter provided no data to support the assertion that designating critical habitat on lands owned by or under the jurisdiction of draft North County MSCP permittees could add economic burdens on potential North County MSCP participants. According to the Final Economic Analysis completed for this critical habitat designation, the economic impact of this designation on landowners is not expected to be significant.

Comment 19: One commenter opposed designating critical habitat for *Ambrosia pumila* on lands covered by the draft North County MSCP. The commenter asserted that sensitive plant and wildlife species anticipated to be covered by the draft North County MSCP and their habitats will be conserved to the maximum extent practicable under this HCP, and that designation of critical habitat on lands that will be covered by the draft North County MSCP would not add more protection for *A. pumila,* but could add economic burdens on potential North County MSCP participants. The commenter goes on to state that the *A. pumila* populations within the County's jurisdiction along the San Luis Rey River (Units 4A and 4B) are within the Pre-approved Mitigation Area (PAMA) of the draft North County MSCP and would be subject to the proposed Narrow Endemic Policy.

Our Response: We did not consider exercising our delegated discretion to exclude any habitat from this critical habitat designation that falls within the plan area of an HCP where an incidental take permit has not yet been issued because until we have reviewed the completed HCP and issued an incidental take permit, we do not know whether the protections afforded the species under the draft plan are adequate or will be implemented.

After determining which areas met the definition of critical habitat for *Ambrosia pumila* under section 3(5)(A) of the Act, we took into consideration the economic impact, the impact on national security, and other relevant impacts of specifying any particular area as critical habitat for this species. According to the Final Economic Analysis completed for this critical habitat designation, the economic impact of this designation on landowners is not expected to be significant and we declined to exercise our delegated discretion to exclude any areas based on economic impacts. The commenter provided no data to support the assertion that designating critical habitat on lands owned by or under the jurisdiction of draft North County MSCP permittees could add economic burdens on potential North County MSCP participants. Therefore, we disagree with the commenter's assertion that lands owned by or under the jurisdiction of draft North County MSCP permittees should be excluded because of possible economic impacts.

Other Comments:

Comment 20: One commenter stated that the values in Tables 3 and 4 either do not match summary totals in the text of the proposed rule, or are presented awkwardly and cause confusion. The commenter suggested that we correct the figures if they are in error, or present them in a clearer format allowing readers to match figures in the text to figures in tables.

Our Response: We agree that the manner in which data were presented in Tables 3 and 4 could be confusing to the reader. We removed these tables from the final rule, and have presented this data in text only to alleviate confusion.

Comment 21: One commenter submitted comments on behalf of an organization which, as a whole, supports designation of critical habitat within HCPs, but in the case of the City and County of San Diego MSCP Subarea Plans under the MCSP, acknowledges there may be some merit to the argument that excluding MSCP lands will benefit coordination with stakeholders, and that the City and County Subarea Plans are already offering benefits to covered species, including *Ambrosia pumila.* Additionally, the commenter stated that rare plant protection mechanisms were already in place prior to protections afforded under the MSCP, and there are serious efforts to implement the MSCP, at least at the County level.

Our Response: Exclusions under section 4(b)(2) of the Act consider the

benefits of partnerships together with numerous other factors to determine whether the benefits of exclusion outweigh the benefits of inclusion. In our exclusion analyses for the City and County of San Diego MSCP Subarea Plans, we reviewed the goals and objectives that provide beneficial conservation measures for *Ambrosia pumila* that are redundant with conservation measures provided by critical habitat designation, and therefore would reduce the benefits of inclusion in critical habitat. When considering the benefits of exclusion, we consider a variety of factors, including but not limited to whether the plan is finalized (*i.e.,* approved by all parties) and if there is a reasonable expectation that conservation management strategies and actions will be implemented into the future (*see* Exclusions under Section 4(b)(2) of the Act section above for further discussion). We determined that the benefits of exclusion do not outweigh the benefits of inclusion of essential habitat covered by the City and County of San Diego MSCP Subarea Plan with the exception of those lands that are both conserved and managed. See the San Diego Multiple Species Conservation Program (MSCP)—City and County of San Diego's Subarea Plans section above for the exclusion analyses for the City and County of San Diego MSCP Subarea Plans.

Comment 22: One commenter believes that critical habitat designations within HCP lands are reasonable and prudent and exclusions under section 4(b)(2) of the Act should not be given for HCP lands.

Our Response: Section 4(b)(2) of the Act authorizes the Secretary to designate critical habitat after taking into consideration the economic impacts, national security impacts, and any other relevant impacts of specifying any particular area as critical habitat. The Secretary is vested with discretion to exclude any particular area from critical habitat if he determines that the benefits of exclusion outweigh the benefits of designating the area as critical habitat, unless the failure to designate will result in the extinction of the species. We believe the exclusions made in this final rule are legally supported under section 4(b)(2) of the Act and scientifically justified. The commenter specifically addressed exclusions where HCPs are in place. Areas excluded under section 4(b)(2) based on completed HCPs or other Service-approved management plans typically receive long-term protection and conservation under their HCPs or management plans. As discussed above, we fully considered and weighed the benefits to the conservation of *Ambrosia pumila* in determining whether to exclude from critical habitat designation any particular area of essential *A. pumila* habitat within an HCP area (*see* response to Comments 13 though 19 above, and Exclusions Under Section 4(b)(2) of the Act section for further discussion on the exclusion analyses for the Western Riverside County MSHCP, City of San Diego MSCP Subarea Plan under the MSCP, and County of San Diego MSCP Subarea Plan under the MSCP).

Comment 23: One commenter opposed excluding lands under the Western Riverside County MSHCP, stating that coordination is poor, habitat continues to degrade at rates equal to or exceeding rates when the Western Riverside County MSHCP was adopted, and it is not clear that there is a serious effort in Western Riverside County to implement the plan (at least in terms of rare plant conservation).

Our Response: We appreciate the commenter's concerns regarding adequate protection of *Ambrosia pumila* under the Western Riverside County MSHCP. We have determined that the benefits of excluding lands owned by or under the jurisdiction of Western Riverside County MSHCP permittees outweigh the benefits of inclusion only in Unit 2, which is both conserved and managed. Coordination between the Service and the managers of the land in Unit 2 (CNLM) is ongoing and has resulted in research and conservation actions for the benefit of *Ambrosia pumila* onsite and elsewhere. The remaining Subunits in Western Riverside County (Subunits 1A, 1B, 3A, and 3B) have not been excluded from this designation, and thus will receive the benefits of critical habitat designation under the Act. We therefore believe the commenter's concern regarding excluding lands covered under the Western Riverside County MSHCP is no longer an issue. We will continue to monitor the Western Riverside County MSHCP implementation on the status of *A. pumila* in other areas owned by or under the jurisdiction of Western Riverside County MSHCP permittees, and work with HCP permittees and landowners to continue and improve implementation of the Western Riverside County MSHCP.

Comment 24: One commenter stated that HCPs are required only to meet an extinction (*i.e.,* jeopardy) standard, and because recovery is not a requirement of HCPs, Section 10/HCP requirements to avoid jeopardy could result in reducing a species to a minimal existence that contributes little to the overall biotic community, and could also leave a species at perpetual risk of extinction from a variety of factors, while technically not qualifying as a jeopardy.

Our Response: We appreciate the commenter's concerns regarding the long-term recovery of *Ambrosia pumila.* Although not specifically stated by the commenter, their comment indicates they believe that lands covered under an HCP should not be a basis for exclusion from a critical habitat designation because the plans do not protect a listed species to the level beyond that evaluated in a jeopardy analysis under section 7 of the Act. However, the Secretary is vested with broad discretion under Section 4(b)(2) in evaluating whether the benefits of excluding an area from critical habitat designation outweigh the benefits of designating the area, so long as exclusion of an area will not result in extinction of a species. We consider a number of factors in a section 4(b)(2) analysis, including (but not limited to) the protections afforded for a species and its essential habitat under an HCP, whether there are conservation partnerships that would be encouraged by designation of, or exclusion from, critical habitat, particularly partnerships that include voluntary protections for listed plant species in an HCP or other management plan, and the economic, regulatory and educational impacts of including a particular area as critical habitat. See Exclusions under Section 4(b)(2) of the Act and "*Benefits of Excluding Lands with HCPs*" section for further discussion.

We found the benefits of excluding lands that are both conserved and managed under the Western Riverside County MSHCP, the City of San Diego MSCP Subarea Plan, and the County of San Diego MSCP Subarea Plan to be greater than the benefits of including these lands. See the Exclusions under Section 4(b)(2) of the Act section above for a detailed discussion.

Comment 25: One commenter stated that critical habitat is intended to provide for the conservation of the species (*i.e.,* to go beyond just preventing extinction and achieve a status where the protections afforded by the Act are no longer necessary); and that critical habitat designations within the context of regional HCPs could assure that the intent of the Act is achieved and improve the opportunity for recovery. A second commenter stated that relinquishing an important tool for conservation (*i.e.,* critical habitat) in cases where a Federal nexus would otherwise exist because of the HCP overlay is not wise if the overall

strategic goal is to recover or stabilize an endangered species.

Our Response: Section 4(b)(2) of the Act states that critical habitat shall be designated, and revised, on the basis of the best available scientific data after taking into consideration the economic impact, national security impact, and any other relevant impact of specifying any particular area as critical habitat. An area may be excluded from critical habitat if it is determined that the benefits of exclusion outweigh the benefits of specifying a particular area as critical habitat, unless the failure to designate such area as critical habitat will result in the extinction of the species. Consequently, we may exclude an area from critical habitat based on economic impacts, impacts on national security, or other relevant impacts, such as preservation of conservation partnerships, if we determine the benefits of excluding an area from critical habitat outweigh the benefits of including the area in critical habitat, provided the action of excluding the area will not result in the extinction of the species. See the Exclusions under Section 4(b)(2) of the Act section above for a detailed discussion.

We found the benefits of excluding lands that are both conserved and managed under the Western Riverside County MSHCP, the City of San Diego MSCP Subarea Plan, and the County of San Diego MSCP Subarea Plan to be greater than the benefits of including these lands. See the Exclusions under Section 4(b)(2) of the Act section above for a detailed discussion.

Comment 26: One commenter stated that the Service should not exclude HCPs from critical habitat because critical habitat is a Federal tool for conserving species and their habitats and by excluding HCPs we are depriving Federal agencies opportunities to conserve species.

Our Response: As a conservation tool, a critical habitat designation ensures that when actions with a Federal nexus may impact critical habitat, the Federal action agency consults with the Service to determine if the action will adversely modify critical habitat. Critical habitat does not require a Federal agency to perform any additional conservation actions nor does it direct conservation actions. In instances where the critical habitat is unoccupied, there may be additional benefit in that the Federal agency is required to consult under section 7 of the Act if its proposed action would affect critical habitat. With regard to areas that are within the boundaries of an HCP, exclusions are based on our determination that the benefits of exclusion outweigh the benefits of inclusion, and that exclusion of an area will not result in extinction of a species. In the areas that we are excluding from this final rule (lands that are both conserved and managed), we have evaluated the benefits of highlighting the importance of these areas for Federal agencies and the public, but found that the benefits of exclusion outweigh the benefits of inclusion for the areas we have excluded (*see* the Exclusions under Section 4(b)(2) of the Act section above for details).

Comment 27: One commenter noted that the information on the life history and geographical range in the proposed rule appears to be accurate overall, but also noted that more detailed editing of the text would greatly improve the readability of the Life History and Geographic Range and Status sections of the proposed rule.

Our Response: We appreciate the commenter's critical review. However, the commenter did not specify how or what portions of the text in these sections should be edited, nor what could be improved for clarity/readability. However, we thank the commenter for their suggestion, and have reevaluated the information provided in the proposed critical habitat rule and believe that it is complete, clear, and accurate based on the best information available.

Comment 28: One commenter suggested that the descriptions of the critical habitat units be expanded to provide more detail on the distribution of *Ambrosia pumila* within these units. This commenter suggested that we describe in detail the current conditions and land use practices within these localities, and note potential threats, even at localities with Western Riverside County MSHCP or HCP reserve or reserve study areas.

Our Response: Regarding the distribution of *Ambrosia pumila* within critical habitat units/subunits, we presume each unit/subunit to be entirely occupied by the species; areas not occupied by aerial stems are presumed to be occupied by rhizomes (*see* Criteria Used To Identify Critical Habitat section above). Therefore, a discussion of the distribution of *A. pumila* plants within each unit/subunit is not needed. Regarding the description of current conditions, land use practices, and potential threats within each unit, we provided all information we are aware of in this final critical habitat designation. Any additional relevant details received during the comment periods have been incorporated into this final rule where appropriate.

Comment 29: One commenter noted that the acreage figures between Table 1 and Table 2 appear to be different than the 41.4 ac (16.8 ha) of occupied habitat for this species in Unit 1A; Table 2 notes that there are 58.3 ac (23.6 ha) of occupied habitat.

Our Response: Each column in Table 2 of the proposed rule was intended to present a separate set of data; the acreages should not sum across each row. We understand that the presentation used was confusing, and have attempted to make presentation of all data as clear as possible in this final critical habitat rule.

Comment 30: One commenter believes that text in the proposed critical habitat rule fails to mention the distribution of *Ambrosia pumila* within proposed Subunit 1A. The commenter further states that from Table 1 it would appear that 56 percent of this habitat is already within County-owned property that will be a reserve area. The commenter suggests that the text clearly note whether the occurrence is within County or private property.

Our Response: As stated above in our response to Comment 28, we presume each unit/subunit to be entirely occupied by the species; areas not occupied by aerial stems are presumed to be occupied by rhizomes (*see* Criteria Used To Identify Critical Habitat section above). The boundaries of all critical habitat subunits represent our estimation of the underground extent of the *Ambrosia pumila* rhizome of each occurrence. Therefore, a discussion of the distribution of *A. pumila* plants within each unit/subunit is not needed and we believe the species occupies 100 percent of Subunit 1A, approximately 23 ac (10 ha) of which is on County property and 18 ac (7 ha) of which is on private property (*see* Criteria Used To Identify Critical Habitat above, and our response to Comment 29).

Comment 31: One commenter stated that the description of critical habitat units should clearly note any current or future threats to Subunit 1A, if there is any planned expansion of Lake Street, and if this or other projects could further fragment the clones found at this locality and how this could affect the viability of the clonal stands found within this subunit.

Our Response: In our description of Subunit 1A we have included all known threats to the habitat in this subunit. We are not aware of a planned expansion of Lake Street or any other proposed project at this site, and thus how any future project that we are not aware of could affect the species in this area.

Comment 32: One commenter stated that the text in the proposed critical

habitat rule should note current land use practices and threats in proposed Subunits 1B and 3A. The commenter pointed out that lands on the south side of Nichols Road (Subunit 1B) are often disked, and lands on the north side of Nichols Road are subject to OHV activity and trash dumping.

Our Response: In our description of Subunits 1B and 3A, we included all known land use practices and threats to the habitat in this subunit that we are aware of (*see* Western Riverside County Multiple Species Habitat Conservation Plan (Western Riverside County MSHCP) section above). We appreciate the additional information provided by the commenter regarding activities in Subunit 1B that impact *Ambrosia pumila* habitat, and we have incorporated this information into this final rule where appropriate.

Comment 33: One commenter believes the expansion of Nichols Road is a likely possibility; thus, further analysis is needed to determine the viability of Subunit 1B if only the 1.1 ac (0.5 ha) within the Criteria Area is retained as occupied habitat for this species. The commenter believes it will be difficult to complete any expansion of Nichols Road without major impacts to at least one of the clonal units in Subunit 1B.

Our Response: The City of Lake Elsinore informed us that the Nichols Road expansion project will avoid the above-ground portion of the *Ambrosia pumila* occurrence in that area (T. Weiner. pers. comm. 2009). Service biologists will continue to work with the City of Lake Elsinore to avoid impacts to all parts of this occurrence of *Ambrosia pumila* as the proposed Nichols Road expansion project goes forward. See the Western Riverside County Multiple Species Habitat Conservation Plan section for further discussion on this exclusion analysis.

Comment 34: One commenter suggested that since Subunit 3A is not proposed to be included within a reserve, further analysis on the viability of this subunit should be provided. The commenter believes there is no justification for excluding this locality from critical habitat if it is not managed within a reserve because the site could be developed (once Western Riverside County MSHCP provisions for *Ambrosia pumila* have been met).

Our Response: We have determined that the benefits of excluding Subunit 3A from this designation do not outweigh the benefits of inclusion because this area has not been conserved and is not managed; therefore the commenter's concern is no longer an issue (*see* the "Western Riverside County Multiple Species Habitat Conservation Plan (Western Riverside County MSHCP)" subsection under the Exclusions Under Section 4(b)(2) of the Act section above).

Comment 35: One commenter requested clarification as to whether the land in Subunit 3A is owned or under easement by Metropolitan Water District or a private landowner.

Our Response: According to the best available information we have regarding land ownership within Subunit 3A, these lands are not owned or under easement held by Metropolitan Water District.

Comment 36: One commenter stated that the size and distribution of *Ambrosia pumila* patches in Subunit 3A should be noted within the text.

Our Response: The boundaries of the critical habitat subunits represent our estimation of the underground extent of the *Ambrosia pumila* rhizome for each occurrence. Therefore, it is our estimation that *A. pumila* occupies 100 percent of Subunit 3A (*see* Criteria Used To Identify Critical Habitat, and our responses to Comments 30 and 32 above).

Comment 37: One commenter stated that more explanation should be provided on the implications of the last column in Table 2, as it appears to the commenter that the majority of the proposed critical habitat in Western Riverside County is not within an existing reserve or proposed reserve area (criteria area), and thus there would be little protection for any of these localities, except County-owned lands in Subunit 1A, and the CNLM-managed lands in Unit 2. (The commenter believes there is a potential argument for excluding the lands within Unit 2 because there is current management at this locality.)

Our Response: A more thorough explanation of protections afforded habitat in each unit/subunit of proposed critical habitat for *Ambrosia pumila* in Western Riverside County is provided in the final rule (*see* the "*Western Riverside County Multiple Species Habitat Conservation Plan*" section above). With regard to our exclusion analysis for the Western Riverside County MSHCP, exclusion of an area from critical habitat is based on our determination that the benefits of exclusion outweigh the benefits of inclusion, and that exclusion of an area will not result in extinction of a species, which is a complex analytical process. We found the benefits of excluding lands covered by the Western Riverside County MSHCP in Unit 2 to be greater than the benefits of including these lands in the critical habitat designation because this area has been conserved and is managed, and exclusion will not result in extinction of *Ambrosia pumila;* the commenter's concern is, therefore, no longer an issue. For more information, see the Exclusions under Section 4(b)(2) of the Act section above for a detailed discussion.

Comment 38: One commenter stated that more details are required on potential fragmentation, potential infrastructure impacts and the "importance" of the clonal populations on County of Riverside lands versus private lands.

Our Response: We appreciate the information provided by the commenter; however, the amount of detail requested by the commenter to be added to the final rule was not necessary for the purpose of designating critical habitat. Therefore, this additional information was not incorporated.

Comment 39: One commenter stated that considering the current land use management practices and proposed reserve protection of only 1.6 percent of the occupied acreage "at this locality", there appears to be little justification for excluding this locality from critical habitat designation. Further, the commenter states that the Western Riverside County MSHCP is to conserve two known localities of *Ambrosia pumila* (near Lake Street (within Subunit 1A) and near Nichols Road (within Subunit 1B)), which could easily lead to the loss of the clones at the other sites in western Riverside County considered suitable for critical habitat designation. The commenter also states that landowner participation within the Western Riverside County MSHCP is voluntary and generally not requested for any property outside of the criteria areas.

Our Response: It is unclear what specific area of Western Riverside County the commenter was referring to as "this locality"; however, we appreciate the commenter's concerns regarding adequate protection of *Ambrosia pumila* under the Western Riverside County MSHCP. Although not specifically stated by the commenter, their comment indicates they believe that the benefits of inclusion (non-redundant protections and education provided by critical habitat designation) are greater than the benefits of exclusion because conservation actions mandated by the HCP are inadequate.

We have found the benefits of exclusion outweigh the benefits of including land in the critical habitat designation only where lands are both conserved and managed (Unit 2); therefore the commenter's concern is no

longer an issue. Please refer to the Exclusions Under Section 4(b)(2) of the Act section, and our response to Comments 13 through 17 above for further discussion on the benefits of exclusion for the Western Riverside County MSHCP. We will continue to monitor the Western Riverside County MSHCP implementation on the status of *Ambrosia pumila.*

Comment 40: One commenter asserted that the final critical habitat rule may not exclude essential habitat covered by other conservation mechanisms. The commenter stated that HCPs utilize a different part of the Act—Section 10, and allow for the "take" of species including *Ambrosia pumila* and are not a substitute for the designation of critical habitat, which focuses on the recovery of species.

Our Response: We respectfully disagree with the comment. Section 4(b)(2) of the Act states that the Secretary must designate and revise critical habitat on the basis of the best available scientific data after taking into consideration the economic impact, national security impact, and any other relevant impact of specifying any particular area as critical habitat. The Secretary may exclude an area from critical habitat if he determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless he determines, based on the best scientific data available, that the failure to designate such area as critical habitat will result in the extinction of the species. In making that determination, the legislative history is clear that the Secretary has broad discretion regarding which factor(s) to use and how much weight to give to any factor.

It is appropriate under Section 4(b)(2) to consider the effect of critical habitat designation on our ability to maintain existing partnerships and encourage future partnerships to conserve listed species, including partnerships with local jurisdictions and other stakeholders to develop HCPs. We note that the Act does not prohibit take of listed plant species and HCPs developed under Section 10 of the Act in support issuance of incidental take permits for listed animal species are not required to include protections for listed plant species. Thus, we believe it is particularly relevant and appropriate to evaluate the impacts of critical habitat designation under Section 4(b)(2) on our ability to encourage development of HCPs and other management plans that voluntarily include protections for listed plant species such as *Ambrosia pumila.* For more information, see response to Comments 13 through 17 and the Exclusions under Section 4(b)(2) of the Act section above for a detailed discussion.

Comment 41: One commenter stated that the Service should not exclude habitat within the plan area of HCP permits that are not yet issued such as the City of Oceanside's Subarea Plan under the Northwestern San Diego County Multiple Habitat Conservation Plan. They argued draft plans provide no guarantee that the final HCPs will provide adequate species conservation.

Our Response: We did not exclude any habitat from this critical habitat designation that falls within the plan area of an HCP permit that has not yet been issued. Please see the Exclusions Under Section 4(b)(2) of the Act section for a detailed discussion on our exclusion analyses of those areas we considered for exclusion in the proposed critical habitat designation (74 FR 44238) and the associated NOA announcing the DEA (75 FR 27690, May 18, 2010).

Comment 42: One commenter stated that the draft proposed critical habitat is not adequate to inform a decision as important as the designation of critical habitat for *A. pumila.*

Our Response: Because little is known about the biology and life history of *Ambrosia pumila* at this time, it is difficult to construct a critical habitat designation that we can be certain fully addresses the needs of the species. However, we are mandated to complete and publish a critical habitat designation for this species by a court-ordered deadline (*see* Previous Federal Actions section of this rule). This final critical habitat designation is based on the best available scientific and commercial data as well as information we obtained during the public comment periods.

Comment 43: One commenter believes the proposed rule is fatally flawed because the agency fails to consider all currently occupied habitat. The commenter believes it is incumbent upon the Service to re-examine all of the extant populations and include a critical habitat designation for each of them, not just those known at the time of listing, in the critical habitat designation. Another commenter stated that no justification is given as to why all extant CNDDB Element Occurrences were not included in the proposed critical habitat designation.

Our Response: All currently occupied and formerly occupied habitat (including all extant CNDDB Element Occurrences) was considered for designation as critical habitat for *Ambrosia pumila,* and all occurrences were included in the proposed critical habitat unless they were known to have been extirpated, presumed to have been extirpated based on documented negative survey results, are not natural occurrences (transplants or plants moved from their natural location with fill soil), or did not meet the criteria used to identify critical habitat (*see* Criteria Used To Identify Critical Habitat section above). Extant occurrences not proposed as critical habitat in the proposed rule were reevaluated prior to publication of the NOA. Based on additional information provided for our analysis, we determined that one occurrence (Gird/Monserate Hill; Subunit 4D) previously analyzed for the proposed rule meets the definition of critical habitat and it was added to the proposed critical habitat designation as identified in the NOA. Additionally, two occurrences of which we were not aware until after the publication of the proposed rule were also added to the proposed critical habitat designation as identified in the NOA.

We recognize that the designation of critical habitat may not include all of the habitat that may eventually be determined to be necessary for the recovery of *Ambrosia pumila,* and critical habitat designations do not signal that habitat outside the designation is unimportant or may not contribute to recovery. Areas outside the final critical habitat designation will continue to be subject to conservation actions implemented under section 7(a)(1) of the Act and regulatory protections afforded by the section 7(a)(2) jeopardy standard and the prohibitions of section 9 of the Act if actions occurring in these areas may affect *A. pumila;* these protections and conservation tools will continue to contribute to recovery of this species.

Comment 44: One commenter believes that all areas occupied by *Ambrosia pumila* clearly support all of the PCEs, because they support *A. pumila.*

Our Response: Critical habitat designations identify habitat areas that provide essential life cycle needs of the species (areas on which are found the PCEs laid out in the appropriate quantity and spatial arrangement essential to the conservation of the species). Based on the best available commercial and scientific information available, we are unable to be more specific about the PCEs for *Ambrosia pumila* due to the lack of information available regarding the biology and life history of the species. Therefore, we are unable to determine whether areas containing transplant occurrences and occurrences highly impacted by human

activities sufficiently support the biology and life history of the species. For this reason, we have not included these areas in the final critical habitat designation.

Comment 45: One commenter noted that according to the CNDDB (2009), several extant occurrences of *Ambrosia pumila* are completely absent in the critical habitat designation, including Element Occurrence 54 (which is 0.5 mi (0.8 km) southeast of Steele Peak) and Element Occurrence 57 (which is adjacent to the west end of Santiago Road, just west of Murrieta Creek).

Our Response: We were not aware of Element Occurrence 57 until after the proposed critical habitat rule was completed. Upon evaluation of the new information received and evaluated, we included a critical habitat subunit (Subunit 3B) in the proposed critical habitat designation, as described in the NOA that published on May 18, 2010 (75 FR 27690). Service and CDFG staff attempted to locate and map Element Occurrence 54 during a site visit in 2009 (A. Folarin, pers. comm. 2009); however, the occurrence was not found and was thus presumed to be extirpated. Other extant occurrences were not proposed as critical habitat because they were not natural occurrences (transplants or plants moved from their natural location with fill soil), or did not meet the criteria used to identify critical habitat (*see* Criteria Used To Identify Critical Habitat section above).

Comment 46: One commenter believes the Service ignored the recovery goal of critical habitat by failing to include additional and adjacent habitat that may not currently be occupied, but could provide an opportunity for *Ambrosia pumila* recovery. This commenter believes that without critical habitat, *A. pumila* has a reduced chance of persisting and recovering, citing Taylor *et al.* 2005. This commenter goes on to state that the Service should consider and evaluate the recovery benefits of critical habitat designation in order to promulgate a legally valid critical habitat rule (which the commenter believes was not done in the proposed rule).

Our Response: Critical habitat designation is a different process than development of recovery goals and objectives that are outlined in a recovery plan (which has not yet been developed for *Ambrosia pumila*). A critical habitat designation is a regulatory action that defines specific areas that are essential to the conservation of the species in accordance with the statutory definition. A recovery plan (and the associated recovery goals and objectives) is a guidance document developed in cooperation with partners, which provides a roadmap with detailed site-specific management actions to help conserve listed species and their ecosystems. Recovery plans provide important information about the species and the actions that are needed to bring about a species recovery.

Based on the best available commercial and scientific information available, we are unable to be more specific about the PCEs for *Ambrosia pumila* due to the paucity of information available regarding the biology and life history of the species. We believe we have, to the best of our ability, determined and designated all habitat areas that are essential to the conservation of the species. We recognize that the designation of critical habitat may not include all of the habitat that may eventually be determined to be necessary for the recovery of *A. pumila,* and critical habitat designations do not signal that habitat outside the designation is unimportant or may not contribute to recovery. Areas outside the critical habitat designation will continue to be subject to conservation actions implemented under section 7(a)(1) of the Act and regulatory protections afforded by the section 7(a)(2) jeopardy standard and the prohibitions of section 9 of the Act if actions occurring in these areas may affect *A. pumila;* these protections and conservation tools will continue to contribute to recovery of this species.

Comment 47: One commenter noted that models are available that specifically address conservation designs to ensure rare species persistence (Burgman *et al.* 2001). The commenter recommended implementation of this type of modeling to improve the methodology used to delineate the areas proposed as critical habitat. Another commenter noted that a relatively recent scientific approach to identifying the size of plant conservation areas takes into consideration multiple variables including life strategy, disturbance probability, potential habitat, population size, recovery from disturbance, habitat suitability, predation, and competition (Burgman *et al.* 2001). This commenter believes that these types of factors are all critical components when establishing critical habitat needs for species and strongly recommends that the Service implement a similar modeling effort for *Ambrosia pumila.*

Our Response: Models such as those discussed by Burgman *et al.* (2001) are useful in identifying target areas for conservation. We have used different types of models to help us identify critical habitat for several federally-listed species. For *Ambrosia pumila,* we have chosen to identify areas where the species is known to occur rather than use a model due to the fact that we would have had difficulty defining the parameters of the model in a way that would have produced meaningful results due to the of paucity of information available regarding the biology and life history of the species. By using the methods described in this final rule, the designation of critical habitat will contribute to the conservation of this species (*see* Criteria Used To Identify Critical Habitat section).

Comment 48: One commenter believes that if an exclusion is contemplated, then consideration must be given not only to the species extinction thresholds, but also to species recovery standards during critical habitat designations.

Our Response: The process for evaluating the exclusion of an area from critical habitat is defined in and governed by Section 4(b)(2) of the Act. As discussed above, that Section vests the Secretary with broad discretion to consider any relevant factor in determining whether the benefits of excluding a particular area from designation as critical habitat outweigh the benefits of designating the area, so long as exclusion of the area would not result in extinction of the species.

We recognize that the designation of critical habitat may not include all of the habitat that may eventually be determined to be necessary for the recovery of *Ambrosia pumila,* and critical habitat designations do not signal that habitat outside the designation is unimportant or may not contribute to recovery. Areas outside the critical habitat designation will continue to be subject to conservation actions implemented under section 7(a)(1) of the Act and regulatory protections afforded by the section 7(a)(2) jeopardy standard and the prohibitions of section 9 of the Act if actions occurring in these areas may affect *A. pumila;* these protections and conservation tools will continue to contribute to recovery of this species. Critical habitat designation is a different process than development of recovery goals and objectives that are outlined in a recovery plan (which has not yet been developed for *Ambrosia pumila*). A critical habitat designation is a regulatory action that defines specific areas that are essential to the conservation of the species in accordance with the statutory definition. A recovery plan (with

associated recovery goals and objectives) is a guidance document developed in cooperation with partners, which provides a roadmap with detailed site-specific management actions to help conserve listed species and their ecosystems. Recovery plans provide important information about the species and the actions that are needed to bring about a species recovery, while critical habitat designations identify specific areas that are essential for the species' conservation.

Comment 49: One commenter stated that connectivity needs to be included and fragmentation avoided, and based on the paucity of knowledge about the reproductive mechanisms, and the documented genetic diversity within studied populations (McGlaughlin and Friar 2005), a conservative approach to connectivity especially between adjacent populations is prudent.

Our Response: To include areas in the critical habitat designation that increase connectivity between areas occupied by *Ambrosia pumila,* we would need to determine what unoccupied areas are essential to the conservation of the species and the function of these areas in the life history of the species. This rule describes our best understanding at this time of the physical and biological features essential to the conservation of *A. pumila.* Due to the lack of information available regarding the biology and life history of the species, we are unable to determine how such unoccupied areas would support the biology and life history of the species, and where they should be located. Therefore, we are unable to include unoccupied areas in between adjacent populations.

Because relatively little is known about the biology and life history of *Ambrosia pumila* at this time, it is difficult to construct a critical habitat designation that we can be certain addresses every need of the species. However, we are mandated to complete and publish a critical habitat designation for this species by a court-ordered deadline (*see* Previous Federal Actions section of this rule). This final critical habitat designation is based on the best available scientific and commercial data as well as information we obtained during the public comment periods.

Comment 50: One commenter stated that the Service needs to include all occupied habitat in the Economic Analysis (and final critical habitat rule), and not rely on the proposed critical habitat as the basis for the Economic Analysis.

Our Response: The purpose of the Economic Analysis is to identify and analyze the potential economic impacts associated with the designation of critical habitat for *Ambrosia pumila.* Occupied areas not proposed as critical habitat are outside the scope of the Economic Analysis, as they are not expected to be impacted by the designation.

Comment 51: One commenter stated that areas that require special management considerations that are covered or will be covered in the future by management plans or conservation plans should not be excluded pursuant to section 3(5)(A) or 4(b)(2) of the Act.

Our Response: Exclusion of an area from critical habitat designation is based on our determination that the benefits of exclusion outweigh the benefits of inclusion, and that exclusion of the area will not result in extinction of a species, which is a complex analysis process. We found the benefits of exclusion of lands that are both conserved and managed under HCPs or long-term management plans to be greater than the benefits of including these lands in the critical habitat designation, because the associated HCPs and management plans afford protection to the excluded areas, and because of the benefits of preserving partnerships and encouraging development of additional HCPs and other conservation plans in the future. For more information, see the Exclusions under Section 4(b)(2) of the Act section above for a detailed discussion.

Comment 52: One commenter stated that in *Center for Biological Diversity, et al.* v. *Norton,* 240 F. Supp. 2d 1090, 1099 (D. Az. 2003) the court found that the existence of a management plan, far from being a reason to exclude an area from critical habitat, is indisputable proof that the area qualifies as critical habitat.

Our Response: In some instances, it may not be appropriate to exclude areas from critical habitat based on a management plan. We review each area that we consider for exclusion on an individual basis and base our conclusion on the results of the analysis conducted in accordance with a section 4(b)(2) of the Act. Our analysis is based on weighing the benefits of excluding the area from the critical habitat designation against the benefits of including the area in the critical habitat designation, and typically includes consideration of the conservation of the species and its habitat achieved under an HCP or other management plan. Please see the Exclusions Under Section 4(b)(2) of the Act section for a detailed discussion of our analyses of those areas we considered for exclusion in the proposed critical habitat designation (74 FR 44238, August 27, 2009) and the NOA announcing the availability of the DEA (75 FR 27690, May 18, 2010).

Comment 53: One commenter stated that whether habitat does or does not require special management is not determinative of whether that habitat is "critical" to a threatened or endangered species; what is determinative is whether or not the habitat is "essential to the conservation of the species" and special management of that habitat is possibly necessary.

Our Response: We agree with the commenter that prong one of the definition of critical habitat in Section 2 of the Act only requires that an area contain an essential physical or biological feature that "may require" special management considerations; it does not require an absolute finding that the area requires special management. Prong two of the definition of critical habitat does not require a finding that special management is required. Please see the Criteria Used To Identify Critical Habitat and Exclusions Under Section 4(b)(2) of the Act sections for a detailed discussion of the process followed to delineate critical habitat for this designation.

Comment 54: One commenter stated that recent scientific reports support the conservation all of the *Ambrosia pumila* populations (McGlaughlin and Friar 2005, Machearn *et al.* 2006, Hierl *et al.* 2007). They stated that conservation of *A. pumila* should include the maintenance of multiple populations throughout the species range.

Our Response: We believe we have designated all habitat areas that we are able to determine are essential to the conservation of the species at this time. We recognize that the designation of critical habitat may not include all of the habitat that may eventually be determined to be necessary for the recovery of *Ambrosia pumila,* and critical habitat designations do not signal that habitat outside the designation is unimportant or may not contribute to recovery. Areas outside the critical habitat designation will continue to be subject to conservation actions implemented under section 7(a)(1) of the Act and regulatory protections afforded by the section 7(a)(2) jeopardy standard and the prohibitions of section 9 of the Act if actions occurring in these areas may affect *A. pumila;* these protections and conservation tools will continue to contribute to recovery of this species.

Comment 55: One commenter stated a belief that *Ambrosia pumila* definitely needs critical habitat designated for it. The commenter goes on to note that at Sweetwater Gorge, the County of San

Diego has an area fenced to preserve this plant which is full of weeds; and the plant did not have a chance. The commenter believes that we need not only designated habitat but a way to keep areas open for this plant, so it will survive.

Our Response: We thank the commenter for the information provided regarding this *Ambrosia pumila* occurrence. Over-competition from nonnative plant species is a threat to *A. pumila* throughout its range. Insuring the implementation of management actions needed to maintain *A. pumila* habitat is beyond the scope of this critical habitat designation. However, Service biologists are working with partners in San Diego and Riverside counties to recover *A. pumila* and insure management and monitoring of the species and its essential habitat.

Comments Regarding the Draft Economic Analysis

General Comments Regarding Assumptions

Comment 56: One comment states that assumptions in the draft economic analysis (DEA), such as the discount rate, should be revised in light of current economic conditions, citing reductions in home prices and rates of development.

Our Response: The DEA quantifies reductions in private land values associated with avoidance requirements, which reflects the market's evaluation of the future development potential of a parcel given this encumbrance. This expectation reflects long-term development potential, periods over which housing market fluctuations historically have and will continue to occur. The market value of parcels is determined by adjusting assessed values to current values using the OFHEO Home Price Index. Over the last three years the index indicates reductions in home prices ranging from 7 to 32 percent in Riverside County and 8 to 18 percent in San Diego County. Thus, property values reflect current housing market conditions in these areas. Finally, with respect to the discount rate(s) applied in the analysis, the U.S. Office of Management and Budget (OMB) requires Federal agencies to report results using discount rates of three and seven percent (*see* OMB, Circular A–4, 2003). In the DEA these rates provide a means to present impacts on an annual basis and do not affect their absolute magnitude.

Comment 57: One comment states that the DEA inappropriately includes and does not clearly define potential costs associated with time delays, regulatory uncertainty, and stigma.

Our Response: Chapter 2 of the DEA defines these categories of costs to provide context for EAs in general. Data are not available to investigate and quantify any potential costs associated with these categories in the DEA. Rather, costs are associated directly with avoidance requirements and associated reductions in developable land value.

Comment 58: One comment states that the DEA understates consultation costs in terms of costs, time and opportunity costs.

Our Response: The DEA presents a range of consultation costs based on a broad review of consultation records from several Service field offices around the country. Absent specific information on consultation costs for the *Ambrosia pumila,* the average of this range of costs represents the best available estimate at this time.

Impacts to Private Lands

Comment 59: One comment states in multiple sections that the DEA fails to acknowledge planned, approved and ongoing development projects in the Alberhill and Nichols Road subunits (1A and 1B). In addition, the DEA does not rely on the most current property value information for these areas, does not account for property value losses on parcels adjacent to designated areas, does not quantify associated regional economic impacts in terms of jobs and wages, and does not acknowledge additional constraints such as affordable housing requirements.

Our Response: As suggested by the commenter, the City of Lake Elsinore was contacted to determine the status of these projects and relevance of ambrosia conservation measures. The planning department was unable to readily identify these projects and provide requested information regarding status, value, permitting, and the potential for a Federal nexus in a reasonable timeframe. However, the DEA provides estimates of potential losses in market value associated with these parcels, which partially reflect any limitations on future development potential. Additional text describing the concerns raised in the comment and subsequent discussions with the City have been added to the final economic analysis (FEA).

Impacts to Infrastructure Projects

Comment 60: One comment states that the DEA fails to recognize the I–15 "multi-modal widening project" in the Alberhill and Nichols Road subunits.

Our Response: The DEA estimates incremental impacts for all properties, including those within Subunits 1A and 1B (Alberhill and Nichols Road respectively). Although the project in question was not discussed specifically, incremental impacts to properties in Subunits 1A and 1B that would occur in the event of a project with a Federal nexus were calculated and included in the DEA.

Comment 61: One comment states that the Mission Trails Region Park unit (Unit 6) overlaps with an infrastructure easement for a water pipeline. The commenter is concerned that the designation may result in additional section 7 consultations over and above those that would result under its proposed HCP.

Our Response: While GIS data were not available to confirm overlap, it does appear that a portion of the easement is within the boundaries of the Mission Trails unit. Padre Dam Municipal Water District along with Helix Water District, Sweetwater Authority, and Otay Water District is in the process of developing a Joint Water Agencies Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP or plan). The plan will govern project location, development, maintenance, and operation of the parties' water delivery facilities. *Ambrosia pumila* is identified as a covered species under the proposed plan. We have not formally reviewed the proposed plan and determined whether to issue an incidental take permit under Section 10 of the Act to the water agencies. However, as part of our anticipated review of the water agencies' permit application, we must conduct an internal consultation under Section 7 of the Act to insure that the proposed permit is not likely to jeopardize the continued existence of *A. pumila,* and will not adversely modify any designated critical habitat for this species. Assuming the project meets applicable statutory standards under Section 7 and Section 10, we will issue an incidental take permit based on the protections provided under the plan for the covered species, including *A. pumila.* Because we will have evaluated the effects of the water agencies' anticipated activities on *A. pumila* and its designated critical habitat within the plan area as part of our review of the proposed NCCP/HCP, future Section 7 consultations, if any, that may occur with regard to *A. pumila* designated critical habitat are not anticipated to result in additional restrictions on or mitigation for the water agencies' activities beyond the measures provided under the NCCP/HCP. Therefore, the DEA does not forecast additional costs

associated with conservation efforts to maintain the district's water delivery facilities.

Benefits of Designation

Comment 62: One comment states that the potential slowing of development as a result of the designation and corresponding reduction in infrastructure needs has a benefit in reducing greenhouse gases. This benefit should be included in the DEA.

Our Response: Whether the proposed designation will have a measurable impact on greenhouse gas emissions is uncertain, both because of the absence of specific information on the nature and extent of future development in designated areas and because projects may find alternate locations, redistributing emissions geographically without producing a net reduction. Finally, the Service has stated previously that the underlying causes of climate change are complex global issues that are beyond the scope of the Act (*see* 74 FR 56070). Thus, the potential for such benefits is not discussed in the DEA.

Comment 63: One comment states that the DEA fails to quantify benefits associated with open space, aesthetics, and educational opportunities and does not recognize benefits associated with improving water quality and quantity and preservation of habitat for other species.

Our Response: As described in Chapter 4 of the DEA, the purpose of critical habitat is to support the conservation of the *Ambrosia pumila.* The data required to estimate and value in monetary terms the incremental changes in the probability of conservation resulting from the designation are not available. Depending on the project modifications ultimately implemented as a result of the rule, other ancillary benefits that are not the stated objective of critical habitat (such as those identified by the commenter) may occur. However, because these benefits are not associated with the stated goals of the rule (*i.e.,* conservation of the species) they do not inform the designation decision.

Comment 64: One comment states that the DEA fails to identify referenced studies that have estimated the public's willingness to pay for endangered species and open space preservation.

Our Response: Richardson and Loomis (2009; *Ecological Economics* 68, p. 1535–1548) present a meta-analysis of 31 studies that estimate the value of threatened, endangered and rare species. Similarly, McConell and Walls (2005) provide an overview of the extensive literature on the value of open space: *http://www.rff.org/Publications/Pages/PublicationDetails.aspx?PublicationID=9562.*

Required Determinations

Regulatory Planning and Review—Executive Order 12866

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

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

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

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

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

Regulatory Flexibility Act (5 U.S.C. 601 et seq.)

Under the Regulatory Flexibility Act (RFA; 5 U.S.C. 601 *et seq.*), as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996 (5 U.S.C. 801 *et seq.*), whenever an agency must publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effects of the rule on small entities (small businesses, small organizations, and small government jurisdictions). However, no regulatory flexibility analysis is required if the head of an agency certifies the rule will not have a significant economic impact on a substantial number of small entities. The SBREFA amended RFA to require Federal agencies to provide a certification statement of the factual basis for certifying that the rule will not have a significant economic impact on a substantial number of small entities. In this final rule, we are certifying that the critical habitat designation for *Ambrosia pumila* will not have a significant economic impact on a substantial number of small entities. The following discussion explains our rationale.

According to the Small Business Administration, small entities include small organizations, such as independent nonprofit organizations; small governmental jurisdictions, including school boards and city and town governments that serve fewer than 50,000 residents; as well as small businesses. Small businesses include manufacturing and mining concerns with fewer than 500 employees, wholesale trade entities with fewer than 100 employees, retail and service businesses with less than $5 million in annual sales, general and heavy construction businesses with less than $27.5 million in annual business, special trade contractors doing less than $11.5 million in annual business, and agricultural businesses with annual sales less than $750,000. To determine if potential economic impacts to these small entities are significant, we consider the types of activities that might trigger regulatory impacts under this rule, as well as the types of project modifications that may result. In general, the term "significant economic impact" is meant to apply to a typical small business firm's business operations.

To determine if the designation of critical habitat for *Ambrosia pumila* would significantly affect a substantial number of small entities, we consider the number of small entities affected within particular types of economic activities, such as residential and commercial development. We apply the "substantial number" test individually to each industry to determine if certification is appropriate. However, the SBREFA does not explicitly define "substantial number" or "significant economic impact." Consequently, to assess whether a "substantial number" of small entities is affected by this designation, this analysis considers the relative number of small entities likely to be impacted in an area. In some circumstances, especially with critical habitat designations of limited extent, we may aggregate across all industries and consider whether the total number of small entities affected is substantial. In estimating the number of small entities potentially affected, we also consider whether their activities have any Federal involvement.

Designation of critical habitat only affects activities authorized, funded, or carried out by Federal agencies. Some kinds of activities are unlikely to have any Federal involvement and so will not be affected by critical habitat designation. In areas where the species is present, Federal agencies already are required to consult with us under section 7 of the Act on activities they authorize, fund, or carry out that may affect *Ambrosia pumila.* Federal agencies also must consult with us if their activities may affect critical

habitat. Designation of critical habitat, therefore, could result in an additional economic impact on small entities due to the requirement to reinitiate consultation for ongoing Federal activities (*see* Application of the "Adverse Modification" Standard section).

In our final economic analysis of the critical habitat designation, we evaluated the potential economic effects on small business entities resulting from implementation of conservation actions related to the designation of critical habitat for *Ambrosia pumila.* The analysis is based on the estimated impacts associated with the rulemaking as described in sections 2 and 3 of the analysis and evaluates the potential for economic impacts related to: Commercial and residential development and transportation and utility projects (Industrial Economics, Inc. 2010, p. 1–6). The FEA estimates the total incremental impacts associated with development as a whole to be $0 to $8,990 over the 20-year timeframe of the FEA. The FEA identifies incremental impacts to small entities to occur only due to residential and commercial development (Industrial Economics, Inc. 2010, pp. A–3–A–5). The other category of projects either will have no impacts (transportation and utility) or are Federal, State, or public entities not considered small or exceed the criteria for small business status. Please refer to our final economic analysis of critical habitat designation for *A. pumila* for a more detailed discussion of potential economic impacts.

In summary, we considered whether this designation would result in a significant economic effect on a substantial number of small entities. The annualized impact to each entity identified in the analysis was estimated to be approximately $225. This impact is less than 10 percent of the total incremental impact identified for development activities. Based on the above reasoning and currently available information, we concluded this rule would not result in a significant economic impact on a substantial number of small entities as identified in the FEA (Industrial Economics, Inc. 2010, p. A–3–A–5). Therefore, we are certifying that the designation of critical habitat for *Ambrosia pumila* will not have a significant economic impact on a substantial number of small entities, and a regulatory flexibility analysis is not required.

Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.)

In accordance with the Unfunded Mandates Reform Act, we make the following findings:

(a) This rule will not produce a Federal mandate. In general, a Federal mandate is a provision in legislation, statute, or regulation that would impose an enforceable duty upon State, local, or Tribal governments, or the private sector, and includes both "Federal intergovernmental mandates" and "Federal private sector mandates." These terms are defined in 2 U.S.C. 658(5)–(7). "Federal intergovernmental mandate" includes a regulation that "would impose an enforceable duty upon State, local, or Tribal governments," with two exceptions. First, it excludes "a condition of Federal assistance." Second, it also excludes "a duty arising from participation in a voluntary Federal program," unless the regulation "relates to a then-existing Federal program under which $500,000,000 or more is provided annually to State, local, and Tribal governments under entitlement authority," if the provision would "increase the stringency of conditions of assistance" or "place caps upon, or otherwise decrease, the Federal Government's responsibility to provide funding" and the State, local, or Tribal governments "lack authority" to adjust accordingly. "Federal private sector mandate" includes a regulation that "would impose an enforceable duty upon the private sector, except (i) a condition of Federal assistance; or (ii) a duty arising from participation in a voluntary Federal program."

Critical habitat designation does not impose a legally binding duty on non-Federal Government entities or private parties. Under the Act, the only regulatory effect is that Federal agencies must ensure that their actions do not destroy or adversely modify critical habitat under section 7. Designation of critical habitat may indirectly impact non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency. However, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency. Furthermore, to the extent that non-Federal entities are indirectly impacted because they receive Federal assistance or participate in a voluntary Federal aid program, the Unfunded Mandates Reform Act would not apply, nor would critical habitat shift the costs of the large entitlement programs listed above on to State governments.

(b) As discussed in the FEA of the proposed designation of critical habitat for *Ambrosia pumila,* we do not believe that this rule would significantly or uniquely affect small governments because it would not produce a Federal mandate of $100 million or greater in any year; that is, it is not a "significant regulatory action" under the Unfunded Mandates Reform Act. The FEA concludes incremental impacts may occur due to administrative costs of section 7 consultations for development activities; however, these are not expected to affect small governments. Consequently, we do not believe that the critical habitat designation would significantly or uniquely affect small government entities. As such, a Small Government Agency Plan is not required.

Takings—Executive Order 12630

In accordance with E.O. 12630 ("Government Actions and Interference with Constitutionally Protected Private Property Rights"), we analyzed the potential takings implications of designating critical habitat for *Ambrosia pumila* in a takings implications assessment. Critical habitat designation does not affect landowner actions that do not require Federal funding or permits and the removal or destruction of listed plant species such as *A. pumila* does not require issuance of a Federal incidental take permit. The designation of critical habitat for *A. pumila* does not pose significant takings implications for the above reasons.

Federalism—Executive Order 13132

In accordance with E.O. 13132 (Federalism), this rule does not have significant Federalism effects. A Federalism assessment is not required. In keeping with Department of the Interior and Department of Commerce policy, we requested information from, and coordinated development of this proposed critical habitat designation with, appropriate State resource agencies in California. The designation may have some benefit to these governments because the areas that contain the features essential to the conservation of the species are more clearly defined. This information does not alter where and what federally sponsored activities may occur. However, it may assist these local governments in long-range planning.

Where State and local governments require approval or authorization from a Federal agency for actions that may affect critical habitat, consultation under section 7(a)(2) would be required.

While non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency for an action, may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency.

Civil Justice Reform—Executive Order 12988

In accordance with Executive Order 12988 (Civil Justice Reform), it has been determined that the rule does not unduly burden the judicial system and that it meets the requirements of sections 3(a) and 3(b)(2) of the Order. We have designated critical habitat in accordance with the provisions of the Act. This rule uses standard property descriptions and identifies the PCEs within the designated areas to assist the public in understanding the habitat needs of *Ambrosia pumila.*

Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.)

This rule does not contain any new collections of information that require approval by OMB under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*). This rule will not impose recordkeeping or reporting requirements on State or local governments, individuals, businesses, or organizations. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

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

It is our position that, outside the jurisdiction of the U.S. Court of Appeals for the Tenth Circuit, we do not need to prepare environmental analyses as defined by NEPA (42 U.S.C. 4321 *et seq.*) in connection with designating critical habitat under the Act. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244). This position was upheld by the U.S. Court of Appeals for the Ninth Circuit (*Douglas County* v. *Babbitt,* 48 F.3d 1495 (9th Cir. 1995), cert. denied 516 U.S. 1042 (1996)).

Government-to-Government Relationship With Tribes

In accordance with the President's memorandum of April 29, 1994, Government-to-Government Relations with Native American Tribal Governments (59 FR 22951), E.O. 13175, and the Department of the Interior's manual at 512 DM 2, we have a responsibility to communicate meaningfully with recognized Federal Tribes on a government-to-government basis. In accordance with Secretarial Order 3206 of June 5, 1997 (American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act), we readily acknowledge our responsibilities to work directly with Tribes in developing programs for healthy ecosystems, to acknowledge that tribal lands are not subject to the same controls as Federal public lands, to remain sensitive to Indian culture, and to make information available to Tribes.

We determined that there are no tribal lands occupied at the time of listing that contain the features essential to the conservation of the species, nor are there any unoccupied tribal lands that are essential for the conservation of *Ambrosia pumila.* Therefore, critical habitat for *A. pumila* is not being designated on tribal lands.

Energy Supply, Distribution, or Use—Executive Order 13211

On May 18, 2001, the President issued an Executive Order (E.O. 13211; Actions Significantly Affect Energy Supply, Distribution, or Use) on regulations that significantly affect energy supply, distribution, and use. E.O. 13211 requires agencies to prepare Statements of Energy Effects when undertaking certain actions. Based on an analysis conducted for this designation, we determined that the final designation of critical habitat for *Ambrosia pumila* is not expected to significantly affect energy supplies, distribution, or use. Therefore, this action is not a significant energy action, and no Statement of Energy Effects is required.

References Cited

A complete list of all references cited in this rulemaking is available on *http://www.regulations.gov* and upon request from the Field Supervisor, Carlsbad Fish and Wildlife Office (*see* **FOR FURTHER INFORMATION CONTACT** section).

Author(s)

The primary author of this notice is the staff from the Carlsbad Fish and Wildlife Office (*see* **FOR FURTHER INFORMATION CONTACT** section).

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, Transportation.

Regulation Promulgation

■ Accordingly, we amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

PART 17—[AMENDED]

■ 1. The authority citation for part 17 continues to read as follows:

Authority: 16 U.S.C. 1361–1407; 16 U.S.C. 1531–1544; 16 U.S.C. 4201–4245; Pub. L. 99–625, 100 Stat. 3500; unless otherwise noted.

■ 2. In § 17.12(h), revise the entry for "*Ambrosia pumila* (San Diego ambrosia)" under family Asteraceae to read as follows:

§ 17.12 Endangered and threatened plants.

* * * * *

(h) * * *

Species		Historic range	Family	Status	When listed	Critical habitat	Special rules
Scientific name	Common name						
FLOWERING PLANTS							
* *	*	*	*	*	*	*	
Ambrosia pumila	San Diego ambrosia.	U.S.A. (CA), Mexico.	Asteraceae ..	E	727	17.96	NA
* *	*	*	*	*	*	*	

■ 3. In § 17.96(a), add an entry for "*Ambrosia pumila* (San Diego ambrosia)" in alphabetic order under family Asteraceae to read as follows:

§ 17.96 Critical habitat—plants.

(a) *Flowering plants.*

* * * * *

Family Asteraceae: *Ambrosia pumila* (San Diego ambrosia).

(1) Critical habitat units are depicted for Riverside and San Diego Counties, California, on the maps below.

(2) Within these areas, the primary constituent elements (PCE) for *Ambrosia pumila* are:

(i) PCE 1—Sandy loam or clay soils (regardless of disturbance status), including (but not limited to) the Placentia (sandy loam), Diablo (clay), and Ramona (sandy loam) soil series that occur on or near (up to several hundred meters from but not directly adjacent to) a river, creek, or other drainage, or within the watershed of a vernal pool, and that occur on an upper terrace (flat or gently sloping areas of 0 to 42 percent slopes are typical for terraces on which *Ambrosia pumila* occurrences are found).

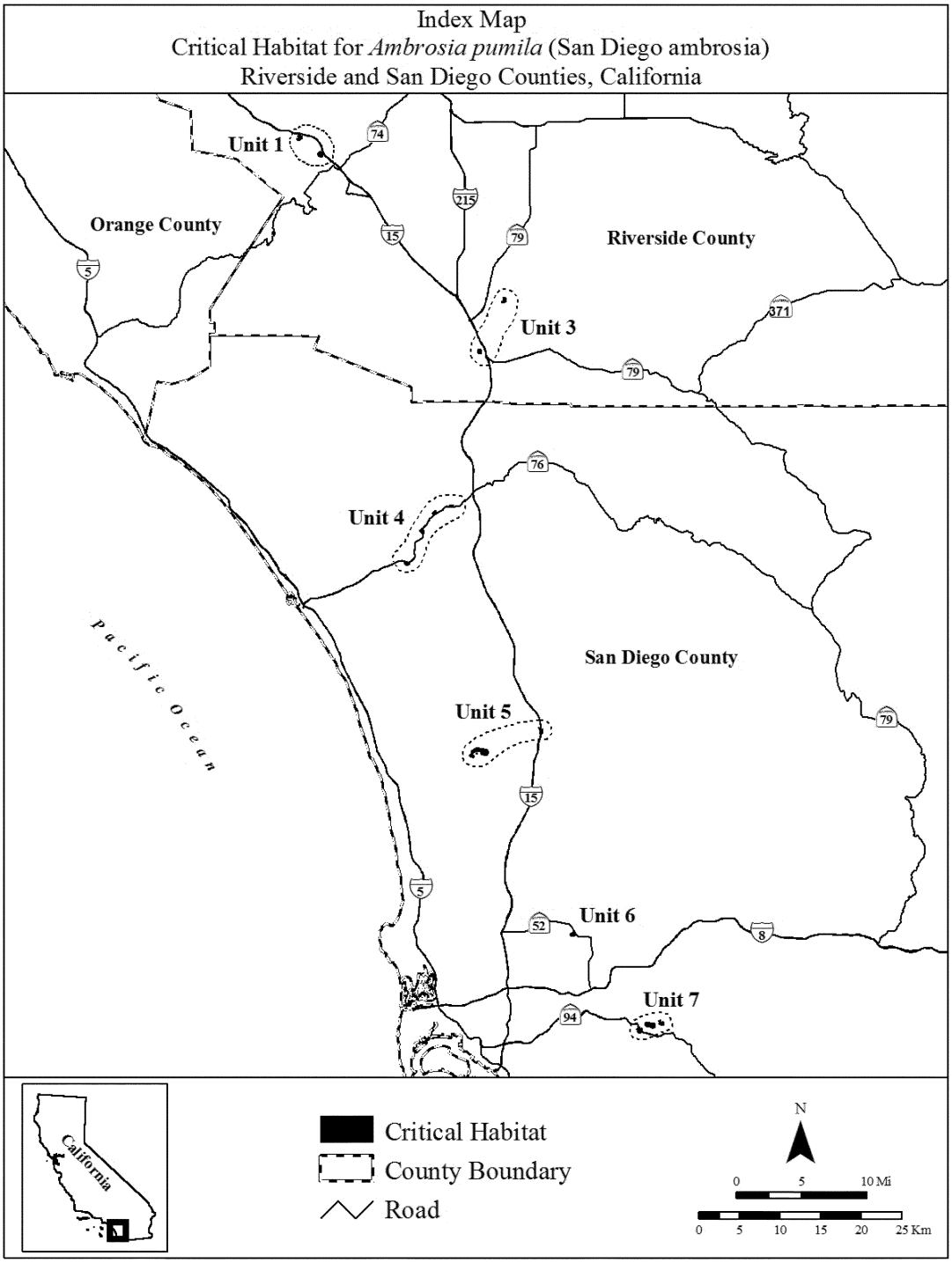
(ii) PCE 2—Grassland or ruderal habitat types, or openings within coastal sage scrub, on the soil types and topography described in PCE 1, that provide adequate sunlight, and airflow for wind pollination.

(3) Critical habitat does not include manmade structures existing on the effective date of this rule and not containing one of more of the primary constituent elements, such as buildings, aqueducts, airports, and roads, and the land on which such structures are located.

(4) *Critical habitat map units.* Data layers defining map units were created using a base of U.S. Geological Survey 7.5′ quadrangle maps. Critical habitat units were then mapped using Universal Transverse Mercator (UTM) zone 11, North American Datum (NAD) 1983 coordinates.

(5) **Note:** Index Map of critical habitat units for *Ambrosia pumila* (San Diego ambrosia) follows:

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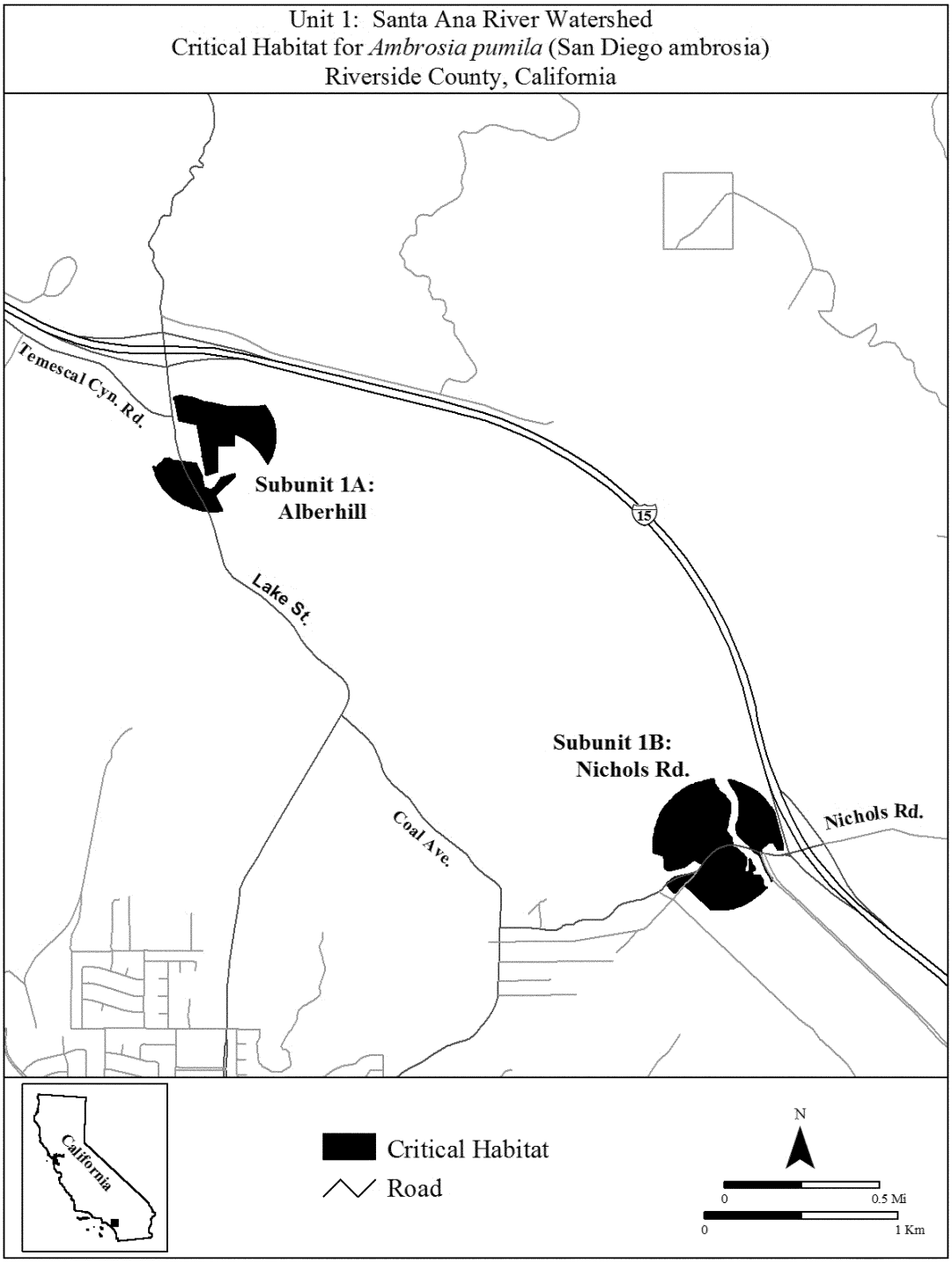
(6) Unit 1: Santa Ana River Watershed, Riverside County, California.

(i) Subunit 1A: Alberhill (Lake Street). From USGS 1:24,000 quadrangle Alberhill, land bounded by the following Universal Transverse Mercator (UTM) Zone 11, North American Datum of 1983 (NAD83) coordinates (E, N): 463686, 3731715; 463700, 3731686; 463720, 3731646; 463716, 3731644; 463729, 3731595; 463760, 3731582; 463782, 3731595; 463814, 3731641; 463886, 3731662; 463886, 3731649; 463787, 3731553; 463823, 3731472; 463814, 3731470; 463800, 3731468; 463786, 3731467; 463772, 3731467; 463757, 3731467; 463743, 3731468; 463729, 3731470; 463715, 3731473; 463701, 3731476; 463687, 3731480; 463684, 3731482; 463668, 3731487; 463658, 3731491; 463653, 3731493; 463650, 3731494; 463643, 3731498; 463626, 3731504; 463609, 3731512; 463606, 3731513; 463589, 3731523; 463575, 3731532; 463568, 3731536; 463565, 3731539; 463559, 3731544; 463555, 3731547; 463546, 3731555; 463529, 3731572; 463521, 3731580; 463514, 3731589; 463501, 3731607; 463491, 3731625; 463483, 3731641; 463479, 3731650; 463477, 3731653; 463475, 3731658; 463471, 3731671; 463465, 3731693; 463464, 3731699; 463467, 3731698; 463480, 3731696; 463496, 3731713;

463509, 3731725; 463524, 3731739; 463548, 3731743; 463563, 3731732; 463661, 3731718; thence returning to 463686, 3731715. Continue to 463692, 3732048; 463718, 3732037; 463768, 3732026; 463824, 3732016; 463861, 3732009; 463916, 3732007; 463940, 3732008; 463960, 3732009; 464014, 3732012; 464040, 3732016; 464046, 3732009; 464054, 3731998; 464062, 3731986; 464068, 3731974; 464070, 3731971; 464071, 3731969; 464074, 3731962; 464080, 3731949; 464084, 3731936; 464088, 3731923; 464092, 3731910; 464094, 3731896; 464096, 3731883; 464097, 3731869; 464098, 3731856; 464098, 3731842; 464097, 3731828; 464095, 3731815; 464093, 3731802; 464090, 3731789; 464086, 3731776; 464081, 3731763; 464076, 3731751; 464071, 3731739; 464068, 3731734; 464064, 3731727; 464058, 3731715; 464056, 3731713; 464009, 3731786; 463961, 3731829; 463909, 3731858; 463881, 3731872; 463883, 3731805; 463875, 3731807; 463798, 3731811; 463797, 3731677; 463737, 3731653; 463731, 3731686; 463720, 3731746; 463718, 3731748; 463717, 3731750; 463718, 3731754; 463719, 3731756; 463690, 3731916; 463615, 3731934; 463595, 3731939; 463577, 3732046; 463573, 3732046; 463571, 3732055; 463582, 3732063; 463596, 3732066; 463615, 3732066; 463641, 3732062; 463665, 3732057; thence returning to 463692, 3732048.

(ii) Subunit 1B: Nichols Road. From USGS 1:24,000 quadrangle Lake Elsinore, land bounded by the following UTM Zone 11, NAD83 coordinates (E, N): 466525, 3729671; 466527, 3729663; 466525, 3729648; 466520, 3729639; 466517, 3729631; 466515, 3729619; 466517, 3729609; 466525, 3729603; 466531, 3729605; 466542, 3729615; 466543, 3729628; 466542, 3729639; 466540, 3729658; 466538, 3729667; 466538, 3729671; 466544, 3729674; 466548, 3729670; 466551, 3729656; 466555, 3729647; 466561, 3729637; 466566, 3729631; 466569, 3729625; 466569, 3729622; 466565, 3729616; 466559, 3729613; 466555, 3729607; 466555, 3729600; 466558, 3729592; 466563, 3729586; 466573, 3729586; 466580, 3729589; 466589, 3729589; 466594, 3729586; 466603, 3729577; 466610, 3729562; 466611, 3729550; 466613, 3729539; 466622, 3729531; 466631, 3729528; 466621, 3729517; 466609, 3729506; 466596, 3729495; 466589, 3729490; 466549, 3729462; 466543, 3729457; 466528, 3729448; 466513, 3729440; 466498, 3729433; 466482, 3729427; 466466, 3729422; 466461, 3729420; 466437, 3729416; 466398, 3729412; 466363, 3729411; 466339, 3729413; 466254, 3729494; 466239, 3729510; 466203, 3729537; 466200, 3729537; 466191, 3729537; 466155, 3729497; 466153, 3729498; 466128, 3729522; 466109, 3729547; 466153, 3729578; 466204, 3729592; 466209, 3729593; 466229, 3729595; 466270, 3729602; 466302, 3729640; 466254, 3729669; 466206, 3729633; 466121, 3729614; 466103, 3729626; 466102, 3729659; 466095, 3729690; 466054, 3729701; 466046, 3729702; 466044, 3729730; 466043, 3729733; 466043, 3729740; 466042, 3729757; 466043, 3729774; 466044, 3729791; 466047, 3729808; 466051, 3729824; 466054, 3729834; 466064, 3729867; 466066, 3729873; 466072, 3729889; 466079, 3729904; 466087, 3729919; 466096, 3729934; 466106, 3729948; 466117, 3729961; 466128, 3729973; 466131, 3729976; 466157, 3730001; 466167, 3730011; 466180, 3730021; 466194, 3730031; 466208, 3730040; 466223, 3730048; 466239, 3730055; 466255, 3730061; 466260, 3730063; 466294, 3730073; 466305, 3730077; 466322, 3730081; 466338, 3730083; 466355, 3730085; 466357, 3730085; 466359, 3730079; 466361, 3730061; 466379, 3730040; 466384, 3730029; 466392, 3730021; 466402, 3730013; 466413, 3730002; 466421, 3729993; 466427, 3729983; 466433, 3729973; 466438, 3729964; 466441, 3729946; 466442, 3729922; 466439, 3729903; 466435, 3729886; 466432, 3729870; 466432, 3729866; 466430, 3729857; 466425, 3729842; 466422, 3729831; 466420, 3729819; 466420, 3729814; 466424, 3729812; 466446, 3729784; 466454, 3729740; 466456, 3729738; 466474, 3729727; 466486, 3729719; 466494, 3729711; 466509, 3729699; 466518, 3729688; 466522, 3729681; thence returning to 466525, 3729671. Continue to 466671, 3729914; 466713, 3729743; 466713, 3729740; 466713, 3729724; 466687, 3729719; 466666, 3729753; 466662, 3729760; 466636, 3729756; 466601, 3729723; 466601, 3729720; 466604, 3729684; 466609, 3729671; 466629, 3729620; 466637, 3729599; 466662, 3729569; 466654, 3729557; 466651, 3729566; 466639, 3729588; 466623, 3729610; 466616, 3729630; 466614, 3729636; 466611, 3729645; 466605, 3729660; 466603, 3729663; 466594, 3729679; 466590, 3729692; 466585, 3729699; 466584, 3729700; 466568, 3729709; 466550, 3729723; 466538, 3729743; 466517, 3729758; 466500, 3729775; 466487, 3729788; 466478, 3729801; 466470, 3729816; 466468, 3729836; 466473, 3729853; 466481, 3729871; 466486, 3729892; 466488, 3729922; 466489, 3729957; 466481, 3729991; 466469, 3730020; 466456, 3730035; 466447, 3730047; 466438, 3730059; 466432, 3730077; 466432, 3730082; 466448, 3730079; 466465, 3730075; 466481, 3730070; 466497, 3730064; 466511, 3730058; 466538, 3730045; 466554, 3730036; 466568, 3730027; 466582, 3730018; 466583, 3730016; 466595, 3730007; 466607, 3729995; 466619, 3729983; 466628, 3729972; 466642, 3729953; 466650, 3729943; 466652, 3729942; 466662, 3729928; thence returning to 466671, 3729914.

(iii) **Note:** Map of Unit 1: Santa Ana River Watershed (Map 2) follows:



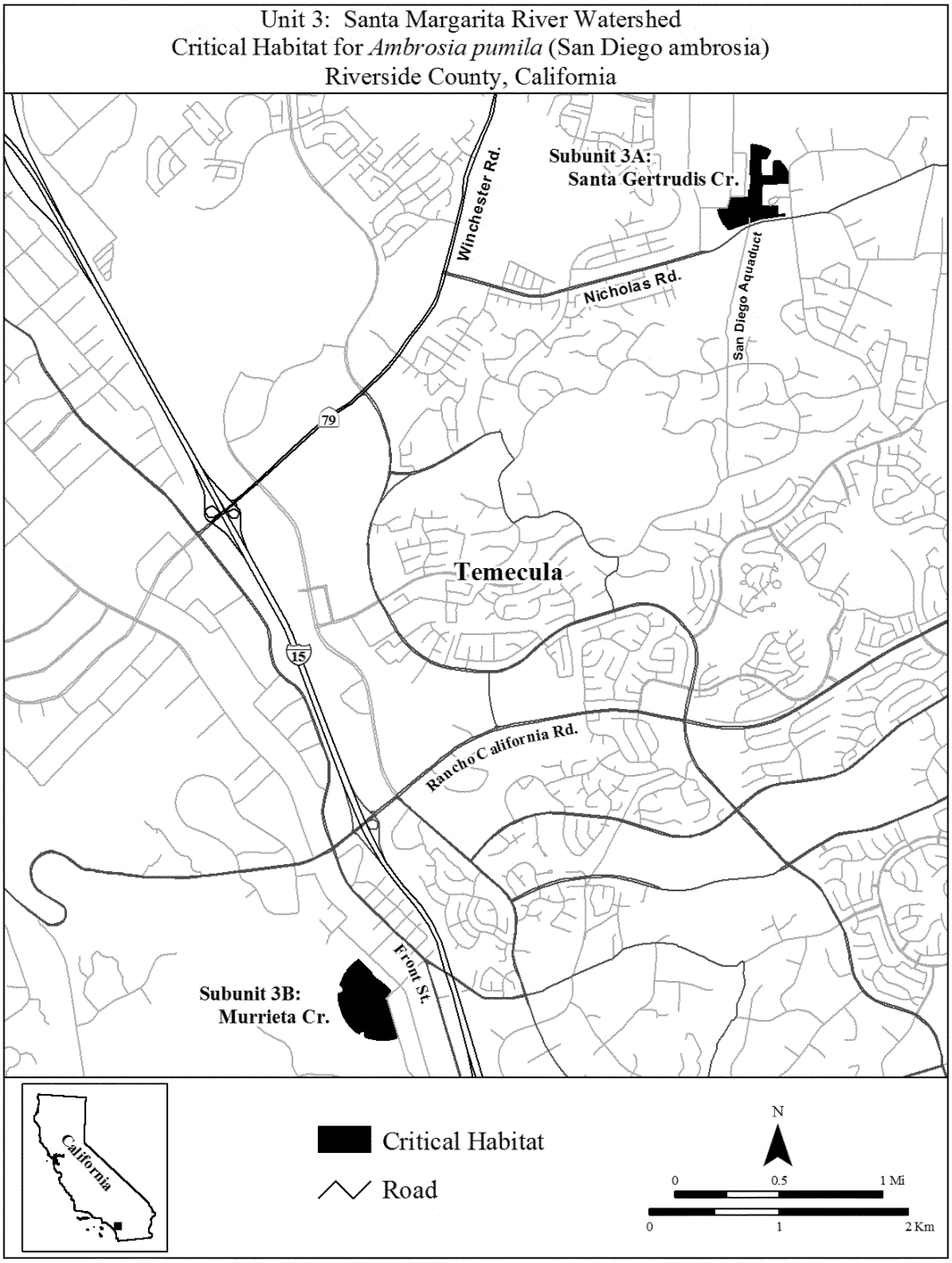
(7) Unit 3: Santa Margarita River Watershed, Riverside County, California.

(i) Subunit 3A: Santa Gertrudis Creek. From USGS 1:24,000 quadrangle Bachelor Mountain, land bounded by the following UTM Zone 11, NAD83 coordinates (E, N): 489149, 3711597; 489149, 3711584; 489149, 3711536; 489150, 3711526; 489182, 3711531; 489207, 3711536; 489206, 3711534; 489204, 3711530; 489150, 3711522; 489032, 3711505; 489029, 3711505; 489004, 3711496; 488986, 3711490; 488853, 3711446; 488773, 3711419; 488772, 3711420; 488762, 3711430; 488752, 3711440; 488743, 3711451; 488735, 3711462; 488727, 3711474; 488720, 3711486; 488714, 3711498; 488708, 3711511; 488703, 3711524; 488698, 3711537; 488695, 3711551; 488692, 3711565; 488690, 3711573; 488740, 3711573; 488761, 3711585; 488780, 3711661; 488930, 3711666; 488932, 3711728; 488940, 3711726; 488943, 3711766; 488947, 3711838; 488937, 3711846; 488946, 3712065; 488946, 3712074; 488957, 3712074; 488971, 3712072; 488984, 3712071; 488987, 3712071; 488990, 3712070; 489021, 3712064; 489021, 3712064; 489051, 3712053; 489080, 3712039; 489095, 3712029; 489094, 3712020; 489063, 3711973; 489021, 3711968; 489016, 3711967; 489020, 3711850; 489021, 3711849; 489029, 3711846;

489029, 3711830; 489071, 3711829; 489078, 3711826; 489096, 3711829; 489115, 3711828; 489118, 3711942; 489129, 3711946; 489173, 3711946; 489176, 3711940; 489179, 3711934; 489188, 3711925; 489197, 3711915; 489205, 3711904; 489212, 3711894; 489219, 3711882; 489224, 3711872; 489231, 3711772; 489227, 3711772; 489148, 3711771; 489032, 3711771; 489029, 3711742; 489031, 3711597; 489081, 3711597; 489094, 3711588; 489105, 3711597; 489136, 3711597; thence returning to 489149, 3711597.

(ii) Subunit 3B: Murrieta Creek. From USGS 1:24,000 quadrangle Temecula, land bounded by the following UTM Zone 11, NAD83 coordinates (E, N): 486159, 3705522; 486130, 3705488; 486110, 3705464; 486117, 3705456; 486125, 3705449; 486155, 3705347; 486174, 3705279; 486208, 3705158; 486202, 3705156; 486186, 3705151; 486169, 3705147; 486165, 3705147; 486153, 3705145; 486140, 3705142; 486130, 3705142; 486123, 3705141; 486116, 3705140; 486104, 3705140; 486076, 3705140; 486058, 3705142; 486045, 3705144; 486030, 3705146; 486014, 3705150; 486008, 3705152; 485996, 3705155; 485986, 3705159; 485970, 3705165; 485960, 3705169; 485954, 3705172; 485959, 3705189; 485959, 3705209; 485945, 3705214; 485921, 3705201; 485918, 3705191; 485913, 3705194; 485902, 3705202; 485889, 3705211; 485876, 3705222; 485870, 3705227; 485861, 3705236; 485855, 3705242; 485843, 3705254; 485834, 3705265; 485827, 3705275; 485824, 3705277; 485815, 3705291; 485806, 3705306; 485803, 3705310; 485797, 3705321; 485791, 3705332; 485784, 3705347; 485780, 3705357; 485776, 3705369; 485774, 3705375; 485769, 3705391; 485765, 3705408; 485763, 3705420; 485760, 3705437; 485758, 3705453; 485758, 3705461; 485758, 3705473; 485758, 3705501; 485774, 3705498; 485777, 3705509; 485794, 3705516; 485793, 3705526; 485785, 3705556; 485769, 3705566; 485769, 3705568; 485773, 3705580; 485776, 3705591; 485781, 3705605; 485787, 3705618; 485794, 3705634; 485802, 3705649; 485811, 3705664; 485817, 3705673; 485825, 3705683; 485828, 3705688; 485839, 3705701; 485845, 3705707; 485853, 3705716; 485859, 3705722; 485871, 3705734; 485881, 3705742; 485891, 3705750; 485894, 3705752; 485908, 3705762; 485910, 3705763; 486004, 3705670; 486019, 3705644; 486044, 3705619; 486065, 3705600; 486086, 3705587; 486119, 3705557; thence returning to 486159, 3705522.

(iii) **Note:** Map of Unit 3: Santa Margarita River Watershed (Map 3) follows:



(8) Unit 4: San Luis Rey River Watershed. From USGS 1:24,000 quadrangle Bonsall, San Diego County, California.

(i) Subunit 4A: Calle de la Vuelta. Land bounded by the following UTM Zone 11, NAD83 coordinates (E, N): 480305, 3685329; 480306, 3685327; 480308, 3685328; 480309, 3685328; 480311, 3685328; 480313, 3685329; 480315, 3685330; 480317, 3685330; 480320, 3685329; 480322, 3685328; 480323, 3685327; 480324, 3685326; 480326, 3685325; 480327, 3685324; 480329, 3685322; 480330, 3685320; 480331, 3685319; 480332, 3685317; 480333, 3685316; 480336, 3685314; 480337, 3685313; 480339, 3685311; 480340, 3685310; 480366, 3685285; 480367, 3685284; 480360, 3685275; 480359, 3685274; 480359, 3685272; 480356, 3685271; 480355, 3685269; 480336, 3685247; 480331, 3685240; 480296, 3685207; 480296, 3685206; 480289, 3685200; 480288, 3685202; 480285, 3685211; 480277, 3685232; 480274, 3685237; 480263, 3685253; 480275, 3685262; 480329, 3685305; 480324, 3685305; 480323, 3685305; 480321, 3685305; 480319, 3685304; 480317, 3685303; 480315, 3685302; 480313, 3685302; 480312, 3685301; 480311, 3685301; 480309, 3685300; 480307, 3685299; 480305, 3685298; 480302, 3685297; 480300, 3685296; 480298, 3685296; 480296, 3685296;

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(ii) Subunit 4B: Olive Hill Road. Land bounded by the following UTM Zone 11, NAD83 coordinates (E, N): 478735, 3683078; 478770, 3683404; 478753, 3683404; 478723, 3683406; 478682, 3683412; 478683, 3683413; 478685, 3683416; 478689, 3683422; 478693, 3683429; 478702, 3683441; 478716, 3683458; 478723, 3683466; 478729, 3683475; 478737, 3683483; 478753, 3683499; 478761, 3683506; 478770, 3683514; 478776, 3683518; 478774, 3683498; 478770, 3683407; thence returning to 478770, 3683404. Continue to 478854, 3683318; 478868, 3683273; 478920, 3683299; 478923, 3683301; 478925, 3683303; 478929, 3683306; 478929, 3683310; 478933, 3683309; 478936, 3683312; 478940, 3683314; 478944, 3683315; 478950, 3683319; 478954, 3683322; 478915, 3683171; 478919, 3683133; 478923, 3683087; 478929, 3683027; 478936, 3682992; 478924, 3682992; 478912, 3682993; 478907, 3682992; 478896, 3682993; 478892, 3682993; 478870, 3682995; 478858, 3682996; 478847, 3682999; 478844, 3683000; 478825, 3683005; 478815, 3683008; 478805, 3683012; 478784, 3683022; 478774, 3683026; 478763, 3683033; 478744, 3683046; 478742, 3683048; 478739, 3683051; 478735, 3683053; 478724, 3683062; 478708, 3683079; 478694, 3683096; 478681, 3683114; 478674, 3683124; 478669, 3683134; 478659, 3683154; 478655, 3683164; 478652, 3683175; 478646, 3683197; 478642, 3683219; 478639, 3683242; 478639, 3683253; 478639, 3683256; 478639, 3683259; 478639, 3683271; 478641, 3683293; 478645, 3683316; 478650, 3683337; 478658, 3683358; 478659, 3683361; 478664, 3683373; 478667, 3683380; 478670, 3683386; 478676, 3683399; 478721, 3683395; 478718, 3683381; 478737, 3683377; 478836, 3683359; thence returning to 478854, 3683318.

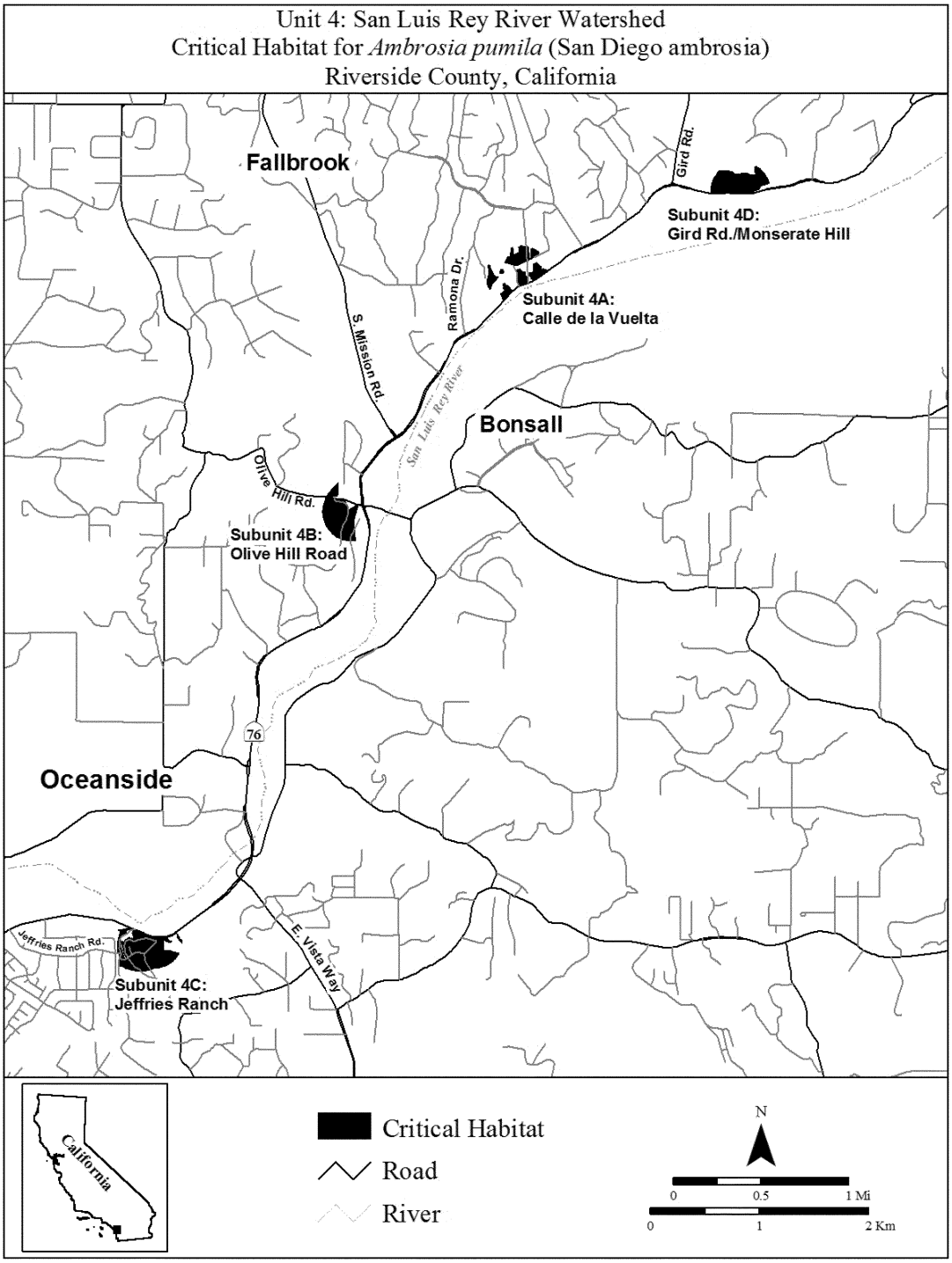
(iii) Subunit 4C: Jeffries Ranch. Land bounded by the following UTM Zone 11, NAD83 coordinates (E, N): 477180, 3679339; 477189, 3679340; 477202, 3679341; 477218, 3679343; 477236, 3679323; 477240, 3679318; 477245, 3679320; 477249, 3679321; 477248, 3679320; 477247, 3679319; 477244, 3679316; 477232, 3679315; 477228, 3679315; 477221, 3679318; 477202, 3679329; thence returning to 477180, 3679339. Continue to 477347, 3679308; 477347, 3679303; 477338, 3679320; 477327, 3679331; 477325, 3679333; 477322, 3679335; 477310, 3679356; 477305, 3679360; 477305, 3679360; 477307, 3679372; 477305, 3679382; 477306, 3679382; 477313, 3679367; 477314, 3679365; 477324, 3679343; 477326, 3679341; 477328, 3679338;

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(iv) Subunit 4D: Gird Road/Monserate Hill. Land bounded by the following UTM Zone 11, NAD83 coordinates (E, N): 482662, 3686370; 482664, 3686368; 482667, 3686364; 482670, 3686360; 482677, 3686352; 482680, 3686347; 482689, 3686335; 482693, 3686329; 482701, 3686316; 482704, 3686309; 482710, 3686295; 482713, 3686288; 482718, 3686274; 482719, 3686271; 482707, 3686267; 482696, 3686261; 482680, 3686257; 482666, 3686254; 482650, 3686251; 482642, 3686248; 482640, 3686242; 482638, 3686238; 482634, 3686226; 482631, 3686222; 482624, 3686213; 482583, 3686199; 482566, 3686188; 482563, 3686187; 482511, 3686179; 482469, 3686178; 482449, 3686178; 482429, 3686181; 482416, 3686180; 482389, 3686180; 482344, 3686184; 482323, 3686183; 482302, 3686181; 482294, 3686181; 482290, 3686180; 482260, 3686179; 482237, 3686178; 482208, 3686183; 482193, 3686186; 482193, 3686194; 482193, 3686200; 482193, 3686201; 482193, 3686209; 482193, 3686213; 482194, 3686228; 482195, 3686231; 482196, 3686239; 482197, 3686246; 482199, 3686254; 482200, 3686257; 482204, 3686272; 482205, 3686277; 482208, 3686286; 482210, 3686291; 482212, 3686295; 482213, 3686299; 482216, 3686305; 482217, 3686308; 482222, 3686319; 482225, 3686324; 482232, 3686336; 482236, 3686341; 482244, 3686354; 482247, 3686357; 482250, 3686361; 482251, 3686363; 482256, 3686368; 482261, 3686374; 482264, 3686377; 482268, 3686381; 482286, 3686374; 482325, 3686376; 482352, 3686373; 482384, 3686368; 482397, 3686358; 482421, 3686349; 482446, 3686348; 482467, 3686353; 482493, 3686354; 482507, 3686353; 482521, 3686352; 482526, 3686350; 482529, 3686349; 482529, 3686349; 482530, 3686349; 482533, 3686349; 482537, 3686349; 482539, 3686347; 482539, 3686347; 482584, 3686340; 482595, 3686333; 482602, 3686317; 482610, 3686315; 482613, 3686332; 482611, 3686335; 482604, 3686346; 482599, 3686352; 482598, 3686367; 482597, 3686370; 482595, 3686369; 482595, 3686371; 482593, 3686392; 482595, 3686409; 482596, 3686422; 482604, 3686417; 482606, 3686416; 482609, 3686414; 482617, 3686409; 482621, 3686406; 482631, 3686399; 482636, 3686395; 482642, 3686390; 482648, 3686384; 482649, 3686383; 482652, 3686380; thence returning to 482662, 3686370.

(v) **Note:** Map of Unit 4, San Luis Rey River Watershed (Map 4) follows:

BILLING CODE 4310–55–P



(9) Unit 5: San Dieguito River Watershed, San Diego County, California.

(i) Subunit 5A: Lake Hodges East Unit. From USGS 1:24,000 quadrangle Escondido, land bounded by the following UTM Zone 11, NAD83 coordinates (E, N): 493490, 3658493; 493465, 3658587; 493409, 3658642; 493384, 3658647; 493357, 3658702; 493353, 3658702; 493349, 3658704; 493347, 3658705; 493346, 3658708; 493340, 3658712; 493338, 3658714; 493335, 3658716; 493334, 3658719; 493334, 3658721; 493335, 3658722; 493338, 3658722; 493340, 3658723; 493342, 3658726; 493344, 3658727; 493340, 3658734; 493338, 3658733; 493336, 3658736; 493336, 3658738; 493337, 3658740; 493322, 3658771; 493287, 3658855; 493261, 3658917; 493249, 3658947; 493290, 3658913; 493335, 3658913; 493339, 3658882; 493358, 3658839; 493375, 3658814; 493376, 3658816; 493379, 3658816; 493380, 3658812; 493379, 3658812; 493381, 3658810; 493383, 3658809; 493386, 3658808; 493387, 3658806; 493387, 3658805; 493386, 3658802; 493382, 3658803; 493414, 3658753; 493470, 3658649; 493496, 3658550; thence returning to 493490, 3658493. Continue to 493410, 3658814; 493412, 3658812; 493413, 3658809; 493414, 3658806; 493414, 3658805; 493412, 3658805; 493410, 3658808; 493407,

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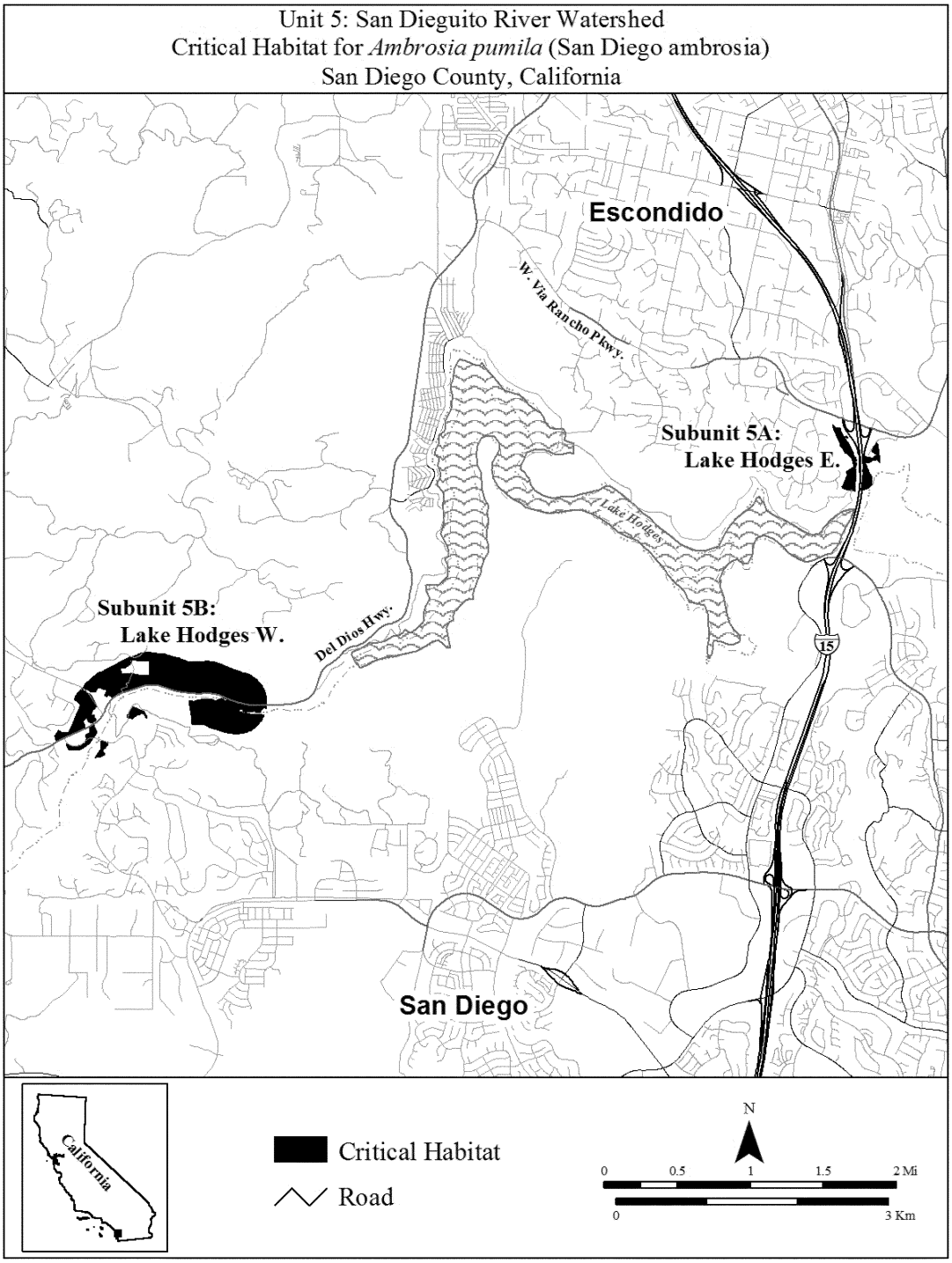
(ii) Subunit 5B: Lake Hodges West (Crosby Estates). From USGS 1:24,000 quadrangle Rancho Santa Fe, land bounded by the following UTM Zone 11, NAD83 coordinates (E, N): 486068, 3656371; 486163, 3656336; 486256, 3656332; 486280, 3656334; 486338, 3656338; 486341, 3656338; 486358, 3656339; 486365, 3656339; 486384, 3656338; 486394, 3656338; 486406, 3656337; 486411, 3656336; 486428, 3656334; 486445, 3656330; 486449, 3656328; 486467, 3656323; 486479, 3656319; 486496, 3656313; 486602, 3656268; 486668, 3656246; 486770, 3656215; 486780, 3656211; 486784, 3656210; 486800, 3656204; 486809, 3656200; 486816, 3656197; 486819, 3656195; 486823, 3656193; 486829, 3656190; 486837, 3656186; 486846, 3656181; 486853, 3656177; 486867, 3656168; 486881, 3656159; 486885, 3656155; 486894, 3656148; 486905, 3656138; 486917, 3656126; 486918, 3656125; 486924, 3656119; 486936, 3656106; 486947, 3656093; 486957, 3656079; 486966, 3656065; 486972, 3656054; 486983, 3656031; 486985, 3656027; 486992, 3656012; 486998, 3656002; 486998, 3655997; 486999, 3655993; 487001, 3655988; 487004, 3655982; 487003, 3655980; 487007, 3655963; 487009, 3655953; 487013, 3655929; 487014, 3655922; 487015, 3655905; 487016, 3655888; 487015, 3655871; 487015, 3655865; 487000, 3655865; 486984, 3655864; 486962, 3655863; 486950, 3655864; 486936, 3655865; 486922, 3655866; 486905, 3655866; 486896, 3655866; 486884, 3655865; 486874, 3655866; 486862, 3655867; 486853, 3655867; 486839, 3655870; 486825, 3655871; 486808, 3655874; 486793, 3655877; 486782, 3655879; 486766, 3655884; 486756, 3655887; 486746, 3655890; 486736, 3655893; 486726, 3655896; 486719, 3655898; 486710, 3655901; 486698,

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(iii) **Note:** Map of Unit 5, San Dieguito River Watershed (Map 5) follows:

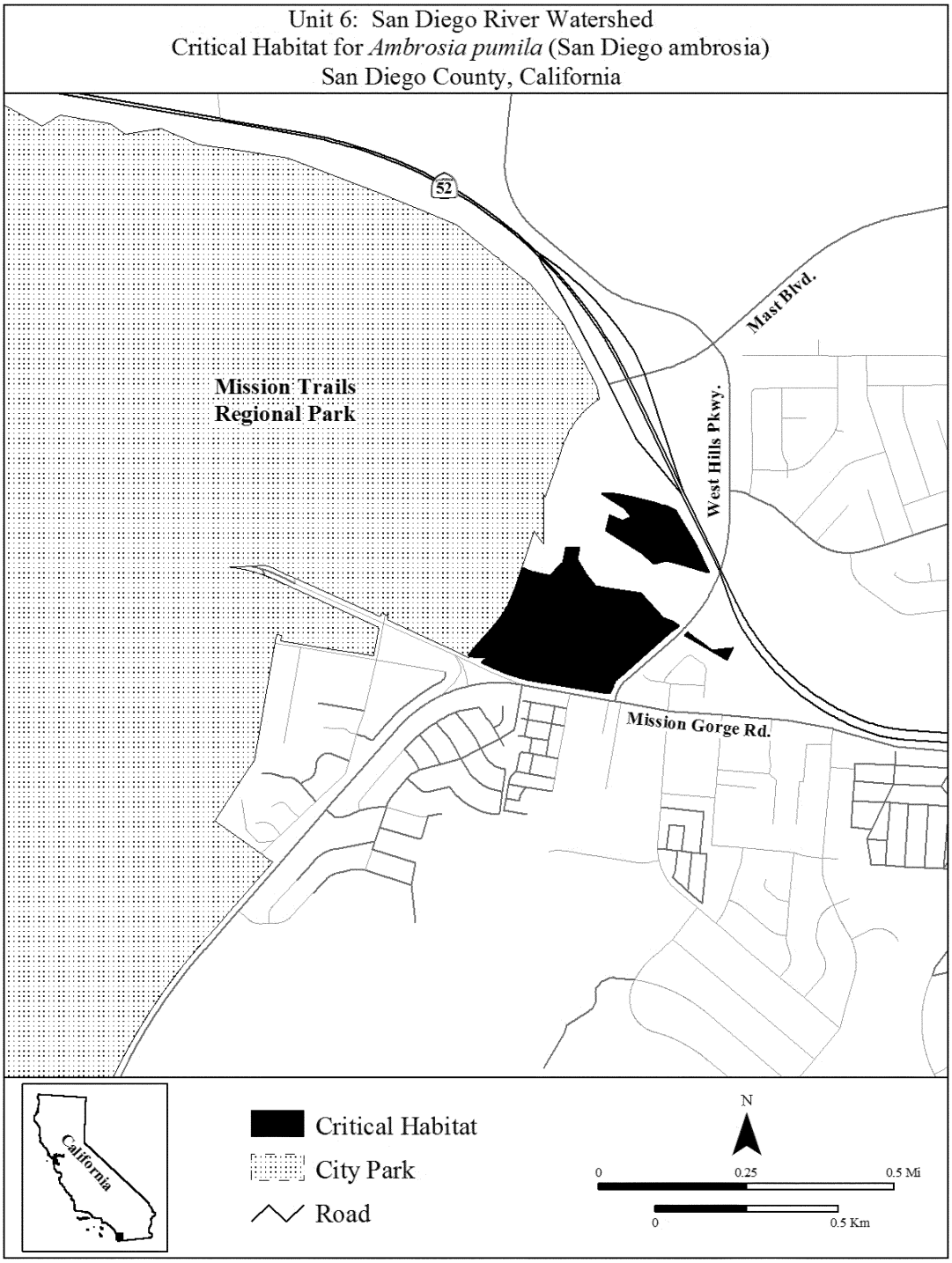


(10) Unit 6: San Diego River Watershed (Mission Trails Regional Park), San Diego County, California.

(i) From USGS 1:24,000 quadrangle La Mesa. Land bounded by the following UTM Zone 11, NAD83 coordinates (E, N): 497416, 3633563; 497433, 3633542; 497440, 3633534; 497486, 3633525; 497490, 3633524; 497564, 3633515; 497623, 3633447; 497653, 3633437; 497667, 3633426; 497667, 3633425; 497665, 3633424; 497664, 3633423; 497663, 3633421; 497661, 3633420; 497660, 3633419; 497659, 3633418; 497658, 3633417; 497657, 3633415; 497656, 3633415; 497653, 3633416; 497641, 3633406; 497622, 3633389; 497502, 3633282; 497501, 3633282; 497500, 3633281; 497499, 3633280; 497498, 3633279; 497496, 3633277; 497494, 3633275; 497493, 3633272; 497492, 3633270; 497491, 3633268; 497490, 3633266; 497490, 3633265; 497489, 3633263; 497488, 3633261; 497487, 3633259; 497486, 3633257; 497486, 3633255; 497485, 3633253; 497484, 3633251; 497483, 3633250; 497483, 3633248; 497482, 3633247; 497482, 3633246; 497481, 3633244; 497480, 3633243; 497480, 3633241; 497478, 3633241; 497476, 3633242; 497474, 3633242; 497436, 3633248; 497321, 3633266; 497291, 3633271; 497255, 3633277; 497253, 3633277; 497251, 3633278; 497250, 3633279; 497248, 3633279; 497247, 3633279;

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(ii) **Note:** Map of Unit 6, San Diego River Watershed (Map 6) follows:



(11) Unit 7: Sweetwater River Watershed. From USGS 1:24,000 quadrangle Jamul Mountains, San Diego County, California.

(i) Subunit 7A: Jamul Drive, land bounded by the following UTM Zone 11, NAD83 coordinates (E, N): 508257, 3622795; 508265, 3622710; 508240, 3622721; 508243, 3622534; 508294, 3622538; 508280, 3622534; 508265, 3622522; 508263, 3622516; 508252, 3622510; 508248, 3622507; 508235, 3622498; 508230, 3622497; 508186, 3622467; 508145, 3622409; 508096, 3622372; 508090, 3622382; 508083, 3622382; 508075, 3622386; 508071, 3622393; 508069, 3622400; 508066, 3622405; 508059, 3622409; 508055, 3622415; 508055, 3622423; 508060, 3622431; 508034, 3622474; 508071, 3622495; 508095, 3622462; 508148, 3622529; 508173, 3622590; 508168, 3622714; 508145, 3622769; 508138, 3622783; 508090, 3622755; 508081, 3622750; 508081, 3622720; 508081, 3622701; 508032, 3622672; 508025, 3622712; 508024, 3622721; 508014, 3622716; 508003, 3622710; 508014, 3622722; 508026, 3622734; 508040, 3622745; 508053, 3622755; 508068, 3622764; 508076, 3622768; 508089, 3622775; 508105, 3622782; 508121, 3622788; 508137, 3622793; 508153, 3622797; 508170, 3622800; 508182, 3622801; 508188, 3622802; 508196, 3622802; 508229, 3622802; 508246,

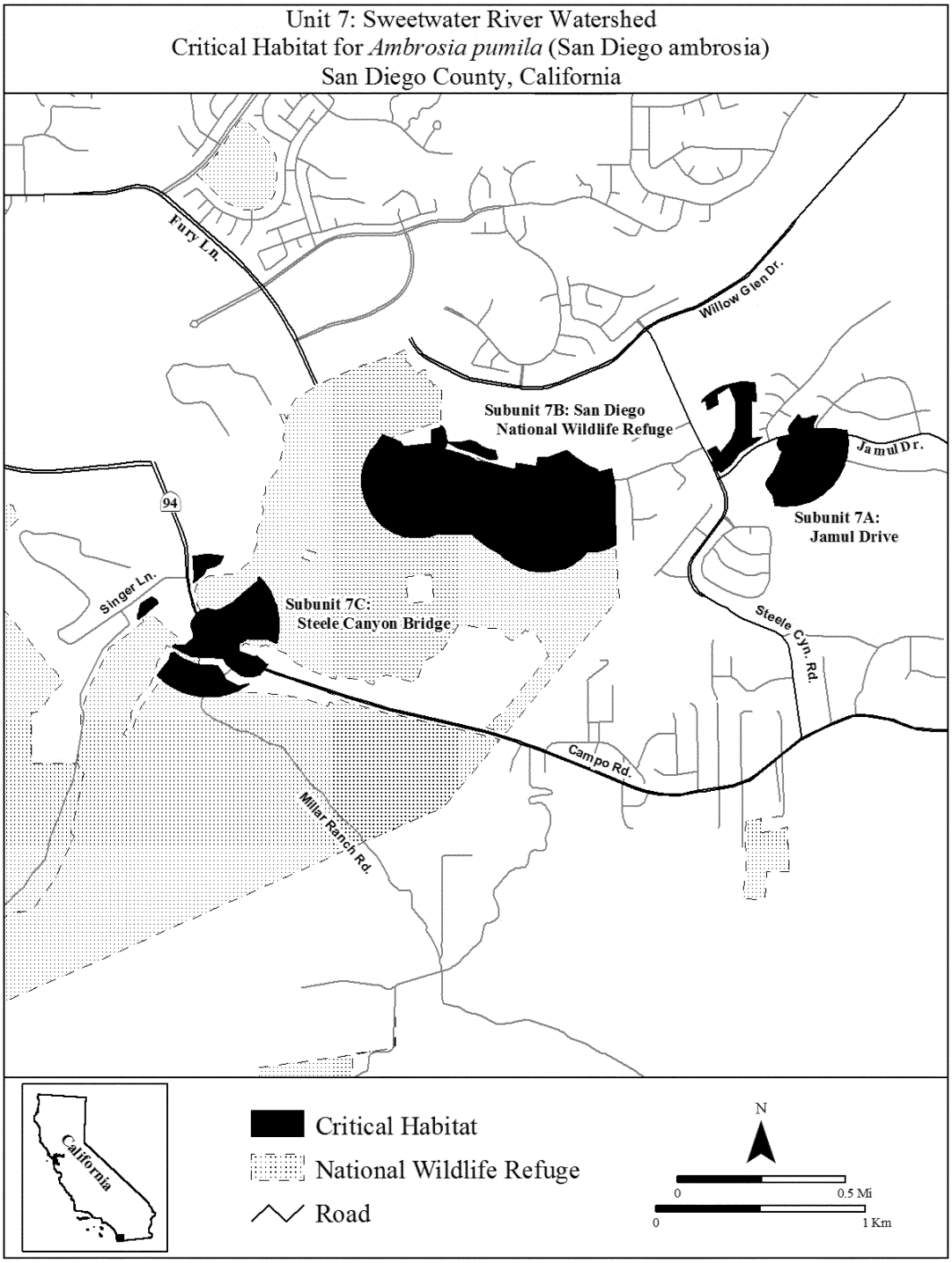
3622800; 508259, 3622798; thence returning to 508257, 3622795. Continue to 508468, 3622646; 508485, 3622630; 508517, 3622630; 508534, 3622638; 508542, 3622640; 508558, 3622642; 508542, 3622609; 508536, 3622576; 508559, 3622577; 508651, 3622578; 508673, 3622575; 508700, 3622571; 508702, 3622561; 508702, 3622558; 508705, 3622544; 508705, 3622536; 508706, 3622527; 508707, 3622510; 508706, 3622494; 508705, 3622476; 508702, 3622460; 508699, 3622448; 508697, 3622439; 508696, 3622434; 508694, 3622427; 508691, 3622417; 508688, 3622409; 508682, 3622392; 508675, 3622377; 508667, 3622362; 508658, 3622348; 508654, 3622341; 508647, 3622332; 508642, 3622325; 508634, 3622316; 508631, 3622312; 508619, 3622299; 508607, 3622288; 508594, 3622277; 508581, 3622267; 508567, 3622257; 508553, 3622248; 508538, 3622240; 508522, 3622233; 508506, 3622227; 508490, 3622222; 508478, 3622220; 508469, 3622218; 508464, 3622216; 508448, 3622214; 508439, 3622213; 508427, 3622212; 508419, 3622211; 508402, 3622210; 508385, 3622211; 508382, 3622211; 508368, 3622213; 508355, 3622215; 508356, 3622218; 508355, 3622222; 508348, 3622263; 508314, 3622305; 508310, 3622320; 508322, 3622341; 508344, 3622369; 508355, 3622382; 508379, 3622440; 508382, 3622447; 508385, 3622455; 508391, 3622474; 508385, 3622478; 508381, 3622480; 508369, 3622497; 508367, 3622516; 508373, 3622533; 508379, 3622539; 508392, 3622541; 508423, 3622547; 508428, 3622548; 508424, 3622568; 508421, 3622582; 508427, 3622592; 508448, 3622625; thence returning to 508468, 3622646.

(ii) Subunit 7B: San Diego National Wildlife Refuge, land bounded by the following UTM Zone 11, NAD83 coordinates (E, N): 506785, 3622518; 506776, 3622486; 506773, 3622483; 506782, 3622480; 506803, 3622474; 506850, 3622458; 506889, 3622450; 506892, 3622450; 506929, 3622425; 506979, 3622418; 506982, 3622418; 507036, 3622402; 507095, 3622387; 507102, 3622386; 507118, 3622390; 507118, 3622415; 507212, 3622399; 507220, 3622440; 507278, 3622444; 507298, 3622453; 507360, 3622474; 507401, 3622441; 507434, 3622417; 507474, 3622397; 507478, 3622395; 507513, 3622372; 507520, 3622374; 507527, 3622376; 507574, 3622389; 507587, 3622323; 507587, 3622311; 507593, 3622117; 507596, 3622028; 507593, 3622026; 507580, 3622020; 507575, 3622017; 507560, 3622010; 507544, 3622004; 507527, 3621999; 507511, 3621995; 507494, 3621992; 507477, 3621991; 507460, 3621990; 507454, 3621990; 507450, 3621985; 507438, 3621973; 507426, 3621961; 507413, 3621950; 507399, 3621940; 507385, 3621932; 507370, 3621924; 507354, 3621917; 507338, 3621911; 507322, 3621906; 507306, 3621902; 507289, 3621899; 507280, 3621898; 507266, 3621897; 507259, 3621896; 507242, 3621896; 507225, 3621896; 507208, 3621898; 507191, 3621901; 507175, 3621904; 507159, 3621909; 507143, 3621916; 507127, 3621923; 507112, 3621930; 507109, 3621932; 507088, 3621945; 507077, 3621952; 507063, 3621962; 507050, 3621973; 507039, 3621983; 507011, 3621999; 507008, 3622000; 506993, 3622009; 506979, 3622020; 506925, 3622061; 506917, 3622068; 506908, 3622075; 506901, 3622078; 506855, 3622075; 506838, 3622074; 506832, 3622074; 506783, 3622076; 506771, 3622076; 506755, 3622078; 506744, 3622079; 506729, 3622075; 506708, 3622069; 506692, 3622065; 506675, 3622062; 506658, 3622061; 506641, 3622060; 506624, 3622061; 506608, 3622062; 506591, 3622065; 506574, 3622069; 506558, 3622074; 506542, 3622080; 506527, 3622087; 506512, 3622095; 506498, 3622104; 506484, 3622114; 506471, 3622124; 506458, 3622136; 506447, 3622149; 506436, 3622162; 506426, 3622175; 506417, 3622190; 506409, 3622205; 506402, 3622220; 506399, 3622229; 506394, 3622241; 506392, 3622248; 506387, 3622264; 506383, 3622281; 506380, 3622297; 506379, 3622314; 506378, 3622331; 506379, 3622348; 506380, 3622365; 506383, 3622382; 506387, 3622398; 506392, 3622414; 506398, 3622430; 506405, 3622446; 506413, 3622461; 506422, 3622475; 506427, 3622482; 506432, 3622488; 506440, 3622498; 506447, 3622508; 506460, 3622526; 506470, 3622541; 506479, 3622551; 506488, 3622546; 506494, 3622543; 506515, 3622535; 506552, 3622521; 506562, 3622517; 506579, 3622493; 506649, 3622502; 506714, 3622510; 506714, 3622576; 506758, 3622587; 506759, 3622593; 506764, 3622590; 506771, 3622582; 506773, 3622578; 506775, 3622574; 506776, 3622571; 506779, 3622557; 506780, 3622551; 506783, 3622529; thence returning to 506785, 3622518. Continue to 506785, 3622517; 506850, 3622515; 506895, 3622524; 506928, 3622512; 506953, 3622496; 506982, 3622483; 507015, 3622475; 507026, 3622438; 506994, 3622434; 506908, 3622466; 506838, 3622491; thence returning to 506785, 3622517.

(iii) Subunit 7C: Steele Canyon Bridge, land bounded by the following UTM Zone 11, NAD83 coordinates (E, N): 505615, 3621882; 505571, 3621844; 505579, 3621869; 505578, 3621878; 505576, 3621904; 505573, 3621960; 505572, 3621967; 505583, 3621969; 505599, 3621972; 505618, 3621974; 505622, 3621974; 505635, 3621975; 505647, 3621975; 505664, 3621974; 505679, 3621973; 505695, 3621971; 505712, 3621968; 505716, 3621967; 505701, 3621940; 505673, 3621923; 505636, 3621910; 505620, 3621886; thence returning to 505615, 3621882. Continue to 505971, 3621723; 505975, 3621707; 505976, 3621702; 505978, 3621690; 505980, 3621678; 505981, 3621666; 505982, 3621661; 505982, 3621650; 505983, 3621637; 505982, 3621615; 505980, 3621597; 505979, 3621584; 505976, 3621569; 505974, 3621561; 505973, 3621554; 505962, 3621558; 505932, 3621570; 505832, 3621575; 505808, 3621562; 505797, 3621556; 505794, 3621554; 505794, 3621549; 505794, 3621533; 505792, 3621514; 505797, 3621512; 505860, 3621488; 505867, 3621487; 505877, 3621491; 505918, 3621454; 505928, 3621452; 505927, 3621449; 505919, 3621439; 505917, 3621435; 505912, 3621428; 505901, 3621415; 505894, 3621408; 505890, 3621404; 505855, 3621395; 505851, 3621395; 505827, 3621394; 505802, 3621402; 505756, 3621431; 505732, 3621455; 505715, 3621480; 505674, 3621484; 505616, 3621483; 505592, 3621487; 505589, 3621487; 505563, 3621491; 505522, 3621511; 505472, 3621540; 505484, 3621544; 505529, 3621540; 505534, 3621540; 505550, 3621556; 505571, 3621577; 505574, 3621598; 505571, 3621603; 505567, 3621615; 505565, 3621627; 505564, 3621634; 505564, 3621639; 505566, 3621652; 505569, 3621664; 505574, 3621675; 505581, 3621686; 505590, 3621694; 505599, 3621702; 505609, 3621708; 505622, 3621713; 505634, 3621716; 505647, 3621716; 505662, 3621714; 505673, 3621710; 505677, 3621709; 505705, 3621718; 505762, 3621747; 505805, 3621785; 505882, 3621851; 505883, 3621858; 505885, 3621867; 505888, 3621871; 505899, 3621860; 505910, 3621846; 505914, 3621840; 505918, 3621835; 505927, 3621823; 505936, 3621808; 505940, 3621801; 505946, 3621790; 505949, 3621782; 505956, 3621767; 505962, 3621753; 505966, 3621740; thence returning to 505971, 3621723. Continue to 505319, 3621677; 505307, 3621669; 505309, 3621682; 505309, 3621686; 505310, 3621694; 505312, 3621702; 505315, 3621718; 505316, 3621722; 505320, 3621734;

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(iv) **Note:** Map of Unit 7, Sweetwater River Watershed (Map 7) follows:



* * * * *

Dated: November 17, 2010.

Thomas L. Strickland,

Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 2010–29692 Filed 11–29–10; 8:45 am]

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S. 3774/P.L. 111–285
To extend the deadline for Social Services Block Grant expenditures of supplemental funds appropriated following disasters occurring in 2008. (Nov. 24, 2010; 124 Stat. 3054)
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