WEST VIRGINIA
SECRETARY OF STATE
NATALIE E. TENNANT
ADMINISTRATIVE LAW DIVISION

Form #1

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OFFICE WEST VIRGINIA
SECRETARY OF STATE

NOTICE OF A PUBLIC HEARING ON A PROPOSED RULE

AGENCY: WV Department of Environmental Protection - Division of Air Quality TITLE NUMBER: 45

RULE TYPE: Legislative CITE AUTHORITY: W. Va. Code §22-5-4

AMENDMENT TO AN EXISTING RULE: YES [X] NO [ ]

IF YES, SERIES NUMBER OF RULE BEING AMENDED: 45CSR34

TITLE OF RULE BEING AMENDED: Emission Standards for Hazardous Air Pollutants

IF NO, SERIES NUMBER OF RULE BEING PROPOSED: _____

TITLE OF RULE BEING PROPOSED: _____

DATE OF PUBLIC HEARING: July 12, 2010 TIME: 6:00 p.m.

LOCATION OF PUBLIC HEARING: WV Department of Environmental Protection
Dolly Sods Conference Room
601 57th Street, S.E.
Charleston, WV 25304

COMMENTS LIMITED TO: ORAL [ ] WRITTEN [ ] BOTH [X]

DATE WRITTEN COMMENT PERIOD ENDS: July 12, 2010 TIME: Close of Hearing

WRITTEN COMMENTS MAY BE MAILED TO:
Kathy Cosco, Public Information Office
WV Department of Environmental Protection
601 57th Street, S.E.
Charleston, WV 25304

The Department requests that persons wishing to make comments at the hearing make an effort to submit written comments in order to facilitate the review of these comments.

The issues to be heard shall be limited to the proposed rule.

ATTACH A **BRIEF** SUMMARY OF YOUR PROPOSAL

Authorized Signature

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY

BRIEFING DOCUMENT

Rule Title: 45CSR34 - "Emission Standards for Hazardous Air Pollutants"

A. AUTHORITY: W.Va. Code §22-5-4

B. SUMMARY OF RULE:

This rule establishes and adopts national emission standards for hazardous air pollutants (NESHAP) and other regulatory requirements promulgated by the United States Environmental Protection Agency (U.S. EPA) pursuant to Section 112 of the federal Clean Air Act, as amended (CAA). This rule codifies general procedures and criteria to implement emission standards for stationary sources that emit, or have the potential to emit, one or more of the hazardous air pollutants set forth in Section 112(b) of the CAA, or one or more of the eight substances listed as hazardous air pollutants in 40 CFR §61.01(a). The rule incorporates by reference the NESHAP standards of 40 CFR Parts 61, 63 and 40 CFR Part 65 (Consolidated Federal Air Rule), to the extent referenced in 40 CFR Parts 61 and 63, promulgated as of June 1, 2010. The rule also adopts associated appendices, reference methods, performance specifications and other test methods which are appended to these standards and contained in 40 CFR Parts 61 and 63. Any person who constructs, reconstructs, modifies or operates any source subject to the provisions of 40 CFR Parts 61 or 63 must comply with the applicable NESHAPS and this rule.

C. STATEMENT OF CIRCUMSTANCES WHICH REQUIRE RULE:

As provided in 40 CFR §§61.04(b) and 63.12(b)(1), and because West Virginia has an approved Title V permit program, the Secretary therefore has the authority to implement and enforce national emission standards for hazardous air pollutants for stationary sources required to obtain a Title V permit under 40 CFR Parts 61 and 63, pursuant to Section 112 of the CAA. Promulgation of this rule is necessary for the State to fulfill its responsibilities under the CAA, and will enable the Department of Environmental Protection to continue to be the primary enforcement authority for NESHAP promulgated by U.S. EPA under 40 CFR Parts 61 and 63 as of June 1, 2010. Promulgation of this rule by the Legislature is necessary for the State to fulfill its responsibilities under the CAA. Revisions to the rule include general annual incorporation by reference updates and updated exclusions to adoption of standards.

The revised rule incorporates by reference the following source categories of new or revised NESHAP standards promulgated as of June 1, 2010 for non-major area sources: Chemical Manufacturing Area Sources.

The revised rule also incorporates by reference the following source categories of new or revised NESHAP standards promulgated as of June 1, 2010 for major sources: Petroleum Refineries, and Reciprocating Internal Combustion Engines.

The following source categories of newly promulgated NESHAPS affecting non-major area sources of hazardous air pollutants are being excluded from incorporation by reference: Prepared Feeds Manufacturing; Aluminum, Copper and other Non-Ferrous Foundries; Asphalt Processing and Asphalt Roofing Manufacturing, Paints and Allied Products Manufacturing; and Chemical Preparations Industry. No additional funding has been provided by U.S. EPA to implement these new federal area source air toxics rules. Further, DAQ considers these standards to be resource-intensive and costly to implement, as a practical matter, without achieving commensurate air quality benefits. West Virginia is one of several states in Region III which are adopting some, but not all, of these standards due to the previous mentioned reasons. U.S. EPA Regional offices will be implementing those standards not adopted by the States, thereby providing a measure of regulatory certainty and consistency.

D. FEDERAL COUNTERPART REGULATIONS - INCORPORATION BY REFERENCE/DETERMINATION OF STRINGENCY:

A federal counterpart to this proposed rule exists. In accordance with the Secretary's recommendation, and with stated exception, the Division of Air Quality proposes that the rule incorporate by reference the federal counterparts. Because the proposed rule incorporates by reference the federal counterpart, no determination of stringency is required.

E. CONSTITUTIONAL TAKINGS DETERMINATION:

In accordance with W.Va. Code §§22-1A-1 and 3(c), the Secretary has determined that this rule will not result in taking of private property within the meaning of the Constitutions of West Virginia and the United States of America.

F. CONSULTATION WITH THE ENVIRONMENTAL PROTECTION ADVISORY COUNCIL:

At its June 3, 2010 meeting, the Environmental Protection Advisory Council reviewed and discussed this rule. (See attached minutes for Council's discussion).

APPENDIX B

FISCAL NOTE FOR PROPOSED RULES

Rule Title: 45CSR34 - "Emission Standards for Hazardous Air Pollutants"

Type of Rule: ___X___ Legislative _____ Interpretive _____ Procedural

Agency: Division of Air Quality

Address: 601 57th Street SE

Charleston, WV 25304

Phone Number: (304)926-0475 Email: tammy.l.mowrer@wv.gov

Fiscal Note Summary

Summarize in a clear and concise manner what impact this measure will have on costs and revenues of state government.

No impact above that resulting from currently applicable federal emission standards.

Fiscal Note Detail

Show over-all effect in Item 1 and 2 and, in Item 3, give an explanation of Breakdown by fiscal year, including long-range effect.

FISCAL YEAR

Effect of Proposal	2011 Increase/Decrease (use "-")	2012 Increase/Decrease (use "-")	Fiscal Year (Upon Full Implementation)
1. Estimated Total Cost	$ 0	$ 0	$ 0
Personal Services	0	0	0
Current Expenses	0	0	0
Repairs & Alterations	0	0	0
Assets	0	0	0
Equipment	0	0	0
Other	0	0	0
2. Estimated Total Revenues	0	0	0

Rule Title: 45CSR34 - "Emission Standards for Hazardous Air Pollutants"

3. Explanation of above estimates (including long-range effect):
Please include any increase or decrease in fees in your estimated total revenues.

Costs anticipated to be incurred in the implementation of federal rules promulgated under 40 CFR Parts 61 and 63 as of June 1, 2010 are included in prior cost estimates prepared for state implementation of Title V of the Clean Air Act, as amended, under 45CSR30. Full Title V program approval was issued by the U.S. Environmental Protection Agency on November 19, 2001.

MEMORANDUM

Please identify any areas of vagueness, technical defects, reasons the proposed rule **would not** have a fiscal impact, and/or any special issues **not** captured elsewhere on this form.

Date: June 9, 2010

John A. Benedict, Director

TITLE 45
LEGISLATIVE RULE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
AIR QUALITY

SERIES 34
EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

§45-34-1. General.

1.1. Scope. -- This rule establishes and adopts a program of national emission standards for hazardous air pollutants (NESHAPS) and other regulatory requirements promulgated by the United States Environmental Protection Agency pursuant to 40 CFR Parts 61, 63 and section 112 of the federal Clean Air Act, as amended (CAA). This rule codifies general procedures and criteria to implement emission standards for stationary sources that emit (or have the potential to emit) one or more of the eight substances listed as hazardous air pollutants in 40 CFR §61.01(a), or one or more of the substances listed as hazardous air pollutants in section 112(b) of the CAA. The Secretary hereby adopts these standards by reference. The Secretary also adopts associated reference methods, performance specifications and other test methods which are appended to these standards.

1.2. Authority. -- W.Va. Code §22-5-4.

1.3. Filing Date. -- ~~April 30, 2010~~.

1.4. Effective Date. -- ~~June 1, 2010~~.

1.5. Incorporation by Reference. -- Federal Counterpart Regulation. The Secretary has determined that a federal counterpart regulation exists, and in accordance with the Secretary's recommendation, with limited exception, this rule incorporates by reference 40 CFR Parts 61, 63 and 65, to the extent referenced in 40 CFR Parts 61 and 63, effective ~~June 1, 2009~~ June 1, 2010.

1.6. Former Rules. -- This legislative rule amends 45CSR34 - "Emission Standards for Hazardous Air Pollutants" which was filed ~~May 8, 2009~~ April 30, 2010, and which became effective ~~June 1, 2009~~ June 1, 2010.

§45-34-2. Definitions.

2.1. "Administrator" means the Administrator of the United States Environmental Protection Agency or his or her authorized representative.

2.2. "Clean Air Act" ("CAA") means 42 U.S.C. §7401 et seq.

2.3. "Hazardous air pollutant" means any air pollutant listed pursuant to 40 CFR §61.01(a) or section 112(b) of the CAA.

2.4. "Secretary" means the Secretary of the Department of Environmental Protection or other person

to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§22-1-6 or 22-1-8.

2.5. Other words and phrases used in this rule, unless otherwise indicated, shall have the meaning ascribed to them in 40 CFR Parts 61 and 63. Words and phrases not defined therein shall have the meaning given to them in federal Clean Air Act.

§45-34-3. Requirements.

3.1. No person may construct, reconstruct, modify, or operate, or cause to be constructed, reconstructed, modified, or operated any source subject to the provisions of 40 CFR Parts 61 and 63 which results or will result in a violation of this rule.

3.2. No person may construct or reconstruct any major source of hazardous air pollutants, unless the Secretary determines that the maximum achievable control technology emission limitation under 40 CFR Part 63 and this rule for new sources will be met.

3.3. The Secretary shall determine and apply case-by-case maximum achievable control technology standards to existing sources categorized by the Administrator pursuant to section 112(c)(1) of the CAA for which the Administrator has not promulgated emission standards in accordance with sections 112(d) and 112(e) of the CAA.

3.4. Prior to constructing, reconstructing or modifying any facility subject to this rule, the owner or operator shall obtain a permit in accordance with the applicable requirements of 45CSR13, 45CSR14, 45CSR19, 45CSR30 and this rule.

§45-34-4. Adoption of Standards.

4.1. The Secretary hereby adopts and incorporates by reference the provisions of 40 CFR Parts 61, 63 and 65, to the extent referenced in 40 CFR Parts 61 and 63, including any reference methods, performance specifications and other test methods which are appended to these standards and contained in 40 CFR Parts 61, 63 and 65, effective ~~June 1, 2009~~ June 1, 2010, for the purposes of implementing a program for emission standards for hazardous air pollutants, except as follows:

4.1.a. 40 CFR §§61.16 and 63.15 are amended to provide that information shall be available to the public in accordance with W.Va. Code §§22-5-1 et seq., 29B-1-1 et seq., and 45CSR31;

4.1.b. Subpart E of 40 CFR Part 63 and any provision related to section 112(r) of the CAA, notwithstanding any requirements of 45CSR30 shall be excluded;

4.1.c. Provisions under Subpart HH of 40 CFR Part 63 which apply to non-major area sources of hazardous air pollutants described in 40 CFR §63.760(b)(2) shall be excluded;

4.1.d. Provisions under Subpart ZZZZ of 40 CFR Part 63 which apply to non-major area sources of hazardous air pollutants described in 40 CFR §63.6585(c) and (d) shall be excluded;

4.1.e. Subparts DDDDDD, LLLLLL, OOOOOO, PPPPPP, QQQQQQ, TTTTTT, WWWWW, ZZZZZ, HHHHHH, BBBBBB, CCCCCC, WWWWWW, XXXXXX, ~~and~~ YYYYYY, ZZZZZZ,

AAAAAAA, BBBBBBB, CCCCCCC, and DDDDDDD of 40 CFR Part 63 shall be excluded; and

4.1.f. Subparts B, H, I, K, Q, R, T, and W; Methods 111, 114, 115 and Appendix D and E of 40 CFR Part 61 shall be excluded.

§45-34-5. Secretary.

5.1. Any and all references in 40 CFR Parts 63 and 65 to the "Administrator" are amended to be the "Secretary" except as follows:

5.1.a. where the federal regulations specifically provide that the Administrator shall retain authority and not transfer authority to the Secretary;

5.1.b. where provisions occur which refer to:

5.1.b.1. alternate means of emission limitations;

5.1.b.2. alternate control technologies;

5.1.b.3. innovative technology waivers;

5.1.b.4. alternate test methods;

5.1.b.5. alternate monitoring methods;

5.1.b.6. waivers/adjustments to recordkeeping and reporting;

5.1.b.7. emissions averaging; or

5.1.b.8. applicability determinations; or

5.1.c. where the context of the regulation clearly requires otherwise.

§45-34-6. Permits.

6.1. Nothing contained in this rule shall be construed or inferred to mean that permit requirements in accordance with applicable rules shall in any way be limited or inapplicable.

§45-34-7. Inconsistency Between Rules.

7.1. In the event of any inconsistency between this rule and any other rule of the West Virginia Department of Environmental Protection, the inconsistency shall be resolved by the determination of the Secretary and the determination shall be based upon the application of the more stringent provision, term, condition, method or rule.

Federal Register

Wednesday,
October 28, 2009

Part III

Environmental Protection Agency

40 CFR Parts 9 and 63
National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries; Final Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 9 and 63

[EPA–HQ–OAR–2003–0146; FRL–8972–4]

RIN 2060–AO55

National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This action amends the national emission standards for petroleum refineries to add maximum achievable control technology standards for heat exchange systems. This action also amends the general provisions cross-reference table and corrects section references.

DATES: The final amendments are effective on October 28, 2009. The incorporation by reference of certain publications listed in the final rule amendments is approved by the Director of the Federal Register as of October 28, 2009.

ADDRESSES: The EPA has established a docket for this action under Docket ID No. EPA–HQ–OAR–2003–0146. 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, is not placed on the Internet and 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, Environmental Protection Agency, EPA West Building, Room 3334, 1301 Constitution Ave., NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566–1744, and the telephone number for the Air and Radiation Docket is (202) 566–1742.

FOR FURTHER INFORMATION CONTACT: Mr. Robert Lucas, Office of Air Quality Planning and Standards, Sector Policies and Programs Division, Coatings and Chemicals Group (E143–01), Environmental Protection Agency, Research Triangle Park, North Carolina 27711, telephone number (919) 541–0884; fax number (919) 541–0246; e-mail address: *lucas.bob@epa.gov*.

SUPPLEMENTARY INFORMATION: The information in this preamble is organized as follows:

I. General Information

A. Does this action apply to me?

The regulated category and entities potentially affected by this final action include:

Category	NAICS [1] code	Examples of regulated entities
Industry	324110	Petroleum refineries located at a major source that are subject to 40 CFR part 63, subpart CC.

[1] North American Industry Classification System.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this final rule. To determine whether your facility is regulated by this action, you should carefully examine the applicability criteria in 40 CFR 63.640 of subpart CC (National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries). If you have any questions regarding the applicability of this action to a particular entity, contact either the air permit authority for the entity or your EPA regional representative as listed in 40 CFR 63.13 of subpart A (General Provisions).

B. Where can I get a copy of this document?

In addition to being available in the docket, an electronic copy of this final action will also be available on the Worldwide Web through the Technology Transfer Network (TTN). Following signature, a copy of this final action will be posted on the TTN's policy and guidance page for newly proposed or promulgated rules at the following address: *http://www.epa.gov/ttn/oarpg/*. The TTN provides information and technology exchange in various areas of air pollution control.

C. Judicial Review

Under section 307(b)(1) of the Clean Air Act (CAA), judicial review of this final rule is available only by filing a petition for review in the United States Court of Appeals for the District of Columbia Circuit by December 28, 2009. Under section 307(d)(7)(B) of the CAA, only an objection to these final rules that was raised with reasonable specificity during the period for public comment can be raised during judicial review. Moreover, under section 307(b)(2) of the CAA, the requirements established by these final rules may not be challenged separately in any civil or criminal proceedings brought by EPA to enforce these requirements.

Section 307(d)(7)(B) of the CAA also provides a mechanism for us to convene a proceeding for reconsideration, "[i]f the person raising an objection can demonstrate to the 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 the 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 20460, 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 20460.

II. Background Information

Section 112 of the CAA establishes a regulatory process to address emissions of hazardous air pollutants (HAP) from stationary sources. After EPA has identified categories of sources emitting one or more of the HAP listed in section 112(b) of the CAA, section 112(d) calls for us to promulgate national emission standards for hazardous air pollutants (NESHAP) for those sources. For "major sources" that emit or have the potential to emit any single HAP at a rate of 10 tons or more per year or any combination of HAP at a rate of 25 tons or more per year, these technology-based standards must reflect the maximum reductions of HAP achievable (after considering cost, energy requirements, and non-air quality health and environmental impacts) and are commonly referred to as maximum achievable control technology (MACT) standards.

For MACT standards, the statute specifies certain minimum stringency requirements, which are referred to as floor requirements. See CAA section 112(d)(3). Specifically, for new sources, the MACT floor cannot be less stringent than the emission control that is achieved in practice by the best-controlled similar source. The MACT standards for existing sources can be less stringent than standards for new sources, but they cannot be less stringent than the average emission limitation achieved by the best-performing 12 percent of existing sources in the category or subcategory (or the best-performing five sources for categories or subcategories with fewer than 30 sources). In developing MACT, we must also consider control options that are more stringent than the floor. We may establish standards more stringent than the floor based on the consideration of the cost of achieving the emissions reductions, any non-air quality health and environmental impacts, and energy requirements.

We published the final MACT standards for petroleum refineries (40 CFR part 63, subpart CC) on August 18, 1995 (60 FR 43620). These standards are commonly referred to as the "Refinery MACT 1" standards because certain process vents were excluded from this source category and subsequently regulated under a second MACT standard specific to these petroleum refinery process vents (40 CFR part 63, subpart UUU, referred to as "Refinery MACT 2").

In developing this rule, we first issued an advanced notice of proposed rulemaking (ANPR) on March 29, 2007. The purpose of the ANPR, which covered the sources subject to the Refinery MACT 1 rule and other source categories, was to solicit additional emissions data and any corrections to the data we already had. We issued an initial proposed rule for the petroleum refineries subject to the Refinery MACT 1 on September 4, 2007, and held a public hearing in Houston, Texas, on November 27, 2007. In response to public comments on the initial proposal, we collected additional information and revised our analysis of the MACT floor. Based on the results of these additional analyses, we issued a supplemental proposal on November 10, 2008, that established a new MACT floor for heat exchange systems. A public hearing for the supplemental proposal was held in Research Triangle Park, North Carolina, on November 25, 2008. We are now taking final action to establish standards for heat exchange systems in the Refinery MACT 1 standards (40 CFR part 63, subpart CC) and to update and amend Table 6 to 40 CFR part 63, subpart CC.[1]

III. Summary of Final Amendments to NESHAP for Petroleum Refineries and Changes Since Proposal

A. What requirements for heat exchange systems are we promulgating pursuant to CAA section 112(d)(2)?

On September 4, 2007, we proposed, under CAA section 112(d)(2), two options for work practice standards for cooling towers: Option 1 was proposed based on our initial assessment of the MACT floor and Option 2 was a beyond-the-floor option. These options would require the owner or operator of a new or existing source to monitor for leaks in the cooling tower return lines from heat exchangers in organic HAP service (*i.e.*, lines that contain or contact fluids with 5 percent by weight or greater of total organic HAP listed in Table 1 of the rule) and, where leaks are detected, to repair such leaks within a specified period of time.

On November 10, 2008, we issued a supplemental proposal that significantly modified the proposed monitoring methods, leak definitions, and corrective action timeframe based on a revised MACT floor and beyond-the-floor analysis. In the supplemental proposal, we also redefined the requirements in terms of heat exchange systems to include the heat exchangers, for which corrective actions are targeted, as part of the source and to specifically address once-through cooling systems.

After considering public comments, for purposes of establishing MACT under CAA section 112(d)(2), we have selected the MACT floor requirements specified in the supplemental proposal for heat exchange systems in organic HAP service at petroleum refineries. We rejected the beyond-the-floor option because it is not cost-effective.

Under these selected requirements, owners and operators of heat exchange systems that are in organic HAP service at new and existing sources are required to conduct monthly sampling and analyses using the Texas Commission on Environmental Quality's (TCEQ) Modified El Paso Method, Revision Number One, dated January 2003.[2] For existing sources, a leak is defined as 6.2 parts per million by volume (ppmv) total strippable volatile organic compounds (VOC) in the stripping gas collected via the Modified El Paso Method. For new sources, a leak is defined as 3.1 ppmv total strippable VOC collected via the Modified El Paso Method. The amendments require the repair of leaks in heat exchangers in organic HAP service within 45 days of the sampling event in which the leak is detected, unless a delay in repair is allowed. Delay in repair of the leak is allowed until the next shutdown if the repair of the leak requires the process unit served by the leaking heat exchanger to be shut down and the total strippable VOC concentration is less than 62 ppmv. Delay in repair of the leak is also allowed for up to 120 days

[1] We were also required by a Consent Decree to consider and address the application of the NESHAP General Provisions in 40 CFR part 63, subpart A to the existing Refinery MACT 1 rule (subpart CC).

[2] "Air Stripping Method (Modified El Paso Method) for Determination of Volatile Organic Compound Emissions from Water Sources," Revision Number One, dated January 2003, Sampling Procedures Manual, Appendix P: Cooling Tower Monitoring, prepared by Texas Commission on Environmental Quality, January 31, 2003 (incorporated by reference—see § 63.14).

if the total strippable VOC concentration is less than 62 ppmv and if critical parts or personnel are not available. The owner or operator is required to continue monthly monitoring and to repair the heat exchanger within 30 days if sampling results show that the leak exceeds 62 ppmv total strippable VOC.

Sampling for leaks can be done for individual or combined heat exchangers. For heat exchange systems including a cooling tower, sampling can be conducted at the combined cooling tower inlet water location. Similarly, for once-through heat exchange systems, the sampling can be conducted after the heat exchanger water is combined and prior to discharge where it will be open to atmosphere. For both cooling tower and once-through heat exchange systems, sampling can be conducted at individual heat exchangers in the return or "exit" lines (*i.e.*, water lines returning the water from the heat exchangers to the cooling tower or to the discharge point). That is, if the cooling tower or once-through system services multiple heat exchangers, the owner or operator may elect to monitor only the heat exchangers "in organic HAP service" or monitor at branch points that combine several heat exchanger exit lines, or monitor at the combined stream for the entire system. If a leak is detected (the measured VOC concentration exceeds the applicable leak definition) at the combined cooling tower inlet or once-through system, the owner or operator may either fix the leak (reduce the VOC concentration to less than the applicable leak definition) or sample heat exchanger exit lines for combinations of heat exchanger exit lines or sample each heat exchanger "in organic HAP service" as necessary to document that the leak is not originating from a heat exchanger "in organic HAP service." If a leak is detected in an individual heat exchanger "in organic HAP service," that leak must be repaired.

All new or existing refineries with a heat exchange system "in organic HAP service" are required to maintain records of all heat exchangers and which of those heat exchangers are in organic HAP service, the cooling towers and once-through systems associated with heat exchangers in organic HAP service, monthly monitoring results, and information for any delays in repair of a leak.

These requirements will apply to sources on a continuous basis, including periods of startup, shutdown, and malfunction (SSM). As provided in the response to comments below, properly operating heat exchangers will not leak HAP into the cooling water, so HAP will not be emitted from the cooling tower or once-through discharges. It is only when they malfunction (*i.e.*, there are leaks) that there may be HAP emissions. The MACT standard for heat exchange units addresses these emissions. Furthermore, there are no HAP emissions associated with start-up and shutdown.

The requirements outlined above are based on the MACT floor determination. We evaluated the following beyond-the-floor options: having a leak definition of 3.1 ppmv for existing sources (beyond-the-floor option for existing sources) and requiring continuous monitoring (beyond-the-floor options for both new and existing sources). As described in our supplemental proposal, we determined that these beyond-the-floor options were not cost-effective and concluded that MACT was the floor level of control.

The final MACT requirements for heat exchange systems will reduce HAP emissions by 630 tons per year (ton/yr). The final requirements for heat exchange systems will also reduce VOC emissions by 4,100 ton/yr. Reducing VOC emissions may provide the added benefit of reducing ambient concentrations of ozone and may reduce fine particulate matter. The annualized nationwide cost impacts of these final standards for heat exchange systems are estimated to be $3.0 million. Our economic analysis indicates that this cost will have little impact on the price and output of petroleum products.

B. What other revisions and clarifications are we making?

As proposed, we are amending 40 CFR 63.650(a) of subpart CC to replace "gasoline loading racks" with "Group 1 gasoline loading racks" to clarify the applicability of the requirements. Furthermore, as we proposed on November 10, 2008, we are also finalizing proposed amendments to the cross-references to subparts R and Y of 40 CFR part 63 in the rule text and in Tables 4 and 5 of subpart CC because subparts R and Y were amended and the revised cross-references clarify the requirements of subpart CC.

We are finalizing amendments to Table 6 to 40 CFR part 63, subpart CC (General Provisions Applicability to Subpart CC) to bring the table up-to-date with requirements of the General Provisions that have been amended since this table was created, to correct cross-references, and to incorporate additional sections of the General Provisions that are necessary to implement other subparts that are cross-referenced by this rule. With respect to the exemption from emission standards during periods of SSM in the General Provisions (*see, e.g.*, 40 CFR 63.6(f) and (h)), we note that on December 19, 2008, in a decision addressing a challenge to the 2002, 2004, and 2006 amendments to those provisions, the Court of Appeals for the District of Columbia Circuit vacated the SSM exemption. *Sierra Club* v. *EPA* (D.C. Cir. No. 02–1135).

The CAA section 112(d)(2) and (3) MACT standard we are promulgating today for heat exchange systems is not implicated by that decision because it does not rely on or reference the provisions of the vacated rule and because the MACT standard applies at all times. We are amending Table 6 to clarify that the MACT standard for heat exchange systems applies at all times.

We are still evaluating the recent court decision. At this time, we are not making any additional changes to Table 6 with respect to the SSM provisions in 40 CFR 63.6(f)(1) and (h)(1). We have completed our initial assessment of the General Provisions and their application to subpart CC of part 63. The recent court decision requires further analysis, and we are currently evaluating how to address SSM events for Refinery MACT 1 sources in light of the court decision.

We are also finalizing amendments to Table 1 and Table 7 to delete methyl ethyl ketone (also known as 2-butanone) from the HAP listed in those tables because methyl ethyl ketone has been delisted as a HAP. We are finalizing amendments to clarify the applicability sections by changing general references to "the promulgation date" to specify the actual promulgation date of the original subpart CC of part 63. Finally, we are also finalizing amendments to clarify how owners and operators should comply with overlapping standards for equipment leaks.

C. What is the compliance schedule for the final amendments?

The final amendments to the Refinery MACT 1 rule will be effective on October 28, 2009. Under section 112(i)(1) of the CAA, any new facility must comply upon startup or on the effective date of the rule, whichever is later. For purposes of determining compliance with these amendments, a new source is a source that commenced construction or reconstruction after September 4, 2007 (the initial date of proposal for these regulations). Consistent with the requirements of CAA section 112(1)(3), the owner or operator of an existing source (including an existing source for these amendments that is currently subject to 1995 Refinery MACT 1 standards for new sources) must comply with the heat exchange system requirements no later than

October 29, 2012. The basis for the 3-year compliance period is set forth below in our responses to comment.

IV. Summary of Comments and Responses

This preamble and the document "National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries: Background Information for Final Standards for Heat Exchange Systems—Summary of Public Comments and Responses" ("Response to Comments") located in the docket (Docket ID No. EPA–HQ–OAR–2003–0146) include only comment summaries and responses to issues related to heat exchange systems and other clarifying amendments. The major comments on those issues and our responses are summarized in the following sections. A summary of the remainder of the comments and responses related to those issues can be found in the Response to Comments document.

Comments regarding other issues raised as a result of the proposed and supplemental proposed rules are not included in this preamble or the Response to Comments document; they will be addressed, as appropriate, in future rulemakings addressing the residual risk and technology reviews for Refinery MACT 1.

A. Heat Exchange Systems

On November 10, 2008, we issued a supplemental proposal with our revised MACT floor and beyond-the-floor analysis. In general, the comments received on the cooling tower requirements initially proposed on September 4, 2007, either have been addressed through the supplemental proposal or are not applicable to the final standards (*e.g.*, clarifications to monitoring methods no longer required). Any general comments regarding cooling tower requirements received on the initial proposal that are still applicable are summarized in the Response to Comments document located in the docket (Docket ID No. EPA–HQ–OAR–2003–0146). Significant comments received on the supplemental proposal are addressed in this section.

1. MACT Floor for Heat Exchange Systems

Comment: A few commenters noted that the leak definition proposed for new heat exchange systems of 3.1 ppmv has not been "demonstrated in practice." One commenter stated that the leak definition of 3.1 ppmv was developed by the State of Texas from the AP–42 emission factor. The commenter stated that only one cooling tower is operating under a permit with that limit (the other cooling towers are under construction), and this cooling tower has only recently begun operating, so there is no significant experience operating with the identified new source limit or applying it to the range of operations and ages of exchangers in a typical refinery. The commenter asserted that some heat exchangers and heat exchange systems are difficult to control, and different leak definitions are appropriate for different situations within an individual refinery, so a set of requirements must be demonstrated to be workable on multiple heat exchange systems of varying services and ages before that set of requirements can be considered "demonstrated in practice." Another commenter stated that there is no demonstration that there is technology that can be applied to new sources that improves the emission performance of these systems when considered across the operating life of the facilities. Both commenters recommended setting the new source and existing source requirements equivalent at 6.2 ppmv. (One of the commenters noted that EPA's analysis shows that the next best controlled source has a limit of 5 ppmv, but the commenter noted that there is not much difference between the reductions achieved by a leak definition of 5 ppmv and a leak definition of 6.2, and 5 ppmv is not cost-effective. The commenter urged EPA to review cooling towers and heat exchange systems under CAA sections 112(d)(6) and 112(f)(2) and consider factors such as cost rather than developing a standard under CAA section 112(d)(2).)

One commenter noted that in the State of Texas, if a particular cooling tower cannot meet its normal leak definition of 80 parts per billion by weight (ppbw) VOC in the water, the State allows that source to set a leak definition of up to 150 ppbw VOC in the water. For flexibility when dealing with continuous small seepage or situations where the particular HAP or VOC present are not completely stripped by the cooling tower, the commenter suggested that in any 1-year period, if monitoring shows three leaks above 6.2 ppmv, but below 12 ppmv, EPA should allow that source to set a new leak definition of 12 ppmv.

Commenters stated that the leak definition of 6.2 ppmv VOC in the stripping gas is not stringent enough. One commenter noted that during cooling tower leak investigations conducted by the City of Houston and TCEQ, a potential leak measured at 2 ppm required sampling by summa canister to confirm the leak, and EPA's regulation should be at least that stringent. The commenter stated that a stringent leak threshold of 2 ppm will ensure that small leaks are found and repaired quickly, especially since the TCEQ leak threshold is 50 parts per billion by volume (ppbv).

Several commenters supported using the Modified El Paso Method to detect leaks but suggested that cooling towers that have higher recirculation flow rates should have lower leak definitions than cooling towers with lower flows because the large cooling towers will have higher mass emissions at the same leak concentration.

Commenters stated that EPA failed to consider the TCEQ Highly Reactive VOC (HRVOC) rule in establishing the MACT floor. The commenters believe the HRVOC rule is applicable to several refinery cooling towers, requires continuous monitoring, and it has a more stringent leak definition and leak repair schedule. One commenter also cited a California refinery that is required to install and operate a continuous hydrocarbon analyzer and repair leaks above an agreed threshold.

Response: The TCEQ El Paso Method has been demonstrated at numerous refineries and other similar sources as an effective means of identifying leaks in heat exchange systems. The method has been used extensively for over 20 years. As suggested by some commenters, the detection limit of the El Paso Method is generally less than 2 ppmv, so leaks of 3.1 ppmv are quantifiable. Ongoing monitoring at refineries indicates that, when no leaks are present or after repairs are made, El Paso monitoring is able to detect leaks well below this leak threshold. As such, the monitoring method and the corrective action measures have been adequately demonstrated.

In criticizing our new source leak definition of 3.1 ppmv, the commenter recognizes that heat exchangers connected to one refinery cooling tower are subject to a monitoring program with a leak definition of 3.1 ppmv. Section 112(d)(3) of the CAA provides that new source MACT cannot be less stringent than "the emission control that is achieved in practice by the best controlled similar source." The commenter's concern that the facility has only recently begun operation and that there is not "significant" experience with the leak definition of 3.1 ppmv does not change the fact that this level is being achieved in practice and thus is the appropriate new source MACT floor. To the extent that the commenter suggests that the cooling towers meeting this limit are different and thus is presumably arguing that they must be subcategorized, the

commenter failed to submit any data supporting such a claim. As one commenter suggested, we cannot set the new source limit at 6.2 ppmv because we are establishing these requirements under CAA section 112(d)(2), and we cannot consider cost in setting the MACT floor. The requirements for heat exchange systems are appropriately developed under CAA section 112(d)(2) because a MACT standard had not been previously developed for this emissions source.

One commenter noted that the TCEQ allows some discretion in setting the total strippable VOC concentration limit or altering the limit based on the performance history of the cooling tower. We do recognize that the cooling tower leak definitions for total strippable VOC required in Texas refinery permits varied from 40 ppbw (or 3.1 ppmv) to 280 ppbw (22 ppmv), including within this range leak definitions at 60 ppbw, 80 ppbw, 150 ppbw, and 180 ppbw, but the 6th percentile facility had a leak definition of 80 ppbw, or 6.2 ppmv total strippable organics as methane. While some permits issued by TCEQ contain language that allows an alteration request or a permit amendment application, as the commenter noted, the permit issued for the 6th percentile cooling tower did not include this type of permit condition. As we cannot establish a requirement less stringent than the MACT floor, we do not provide a 12 ppmv leak definition under any circumstances.

Most of the commenters requesting lower leak definitions appear to misunderstand the stringency of the requirements for heat exchange systems included in the supplemental proposal. Based on the liquid and air flow rates specified in the TCEQ El Paso Method, and with the VOC measurements made as methane as required in the State permits and the supplemental proposal, a 3.1 ppmv VOC concentration in the gas stream from the El Paso stripping column is equivalent to 40 ppbw of strippable VOC (as methane) in the cooling water. The 6.2 ppmv leak threshold translates to a strippable VOC (as methane) in the cooling water of 80 ppbw.

The TCEQ HRVOC rule sets an action level that is 50 ppbw in the cooling water, not 50 ppbv in the stripping air as the commenter suggested. As such, the TCEQ HRVOC rule action level is actually slightly less stringent than the leak definition in the new source MACT requirements. Furthermore, the 50 ppbw threshold only triggers calculations of emissions, and not necessarily corrective action. Therefore, we disagree with commenters that suggest the HRVOC rule requirements are more stringent than the new or existing MACT floor requirements we established.

In our supplemental proposal, we specifically looked at lowering the leak definition for existing sources from 6.2 ppmv to 3.1 ppmv as part of our beyond-the-floor analysis, and determined that this was not cost-effective. Incrementally reducing the leak definition to 2 ppmv would be even less cost-effective than the option we evaluated. Furthermore, it would result in negligible additional emissions reductions, and it is very near the limit of detection of the El Paso Method. Therefore, we reject the option of setting the leak definition at 2 ppmv for new or existing sources because it is not cost-effective.

The commenter requesting different leak definitions for different-sized cooling towers is essentially asking for less control for small cooling towers (*i.e.*, an effective leak definition greater than 6.2 ppmv) and more control for larger cooling towers (*i.e.*, an effective leak definition less than 6.2 ppmv, and in some cases less than 3.1 ppmv). In our review of permits, we found no basis for subcategorizing the cooling towers by different recirculation rates. In addition, the suggested approach is inconsistent with the MACT floor requirements we identified for heat exchange systems.

We also disagree with the comments that claim we did not consider the HRVOC rule in our decision-making process. We found that most cooling towers that are subject to the HRVOC rule are associated with ethylene production units, and not refinery process units. As we specifically collected recent permit requirements for Texas refineries, to the extent there might be refinery cooling towers subject to the HRVOC rule, those requirements were considered in the development of the MACT floor. As explained above, we also disagree with the commenter's characterization of the stringency of the HRVOC rule in comparison with the new and existing MACT floors.

Our analysis indicated that repair provisions were more important in reducing heat exchange system emissions than using continuous monitoring. Contrary to the commenter's supposition, there are no repair schedules within the HRVOC cooling tower requirements. The commenter actually referenced the repair provisions for fugitive process equipment leaks (valves and pumps), which are not applicable to cooling towers. In the HRVOC rule, the action level is not a leak definition; rather, the leak definition is used to trigger more frequent monitoring for emission estimation and not specific repair requirements. In the HRVOC rules, facilities with cooling towers must meet an annual and an hourly site-wide HRVOC emissions cap. The hourly cap is quite high, and would not require any heat exchanger leaks to be repaired; the annual cap would tend to drive heat exchanger repairs. A medium-sized 30,000 gallon per minute cooling tower with a leak of 1,000 ppbw total VOC containing 20 percent HRVOC (as defined in the Texas rule) would have to repair within 45 days under the MACT floor requirements of this rule, but would not necessarily have to repair in 45 days to comply with the HRVOC rule, which sets a site-wide cap of 10 ton/yr (45 days of emissions would release 1.6 tons of HRVOC, under this scenario).

While different scenarios can be devised, the stringency of the Texas HRVOC rule is not as easy to categorize as the commenters suggest, and it could result in less emission reductions than the proposed new or existing source MACT floors.

Contrary to the commenter's assertion, we also reviewed and evaluated the permit requirements for the cited California refinery, and the permit was included in the docket. The permit, dated April 17, 2008, included a provision for a continuous monitor to be installed at a future date, to be determined, and the planned monitor was not being used at the time of our review. Additionally, based on the cooling tower's recirculation rate and the permitted VOC daily emission rate, the apparent action level (also not yet determined) is likely to be much higher than the leak definition for existing source MACT floors. In the cooling tower memorandum, we only summarized the information from the top-ranked cooling towers; the cooling tower at this California refinery was not included in the memorandum because, based on actual permit conditions, this cooling tower is not among the top-performing 12 percent of cooling towers.

While continuous monitoring was not used by the top-performing cooling towers, and, therefore, is not part of the floor requirements, we did evaluate requiring continuous monitoring in our beyond-the-floor analysis. However, the cost-effectiveness of this option exceeded half a million dollars per ton of HAP reduced, and, therefore, we did not require continuous monitoring as the standard. Rather, we adopted the floor as the MACT standard.

Comment: One commenter noted that the proposed recordkeeping and reporting requirements for heat exchange systems are unnecessarily burdensome, go far beyond the requirements for the MACT floor, and should be revised. For the Notice of Compliance Status, the commenter noted that "heat exchange systems" are an artifact of the regulation, do not normally have specific names, and will change from time to time, so the requirement to identify the heat exchange systems that are subject to the requirements of this subpart should be changed to a list of cooling towers that serve any heat exchange system or systems in organic HAP service. For periodic reports, the commenter stated that: (1) The number of heat exchange systems in HAP service will change over time, so the requirement to report that number should be deleted; (2) the requirement to report the number of heat exchange systems in HAP service found to be leaking should be changed to a request to identify exchangers found to be leaking; (3) the requirement to report the number of leaks in § 63.655(g)(9)(iii) duplicates the requirement in § 63.655(g)(9)(ii); (4) § 63.655(g)(9)(iii) should not require the reporting of measurements below the leak definition and should only ask for a summary of the leaks identified during the reporting period; (5) each 6-month period will include a lot of leaks, so there is no need to report the date of every leak (a record should be sufficient); (6) § 63.655(g)(9)(v) should be revised to reflect all delays and to address situations when a leak is detected in one reporting period and repaired in the next; and (7) reporting the estimate of VOC emissions for delay of repair should only be required when the delay of repair option was invoked. For recordkeeping, the commenter stated that: (1) Calculating the requested information for each heat exchanger in a refinery will take an estimated 40 hours per refinery and must be repeated every year; these burdens were not included in the information collection request (ICR) burden estimate and do not add value for exchangers that will not be monitored due to low HAP content, that do not contact HAP, or would not leak into the cooling water; (2) although sources will need a record of which heat exchange systems include exchangers in organic HAP service to comply with the monitoring requirements, identification of all heat exchangers is not necessary; and (3) the information requested in § 63.655(i)(4)(iii)(E) is sometimes available for whole cooling towers but not readily available for heat exchange exit lines or cooling tower return lines. The commenter stated that temporary heat exchangers and sample coolers should be excluded from these recordkeeping and reporting requirements.

Response: We reviewed the recordkeeping and reporting requirements identified by the commenter. We do not see how the heat exchange system will be as variable as the commenter suggested. We have revised the definition of heat exchange system to clarify our intent. We also: (1) Amended § 63.655(g)(9)(v) to more clearly indicate that all delayed repairs must be included and that delays may occur across reporting periods; (2) amended the reporting requirements in § 63.655(g)(9)(vi) to clarify that leak emission estimates are only required for an actual delay of repair; and (3) clarified in § 63.655(g)(9)(vi) that the flow rate is for the location where the monitoring occurs. It is anticipated that facilities will monitor at locations where the flow rate is known based on pump curves, heat balance calculations, or other engineering methods. A continuous flow monitor is not required, but a flow rate at the monitoring location is needed to assess the potential mass emissions associated with a leak. For the other comments, we find that the recordkeeping and reporting requirements are needed to document compliance with the rule. Specifically, identifying heat exchangers and heat exchange systems that are in organic HAP service, maintaining monitoring results, and reporting the date a leak is identified and repaired is essential for demonstrating compliance with the monitoring requirements.

2. Applicability Issues

Comment: One commenter supported changing the affected source from "cooling towers" to "heat exchange systems," noting that it allows the facilities flexibility in monthly monitoring, leak tracking, and determining best sampling locations. Other commenters stated that Refinery MACT 1 should only apply to heat exchange systems that are part of cooling tower systems and should not apply to once-through cooling water systems. The commenters suggested that the supporting documentation indicates that only cooling tower heat exchange systems were evaluated, and, if EPA wants to finalize requirements for once-through cooling water systems, the requirements must be properly evaluated and the analyses provided for comment. One commenter stated that the emissions from once-through cooling systems are fundamentally different than systems with cooling towers since once-through systems do not have the air contact and stripping properties of cooling towers, and, as a result, a cost analysis of the two systems would show considerably different costs. The commenter also noted that the monitoring and repair techniques employed for the once-through systems are different than the monitoring for cooling tower systems, and these techniques should be evaluated for best demonstrated control technology (BDT) if once-through cooling systems are included in the rule. One commenter noted that, as proposed, the heat exchange system requirements apply to systems where the pressure gradient would not allow leakage into the cooling water. The commenter noted that these systems do not need monitoring, and a pressure gradient threshold of 35 kilopascals (kPa) should be included in the definition of "heat exchange system" to exempt these types of systems from Refinery MACT 1. Finally, the commenter stated that including the term "cooling tower" in the definition of "heat exchange system" could lead to confusion over the monitoring location requirements.

Response: EPA has developed MACT standards, such as the Hazardous Organic NESHAP (HON) and Ethylene MACT, for heat exchange systems, and these standards include once-through cooling water systems. Generally, the HON and Ethylene MACT standards allow alternative surrogate means of compliance that are equivalent to those standards. We considered and rejected these alternatives in the development of the requirements that we proposed for heat exchange systems and that we are now finalizing because the HON and Ethylene MACT standards are less stringent than our floor. We are not aware of any means of surrogate monitoring that would achieve identification of leaks equivalent to the floor level of monitoring required for refinery heat exchange systems.

We believe that control of once-through heat exchanger cooling systems is appropriate for several reasons, as outlined below. First, emissions of volatile HAP such as benzene occur readily from open water sources, which is why the Benzene Waste Operations NESHAP and the Refinery MACT 1 wastewater provisions require wastewater streams with benzene (as a surrogate for volatile HAP) to be covered and controlled until an appropriate treatment process is used to recover or destroy the benzene. While the stripping process may not be as fast as in a cooling tower, the once-through cooling

water will have a much longer exposure to the atmosphere than a system with a cooling tower. Thus, while the emissions may occur over a longer time period (over a larger area), all available scientific evidence and fate modeling studies of open water systems leads us to conclude that essentially all volatile HAP will be released into the atmosphere. As such, we see no reason why HAP leaks from heat exchange systems into once-through cooling water should be treated any differently than HAP leaks from heat exchange systems that have cooling towers.

Second, in conducting the MACT floor analysis for heat exchange systems presented in the supplemental proposal, we assumed that once-through cooling waters were included and that emissions from the once-through systems would be similar to those with recirculation of cooling waters. In reviewing the permits that formed the basis of the MACT floor analysis, we found that the majority did not indicate whether the system was once-through or recirculating. However, we note that some permits included text for monitoring of "cooling towers" and "cooling tower water" and some specified monitoring for "heat exchanger system cooling water." The latter permits would appear to include once-through systems. Based on review of multiple references, the use of once-through cooling water in the petroleum refinery industry has been declining over the last 40 years, and is now a very small subset of the heat exchanger water systems. One reference indicated that a sample of facilities surveyed back in 1967 showed that only 5 percent of petroleum refineries were still using once-through cooling.[3] No more recent data could be found on how many refineries use once-through systems. A more recent study on once-through cooling systems for cogeneration facilities indicated that approximately 11 percent of non-utility plants that cogenerated power use once-through cooling; the 123 non-utility facilities included pulp and paper, chemical, iron and steel, aluminum, and petroleum refining industries.[4] Of the 123 facilities in the survey, four were confirmed petroleum refineries and three of these four sources provided a response to the survey. None of the three reported that once-through cooling systems were used.

Hypothetically, if we assumed that there were additional once-through cooling systems that were not included in our MACT floor analysis, we could assume that approximately 5 to 11 percent of the total cooling systems were once-through. The original number of cooling tower systems included in the MACT floor analysis was 520. If we assume that 5 to 11 percent of the cooling systems are once-through systems, then the total hypothetical number of cooling systems could range from 547 to 584 cooling systems. The MACT floor for these cooling systems would be based on the average emissions limitations achieved by the top 12 percent of cooling systems; the 6th percentile would be represented by the 33rd and the 35th cooling systems, respectively, for the hypothetical total number of cooling systems estimated to be 547 and 584. There would be no change in the MACT floor for existing sources for this hypothetical case. The MACT floor would be identical to the requirements in the supplemental proposal, *i.e.*, the 33rd and 35th ranked cooling systems have requirements to implement corrective action and heat exchange leak repairs when the strippable total VOC concentration in stripped air exceeds 6.2 ppmv. The owner or operator must identify the leaking heat exchanger, and repair at the earliest opportunity and no later than the next scheduled shutdown.

To the extent the commenters are suggesting that once-through systems should be treated as a separate subcategory, they have provided no information to support that subcategorization is appropriate.

We agree with the commenter and have clarified in § 63.654(b)(1) that the requirements do not apply to heat exchange systems where the minimum water-side pressure is 35 kPa greater than the maximum process-side pressure. We have also revised the definition of "heat exchange system" to identify the equipment that is included for closed-loop recirculation systems (systems with cooling towers), to identify the equipment that is included in the once-through systems, and to clarify that once-through systems are also regulated. Furthermore, definitions are provided for "cooling tower return line" and "heat exchanger exit line" to clarify the appropriate sampling locations. Sampling at either location is allowed; for once-through cooling systems, sampling is allowed at an aggregated location as long as it is before exposure to the atmosphere. To clarify this requirement, we have modified the definition of "heat exchange exit line" to be "the cooling water line from the exit of one or more heat exchangers (where cooling water leaves the heat exchangers) to either the entrance of the cooling tower return line or prior to exposure to the atmosphere, whichever occurs first."

3. Compliance Schedule for Heat Exchange Systems

Comment: Several commenters supported the originally proposed compliance date of 3 years and 90 days. One commenter noted that the reference to 90 days in CAA section 112(f)(4) has been misread by some to limit compliance time, but since it is expected that installation of controls necessitates a longer time to comply, the waiver provisions should only be considered if EPA set a compliance deadline less than 3 years. Some commenters noted that 18 months should be sufficient for all new requirements, as industry is already familiar with many of the processes to be controlled and are already regulating these emissions.

Several commenters addressed the compliance dates relative to the supplemental proposal. For new sources, commenters noted that these requirements will be promulgated only 2 months after they were proposed in the supplemental proposal, which is inadequate time in which to have monitors purchased and operating. The commenters asserted that EPA should provide 1 year for new sources to comply with the standards.

Commenters specifically noted that although many Texas refiners are currently familiar with the monitoring methods required for heat exchange systems, it took years for them to gain that familiarity, and it will take time for other refiners to learn to perform the methods efficiently. One commenter noted that when monitoring begins, there will be an initial period in which multiple repairs are necessary, some of which may require shutdowns. The commenters recommended that EPA provide the full 3 years provided by the CAA for compliance with heat exchange system requirements; this additional time would allow refiners to become familiar with the monitoring method and to complete initial repairs during already scheduled shutdowns and turnarounds. Conversely, several commenters stated that the cooling tower standards should be implemented in 1 year rather than progressively over 3 years as proposed in the supplemental proposal. Another commenter stated that the 18-month compliance schedule for heat exchange systems in the supplemental proposal is preferable to

[3] Gibbons, DC. *The Economic Value of Water.* Published by Resources for the Future. 1986.

[4] Veil, J., M. Pruder, D. Littleton, and D. Moses. "Cooling Water Use Patterns at U.S. Nonutility Electric Generating Facilities." *Environmental Science and Policy.* 2000.

the 3-year (and 90 days) compliance schedule in the original proposal.

Response: As an initial matter, we note that the originally proposed compliance schedule (*i.e.*, 3 years and 90 days) should not have included the additional 90 days. Section 112(i)(3) of the CAA provides that existing sources must comply within "3 years after the effective date" of the standard. With respect to the 18-month compliance timeframe specified in our supplemental proposal, we agree that the commenters have made valid points supporting adoption of a 3-year compliance period instead. The comments that many refineries do not have experience with the TCEQ El Paso Method is supported by our review of cooling tower requirements for different States. We believe that some sources will need up to the full 3 years allowed under CAA section 112(i)(3) based on the estimated length of time required for refiners to survey the heat exchangers, identify those in organic HAP service, install the necessary sampling ports, purchase the Modified El Paso sampling system, familiarize themselves with the test method, and provide training to their employees. In addition, refiners will need to take steps to be prepared to repair leaking heat exchange systems. This includes performing initial sampling to identify heat exchangers that are prone to leakage or are in critical service, identify means to isolate or repair heat exchangers online, and to order and stock necessary equipment and spare parts.

With respect to new source requirements, the CAA specifies that such sources must comply upon start-up or the date of publication of the final rule, whichever is later. We note that, based on the definition of an affected source in the Refinery MACT 1 rule, a construction project significant enough to trigger the new source provisions is likely to take years to complete, and that any source undertaking such project has been on notice since our initial proposal that cooling tower monitoring (or heat exchange system monitoring) would be required.

4. Delay of Repair Provisions

Comment: Commenters noted that the new source delay of repair standards are based on cooling towers that are not yet operational, so those permit conditions are not "achieved in practice." The commenters argued that it takes time after startup of new facilities to determine if new, previously untested requirements are achievable or whether permit modifications are needed; it is also unknown if Texas will allow deviations from permit conditions and under what conditions for heat exchange system repairs. The commenters stated that the new source delay of repair standards must instead be based on "Repair and Delay 2" as described in Table 1 of EPA's supporting memorandum (which the commenter thought were the requirements for the existing source floor).

One commenter supported the 45-day repair allowance and delay of repair allowances. Another commenter stated that the maximum delay of repair should be 60 days because refineries already have 18 months to comply. Some commenters expressed concern that EPA proposed to disallow delay of repair for leaks above 62 ppmv after 3 years and noted that EPA has not demonstrated the rationale for removing that allowance. One commenter stated that EPA needs to address the situation in which multiple small leaks occur at multiple heat exchangers and the cumulative effect at the cooling tower return line is a leak above 62 ppmv. The commenters stated that unplanned shutdowns are expensive and disruptive, but would be necessary when repair is infeasible without a shutdown. One commenter requested that EPA allow owners and operators to request delay of repair on a case-by-case basis when justified.

Response: The supplemental proposed MACT floor for both new and existing sources is repair within 45 days for leaks of 62 ppmv or greater. In establishing the floor, we found that the no delay of repairs requirement for large leaks has been implemented and required for 35 cooling towers at numerous facilities. Also, both the top-ranked and 6th percentile cooling tower had identical requirements excluding large leaks from delay of repair. As such, this requirement has been implemented and has been adequately demonstrated and it establishes the minimum floor requirement. In the supplemental proposal, we proposed to allow delay of repair for large leaks for the 18 month phase-in of the repair requirements, which correspond to the "Repair and Delay 2" provisions cited by the commenter. However, we have concluded that these temporary delay of repair provisions were not equivalent to the requirements for the MACT floor for existing heat exchange systems, which is why they were only temporary provisions in the supplemental proposal. Additionally, the 3-year compliance timeframe in the final rule will allow facilities sufficient time to resolve these initial problems. As discussed previously, we are now implementing all heat exchange system requirements for existing sources on the same 3-year schedule. Upon implementation of the required monitoring provisions, it is anticipated that leaks will be identified well before they become large. Thus, while delay of repairs are allowed for small leaks, it is the refinery owner or operator's responsibility to order necessary parts and schedule a repair before the leak exceeds the 62 ppmv threshold. Negligence on the part of the owner or operator regarding this responsibility is not a reasonable justification for providing delay of repair provisions for large leaks. Consistent with the requirements that apply to the units which provided the basis for the MACT floor, any leak greater than 62 ppmv that is not repaired in the timelines provided in the rule is a deviation of the standard and subject to enforcement actions at the discretion of the Agency or permitting authority.

5. Monitoring Alternatives

Comment: Commenters noted that the concentration of heavy organic HAP and water soluble HAP can build up in recirculating cooling tower systems, and since the El Paso Method involves more vigorous stripping than occurs in a cooling tower, monitoring might falsely indicate a leak. The commenters suggested that, as an alternative, sources should be allowed to use methods they are presently using, including testing the inlet water to a heat exchange system and using the difference between the outlet and the inlet to determine if the leak definition is exceeded. One commenter noted that if once-through cooling systems continue to be considered affected facilities by EPA, it is important for the requirements to consider the baseline of HAP (or surrogate VOC) emissions in the inlet to the system so that facilities are only responsible for assessing any "increase" in the pollutant attributed to the operating facility, not pollutants in the water basin upstream of the facility. Another commenter requested that EPA allow owners or operators to demonstrate that another monitoring method such as a continuous emission monitoring system or parameter monitoring is equivalent to the monitoring methods specified for heat exchange systems. One commenter requested that EPA continue to allow the method originally proposed as well as a relatively new analytical method for early detection developed by Baker Petrolite. Another commenter stated that the El Paso Method measures VOC in the air, and EPA should allow any monitoring method that has adequate sensitivity to measure 80 ppbw of

strippable VOC in the water or for a surrogate that can be correlated to strippable VOC and can be measured at a level that would indicate a leak of 80 ppbw of strippable VOC in the water for a particular heat exchange system. This monitoring flexibility would be helpful to confirm El Paso results as well as more efficient for sources that are required to conduct other types of monitoring by their State or local agency or for compliance with another Federal regulation (such as the HON).

Response: We acknowledge that some refineries have specific monitoring systems in-place and that the use of these monitoring systems would ease the burden on the refinery owner or operator. However, we are not aware of any practical alternatives that we can specify that provide an equivalent measure of strippable organics. Nor have any of the commenters provided evidence that a specific alternative method would result in an equivalent measure. For example, we have reviewed the "method for early detection developed by Baker Petrolite" and found that the detection level for most individual compounds is much higher than the total strippable VOC concentrations that define a leak for the MACT floor facility. That is, this method would not be able to identify small to medium-sized leaks that would be identified and would be required to be fixed by the MACT requirements for heat exchange systems.

Although we expect the El Paso column to mimic the stripping that occurs in the cooling tower, the amount of stripping that occurs in the cooling tower is dependent on the design and operation of the cooling tower. Moreover, the purpose for the use of the El Paso Method is to detect leaks in heat exchange systems, not to estimate emissions. Consequently, we do not believe that analytical methods based on the measurement of single constituents or that employ inlet/outlet cooling tower water sampling are equivalent to the El Paso Method for determining strippable VOC. That is, these alternative methods would not result in the same corrective action thresholds as the prescribed monitoring technique.

The commenters have provided no evidence that a build-up of heavy organics would cause a heat exchange system to exceed a leak definition of 6.2 ppmv total strippable VOC, nor have they provided compelling evidence that such a leak would not result in any air emissions. While we agree that the relative stripping efficiency of a given cooling tower will not necessarily match the stripping efficiency of the El Paso stripping column, it is unreasonable to conclude that the cooling tower will have no HAP emissions. Furthermore, the majority of HAP included in Table 1 are volatile. Thus, for a heat exchange system that is "in HAP service," we believe it is appropriate to initiate corrective action if the leak threshold is exceeded because that corrective action will result in reduced HAP emissions.

As stated previously, the goal of the heat exchange system provisions is to identify and fix leaks at the heat exchanger to reduce subsequent emissions of HAP. For once-through cooling systems, we believe it is unlikely that the strippable organics concentration in the inlet water would exceed the leak threshold. Further, the commenters have provided no evidence that the fresh water feed for a once-through heat exchange system could contain enough strippable organics to cause a heat exchange system to exceed a leak definition of 6.2 ppmv total strippable VOC. Therefore, we have not provided any alternative leak detection procedure for once-through heat exchangers.

Comment: Commenters supported allowing the facility to demonstrate that a leak is not in a heat exchanger that is in HAP service. One commenter stated that if VOC testing indicates a leak in a heat exchange system, the facility should be allowed to speciate the compounds in the leak to determine if the leak is a HAP leak. Another commenter agreed, noting that proposed § 63.654(e) requires monitoring of every individual exchanger in organic HAP service in a heat exchange system in order to prove that the leak is not from an exchanger in organic HAP service. The commenter stated that this requirement is very costly and recommended three alternatives: (1) The owner or operator should be allowed to determine the species in the process or processes served by the cooling tower to determine if the process is in HAP service; (2) the owner or operator should be allowed to speciate the sample from the cooling tower return line to determine the leaking heat exchanger; and (3) the owner or operator should be allowed to sample groups of heat exchangers rather than each individual heat exchanger.

One commenter noted that the supplemental proposal appears to only allow sampling at the outlet of each heat exchanger or at the inlet to a cooling tower, but it is often preferred to sample at branch points in cooling tower return piping for several reasons: (1) Only a particular branch has exchangers in HAP service; (2) it is easier to identify the source of any leak that does occur; or (3) a particular cooling tower is shared among administrative units and compliance is more readily achieved if each unit is responsible for its own heat exchangers. The commenter also noted that the language is inconsistent with the definition of "heat exchange system," which can be any number of exchangers, not just one exchanger or all exchangers in a particular cooling water loop. The commenter suggested revisions to the definition of "cooling tower return line" to clarify the requirement.

Response: The purpose for the rule is to find and fix leaks for heat exchange systems in organic HAP service. If a leak is detected at a cooling tower return line or in a once-through system, the owner/operator can find and fix the leak by any means possible, including the means specified by the commenters. If, however, the owner/operator does not want to fix the leak because they believe that the leak is caused by heat exchangers that are not in organic HAP service, the only way to definitively prove that is to test the individual or groups of heat exchangers in organic HAP service that make up the system in which a leak has been detected.

The Texas permit data and TCEQ El Paso Method is based on strippable VOC. We found that this is an appropriate surrogate for HAP emissions for cooling towers that are in HAP service. A refinery may use speciation of the El Paso column stripping air or other methods at their discretion to determine the location of the leak. However, we cannot provide, based on the MACT floor requirements, an alternative action level that defines a HAP leak as opposed to a VOC leak, as the commenter proposes.

We have made minor adjustments to the final standards to allow our intended outcome of alternative 3, as described by the commenter. Specifically, we have clarified the definition of heat exchanger exit line to include water lines from "one or more heat exchangers." This clarification is intended to allow monitoring using the Modified El Paso Method from each heat exchanger *or group of heat exchangers* in organic HAP service upstream of the cooling tower return line. For example, if three process units are served by one heat exchange system and multiple heat exchangers are grouped by process unit and the three return lines combine before the main cooling tower return line, then the owner or operator may choose to measure each of the three return lines associated with a process unit in organic HAP service. If monitoring at those points results in concentrations less

than the leak definition, then no repair is necessary.

6. Impact Estimates for Cooling Towers

Comment: Several commenters argued that EPA's estimates of baseline emissions were based on faulty and unsupported premises. One commenter stated that the model cooling tower sizes understate the emissions because the average flow rate is a factor of 2 less than in a study performed by the Galveston-Houston Association for Smog Prevention (GHASP). One commenter said the emissions are understated because they do not include HAP emissions from SSM events. Two commenters questioned the use of TCEQ inventory data. One commenter stated that the TCEQ inventory appears to be biased low for HAP when compared to the Toxics Release Inventory (TRI) reported releases (on a plant-wide basis). The other commenter suggested that EPA mistakenly assumed the TCEQ data were based on controlled emission factors in projecting the baseline emissions ranging from 352 to 2,300 ton/yr because of the guidance provided in the 2006 TCEQ inventory guidelines for cooling towers. The commenter also cited a report by URS Corporation where two high rate leaks were identified as evidence that the baseline emission rates were too low.

Two commenters stated that the cooling tower impacts do not account for the maximum emissions allowed under the proposed MACT standard. According to the commenters, the cooling tower impacts assume 50 percent of leaks are fixed as soon as possible rather than the 45 days allowed in the proposed rule, and they do not account for permitted delay of repair for up to 120 days. Also, the commenters stated that the EPA did not justify the 50 percent assumption for delay of repair and should assume all refineries will delay repair.

Two commenters also cited variability in the emissions from cooling towers as a concern. One commenter stated that the use of a single average HAP content for the cooling tower emissions estimates does not consider the range of potential HAP concentrations. Another commenter questioned the use of 2004 TCEQ inventory data by comparing the 2004 TCEQ inventory for selected refineries with TCEQ data for 2005 and 2006, which showed that the quantity and composition of emissions is variable from year to year. According to this commenter, EPA failed to account for this variability or provide rationale as to why the 2004 emissions data are representative, and, therefore, the analysis fails to capture all refinery emissions and is unlawful.

Response: We disagree with the commenters that state that the cooling tower emissions were understated or otherwise not properly characterized when developing the impact estimates. With respect to the cooling tower sizes, the GHASP study includes refineries and chemical plants, and the data are skewed by several large cooling towers, which we believe are associated with petrochemical (ethylene) plants and not refineries. Eliminating the three largest cooling towers of the 54 cooling towers in the GHASP dataset brings the data (which include only the Houston area, which has larger than average-sized refineries) in reasonable agreement with the projected size-distribution of cooling towers (the mean cooling tower recirculation rate in the GHASP data is reduced from a factor of 200 percent to a factor of 50 percent above the mean flow rate in our impacts analysis). The TCEQ emissions data and the AP–42 emission factors are the best available data by which to estimate cooling tower emissions. The TRI does not provide emissions breakdown by source, so it is impossible to determine what emissions in the TRI are associated with cooling towers.

We specifically consider SSM emissions in the cooling tower impacts. Heat exchanger leaks that result in cooling tower emissions are a type of malfunction. If the units operate as designed, there would be no emissions from the cooling towers. No additional emissions are expected specific to cooling towers during startup or shutdown events. The requirements for monitoring and repairing heat exchange systems directly address malfunction emissions.

We also note that selected short-term emissions from selected heat exchanger leaks are not indicative of the average long-term emissions that are appropriate for estimating chronic effects or life-time cancer incidence. Not all heat exchange systems leak every year, and the leaks that do occur do not last all year long. Note also that two of the "leaks" identified in the cited study were comparable to the *controlled* AP–42 emission factor. Our impact estimates directly account for the fact that some heat exchangers do not have leaks at all, some have small leaks, and some have large leaks. We compared emission estimates using a variety of methods and determined that the baseline and controlled emission estimates were as accurate and unbiased as we could develop.

The commenters also incorrectly characterized our emission estimates with respect to repair times. For cooling towers that were assumed to be repaired as soon as possible, we used the full 45-day repair allowance plus 15 days (one-half the monitoring frequency) for estimating the duration of the leak. Leaks may occur any time between monitoring events, but 15 days provides the best estimate of the average leak duration prior to identifying the leak. Once a refinery owner or operator measures a leak and identifies its source, they will also know what actions are needed to reduce the leak. In some instances, the refinery owner or operator will find that the cost of repairing the leak is easily offset by the recovery of the leaking product or process stream. In these cases, the refinery owner or operator will elect to repair the leak rather than delay repair. While data are limited, our best engineering estimate is that roughly 50 percent of leaks will be repaired within the first 45 days simply because it is economical to do so. For the 50 percent of leaks for which repair is delayed, 120 days was used as the duration of the leak when estimating the emissions from these units.

With respect to the TCEQ data, we are confident that the controlled AP–42 emission factors were generally used. Public comments were received on the original proposal requesting that corrections be made to the emissions data for the highest emitting cooling towers in the TCEQ dataset because the uncontrolled AP–42 emission factor had been incorrectly used, and that the controlled AP–42 emission factor should be used. We also note that TCEQ's 2006 guidance on use of AP–42 emission factors cited by the commenter came out well after the 2004 inventory was developed, so its use was not possible. Finally we note that, if the TCEQ inventory estimates were based on uncontrolled emission factors, then the 352 ton/yr projection from the TCEQ data would be the upper-end of the range, which would make the baseline emission estimate lower, not higher.

Finally, while leaks from heat exchangers that give rise to cooling tower emissions are inherently random and variable, our analysis was specifically designed to provide an estimate of the long-term (life-time) exposure from cooling tower emissions. Assuming that all leaks come from a specific unit with high HAP content, that all leaks are big, and that all repairs will be delayed provides a completely unrealistic picture of long-term emissions. When assessing short-term exposure, we multiplied our long-term emissions by a factor of 10, which

effectively accounts for the variability in emissions cited by the commenters.

Comment: One commenter stated that cooling tower emission reductions are estimated by EPA to be 4 to 10 percent, but the GHASP Report 2006 shows reductions on the order of 90 percent. As such, the commenter suggested that the emission and emission reduction estimates are unreasonable and conclusions drawn from the emission estimates are unreliable.

Response: The analysis includes all emission sources covered under the Refinery MACT 1 regulation. If, at baseline, cooling towers represent only 5 percent of a refineries HAP emissions, a 90-percent reduction in cooling tower emissions would only result in a 4.5-percent reduction in the nationwide baseline HAP emissions from refineries. The cooling tower impact memo (Docket ID No. EPA–HQ–OAR–2003–0146–0143) indicates that the proposed MACT requirements for cooling towers will result in an 82-percent reduction in VOC and HAP emissions from cooling towers, which is in reasonable agreement with the reduction estimates in the GHASP Report 2006.

B. General Provisions Applicability

Comment: One commenter supported the revisions to Table 6 of Refinery MACT 1 in the supplemental proposal but had a few suggested revisions. First, the commenter noted that EPA proposed that §§ 63.5(d)(1)(iii), (2), and (3)(ii) apply to Refinery MACT 1. The commenter stated that this change would require owners and operators to include considerable emission and control information in requests to construct or reconstruct, and this information has not previously been required. In particular, the commenter noted that the proposal to require measured emission data in the Notice of Compliance Status required by § 63.5(d)(1)(iii) would be very costly, and the permitting authority is the best party to identify where testing is required to confirm mass emission limitations are being met. The commenter recommended that EPA not finalize this proposed requirement; if finalized, the requirements should only apply to construction or reconstruction that commenced after September 7, 2007.

Second, the commenter stated that § 63.8(b)(2), which EPA proposed should apply to Refinery MACT 1, specifies monitoring location requirements that may conflict with existing monitoring locations. If owners or operators do not already have monitors in locations that comply with § 63.8(b)(2), they could be out of compliance on the date these requirements are finalized. The commenter noted that EPA has not evaluated the impacts of these efforts, and no additional compliance time has been provided, so EPA should not finalize this proposal.

Finally, the commenter noted that EPA proposed to require Refinery MACT 1 sources to comply with §§ 63.1(b)(3) and 63.10(b)(3), which require owners and operators to keep "negative" records. The commenter stated that these records serve no purpose and have not been kept in the past.

Response: We have reviewed the General Provisions (40 CFR part 63, subpart A) and Table 6 of Refinery MACT 1 as included in the supplemental proposal, and we have determined that the emission estimates in § 63.5(d)(1)(ii)(H) and the emission measurements in § 63.5(d)(1)(iii) are not necessary. Given the types of emission sources affected by Refinery MACT 1, estimating the emissions "* * * in units and averaging times specified by the relevant standard" is not relevant for most of the sources. The permitting authority has a right to require HAP emission estimates for Refinery MACT 1 process units, but the permitting authority has discretion on what emission estimates are needed. Paragraph 63.5(d)(1)(iii) is unworkable for most Refinery MACT 1 emission sources as these sources do not lend themselves to direct emission measurements. However, the information required under § 63.5(d)(2) and (3) is reasonable and necessary information needed by permitting agencies and we are including these requirements from the General Provisions in Table 6 of Refinery MACT 1 in the final amendments.

Paragraph 63.8(b)(2) provides specific guidelines and options for monitoring when emissions from two or more affected sources are combined before being released into the air. While Refinery MACT 1 does specify locations to conduct monitoring, it does not address instances where multiple emission sources are combined. We find that § 63.8(b)(2) provides useful guidance that does not contradict or otherwise alter the monitoring locations specified in Refinery MACT 1. As such, we are specifying in Table 6 of Refinery MACT 1 that § 63.8(b)(2) applies.

We agree with the commenter that §§ 63.1(b)(3) and 63.10(b)(3) should not apply because the records required in these sections apply to applicability determinations that have long been completed and the records required under these sections would no longer need to be retained because they would be over 5 years old. Furthermore, the amendments specify the records needed for the new heat exchange system requirements specified under these sections are not necessary.

V. Summary of Impacts

The total capital investment cost of the final amendments is estimated at $16 million. The total annualized cost of the controls required by the final amendments is expected to be $3.0 million, which includes $2.2 million credit for recovery of lost product and the annualized cost of capital. The final amendments will achieve a nationwide HAP emission reduction of about 630 ton/yr with a concurrent reduction in VOC emissions of about 4,100 ton/yr. Table 1 of this preamble summarizes the cost and emission reduction impacts of the final standards.

TABLE 1—NATIONWIDE IMPACTS OF HEAT EXCHANGE SYSTEM STANDARDS

Affected source	Total capital investment ($ million)	Total annualized cost without recovery ($ million)	Product recovery credit ($ million)	Total annualized costs ($ million/yr)	HAP emission reductions (ton/yr)	Cost-effectiveness ($/ton HAP)
Heat exchange systems	16	5.2	(2.2)	3.0	630	4,700

VI. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), this action is a "significant regulatory action" because it may raise novel legal or policy issues. Accordingly, EPA 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.

B. Paperwork Reduction Act

The information collection requirements in this rule will be submitted for approval to OMB under the Paperwork Reduction Act, 44 U.S.C. 3501, *et seq.* The information collection requirements are not enforceable until OMB approves them.

The information requirements in the final amendments include monitoring, recordkeeping, and reporting provisions for cooling towers. Owners or operators of cooling towers must conduct monthly monitoring of each heat exchanger to identify and repair leaks. Records of monitoring and repair data also must be kept. All respondents must submit one-time notifications and semiannual compliance reports.

The information collection requirements in this final rule are needed by EPA and delegated authorities to determine that compliance has been achieved. The recordkeeping and reporting requirements in this final rule are based on the information collection requirements in the part 63 General Provisions (40 CFR part 63, subpart A). The recordkeeping and reporting requirements in the General Provisions are mandatory pursuant to section 114 of the CAA (42 U.S.C. 7414). All information submitted to EPA pursuant to the information collection requirements for which a claim of confidentiality is safeguarded according to CAA section 114(c) and the Agency's implementing regulations at 40 CFR part 2, subpart B.

The annual burden for this information collection averaged over the first 3 years of this ICR is estimated to total 13,647 labor hours per year at a cost of $1,048,783 for one new refinery and 153 existing refineries. The average annual reporting burden is 2,825.72 labor hours for 154 total annual responses; the average annual burden per response is 18.35 hours. Responses include Notifications of Compliance Status for cooling towers at new and existing refineries and semiannual compliance reports containing information on cooling towers at new and existing refineries. Capital/startup costs are estimated at $16,306,000. The operation and maintenance costs associated with the final rule amendments are estimated at $61,711. Burden is defined at 5 CFR 1320.3(b).

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 and 48 CFR chapter 15. EPA is amending the table in 40 CFR part 9 of currently approved ICR control numbers issued by OMB for various regulations to list the information requirements contained in this final rule. This amendment updates the table to list the information collection requirements being promulgated today as amendments to the NESHAP for petroleum refineries.

EPA will continue to present OMB control numbers in a consolidated table format to be codified in 40 CFR part 9 of the Agency's regulations, and in each CFR volume containing EPA regulations. The table lists the section numbers with reporting and recordkeeping requirements, and the current OMB control numbers. This listing of the OMB control numbers and their subsequent codification in the CFR satisfy the requirements of the Paperwork Reduction Act (44 U.S.C. 3501, *et seq.*) and OMB's implementing regulations at 5 CFR part 1320.

C. Regulatory Flexibility Act

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

For the purposes of assessing the impacts of this final rule on small entities, small entity is defined as: (1) A small business that meets the Small Business Administration size standards for small businesses at 13 CFR 121.201 (a firm having no more than 1,500 employees); (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 this final rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. Based on our economic impact analysis, the amendments will result in a nationwide net annualized cost of about $3.0 million, which includes a credit of about $2.2 million per year from reductions in product losses. Of the 24 small entities that would incur annualized costs as a result of the final amendments, annualized costs for each of them are below 0.02 percent of revenues; therefore, no adverse economic impacts are expected for any small entity. Thus, the costs associated with the final amendments will not result in any "significant" adverse economic impact for any small or large entity.

D. Unfunded Mandates Reform Act

This final 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 to the private sector in any one year. As discussed earlier in this preamble, these amendments result in nationwide costs of $3.0 million per year for the private sector. Thus, the final rule is not subject to the requirements of sections 202 and 205 of the Unfunded Mandates Reform Act (UMRA).

This rule is also not subject to the requirements of section 203 of UMRA because it contains no regulatory requirements that might significantly or uniquely affect small governments. The final amendments contain no requirements that apply to such governments, and impose no obligations upon them.

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."

The final amendments do not have federalism implications. They would

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. These final amendments add control and performance demonstration requirements. They do not modify existing responsibilities or create new responsibilities among EPA Regional offices, States, or local enforcement agencies. Thus, Executive Order 13132 does not apply to the final amendments.

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

This action does not have tribal implications, as specified in Executive Order 13175 (65 FR 67249, November 9, 2000). The final amendments will not have substantial direct effects on tribal governments, on the relationship between the Federal government and Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes, as specified in Executive Order 13175. The final amendments impose no requirements on tribal governments. Thus, Executive Order 13175 does not apply to this action.

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

This action is not subject to Executive Order 13045 (62 FR 19885, April 23, 1997) because it is not economically significant as defined in Executive Order 12866, and because the Agency does not believe the environmental health or safety risks addressed by this action present a disproportionate risk to children.

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

This action is not a "significant energy action" as defined in Executive Order 13211 (66 FR 28355, May 22, 2001) because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. Further, we have concluded that the final amendments are not likely to have any adverse energy effects because they result in overall savings due to product recovery.

I. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act (NTTAA) of 1995, Public Law No. 104–113, (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards (VCS) in its regulatory activities, unless to do so would be inconsistent with applicable law or otherwise impractical. VCS are technical standards (*e.g.*, materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by VCS bodies. NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency does not use available and applicable VCS.

This final rule involves technical standards. EPA has decided to use "Air Stripping Method (Modified El Paso Method) for Determination of Volatile Organic Compound Emissions from Water Sources," Revision Number One, dated January 2003, and will incorporate the method by reference (see 40 CFR 63.14). This method is available at *http://www.tceq.state.tx.us/assets/public/implementation/air/sip/sipdocs/2002-12-HGB/02046sipapp_ado.pdf*, or from the Texas Commission on Environmental Quality (TCEQ) Library, Post Office Box 13087, Austin, Texas 78711–3087, telephone number (512) 239–0028. This method was chosen because it is an effective means to determine leaks from heat exchangers and it is the method used in the best performing facilities. This TCEQ method utilizes a dynamic or flow-through system for air stripping a sample of the water and analyzing the resultant off-gases for VOC using a common flame ionization detector analyzer. While direct water analyses, such as purge and trap analyses of water samples utilizing gas chromatography and/or mass spectrometry techniques, have been shown to be effective for cooling tower measurements of heavier molecular weight organic compounds with relatively high boiling points, it has been determined that this approach may be ineffective for capture and measurement of VOC with lower boiling points, such as ethylene, propylene, 1,3-butadiene, and butenes. The VOC with a low molecular weight and boiling point are generally lost in the sample collection step of purge/trap type analyses. Consequently, this TCEQ air stripping method is used for cooling tower and other applicable water matrix emission measurements of VOC with boiling points below 140 °F.

Under §§ 63.7(f) and 63.8(f) of subpart A of the General Provisions, a source may apply to EPA for permission to use alternative test methods or alternative monitoring requirements in place of any required testing methods, performance specifications, or procedures in the final rule and amendments.

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 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.

This rulemaking will achieve significant reductions of HAP emissions from cooling towers located at petroleum refineries. Exposure to HAP emissions raises concerns regarding environmental health for the United States population in general, including the minority populations and low-income populations that are the focus of the Environmental Justice Executive Order.

The emission reductions from the new standards finalized in the petroleum refinery rule will have beneficial effects on communities in proximity to petroleum refineries, including low-income and minority communities. For example, the new standards for cooling towers will reduce air toxics emissions from petroleum refineries by 630 tons and VOC emissions by 4,100 tons annually.

K. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801, *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this final rule and other required information to the United States Senate, the United States House of Representatives, and the Comptroller

General of the United States prior to publication of the final 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 final rule will be effective on October 28, 2009.

List of Subject for 40 CFR Parts 9 and 63

Environmental protection, Air pollution control, Hazardous substances, Incorporation by reference, Reporting and recordkeeping requirements.

Dated: October 15, 2009.

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 9—[AMENDED]

■ 1. The authority citation for part 9 continues to read as follows:

Authority: 7 U.S.C. 135, *et seq.*, 136–136y; 15 U.S.C. 2001, 2003, 2005, 2006, 2601–2671; 21 U.S.C. 331j, 346a, 348; 31 U.S.C. 9701; 33 U.S.C. 1251, *et seq.*, 1311, 1313d, 1314, 1318, 1321, 1326, 1330, 1342, 1344, 1345(d) and (e), 1361; E.O. 11735, 38 FR 21243, 3 CFR, 1971–1975 Comp. p. 973; 42 U.S.C. 241, 242b, 243, 246, 300f, 300g, 300g–1, 300g–2, 300g–3, 300g–4, 300g–5, 300g–6, 300j–1, 300j–2, 300j–3, 300j–4, 300j–9, 1857, *et seq.*, 6901–6992k, 7401–7671q, 7542, 9601–9657, 11023, 11048.

■ 2. The table in Section 9.1 is amended by:

■ a. Removing the entry for 63.654 under the heading "National Emission Standards for Hazardous Air Pollutants for Source Categories"; and

■ b. Adding an entry for 63.655 in numerical order under the indicated heading to read as follows:

§ 9.1 OMB Approvals under the Paperwork Reduction Act.

* * * * *

40 CFR citation	OMB control No.
* * * * *	
National Emission Standards for Hazardous Air Pollutants for Source Categories [3]	
* * * * *	
63.655	2060–0340
* * * * *	

[3] The ICRs referenced in this section of the table encompass the applicable general provisions contained in 40 CFR part 63, subpart A, which are not independent information collection requirements.

* * * * *

PART 63—[AMENDED]

■ 3. The authority citation for part 63 continues to read as follows:

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

Subpart A—[Amended]

■ 4. Section 63.14 is amended by adding paragraph (n) to read as follows:

§ 63.14 Incorporations by reference.

* * * * *

(n) The following material is available from the Texas Commission on Environmental Quality (TCEQ) Library, Post Office Box 13087, Austin, Texas 78711–3087, telephone number (512) 239–0028 or at *http://www.tceq.state.tx.us/assets/public/implementation/air/sip/sipdocs/2002-12-HGB/02046sipapp_ado.pdf*:

(1) "Air Stripping Method (Modified El Paso Method) for Determination of Volatile Organic Compound Emissions from Water Sources," Revision Number One, dated January 2003, Sampling Procedures Manual, Appendix P: Cooling Tower Monitoring, prepared by Texas Commission on Environmental Quality, January 31, 2003, IBR approved for § 63.654(c)(1) and (g)(4)(i) of subpart CC of this part.

(2) [Reserved]

Subpart CC—[Amended]

■ 5. Section 63.640 is amended by:

■ a. Revising paragraph (a) introductory text;

■ b. Revising paragraph (b)(2);

■ c. Revising paragraph (c) introductory text;

■ d. Revising paragraphs (c)(6) and (c)(7);

■ e. Adding paragraph (c)(8);

■ f. Revising paragraphs (e) introductory text, and (e)(2)(iii);

■ g. Revising paragraphs (f) introductory text, and (f)(5);

■ h. Revising paragraph (h) introductory text;

■ i. Revising paragraphs (h)(1) and (h)(2);

■ j. Revising paragraph (h)(4);

■ k. Adding paragraph (h)(6);

■ l. Revising paragraphs (k)(1), (k)(2)(i), (k)(2)(ii), (k)(2)(iii), and the first sentence in paragraph (k)(2)(vi);

■ m. Revising paragraphs (l) introductory text, and (l)(2)(i), the first sentence in paragraph (l)(2)(ii), the first sentence in paragraph (l)(3) introductory text, paragraphs (l)(3)(i) and (l)(3)(ii), the first sentence in paragraph (l)(3)(vi), and the first sentence in paragraph (l)(3)(vii); and

■ n. Revising paragraph (p) to read as follows:

§ 63.640 Applicability and designation of affected source.

(a) This subpart applies to petroleum refining process units and to related emissions points that are specified in paragraphs (c)(5) through (c)(8) of this section that are located at a plant site and that meet the criteria in paragraphs (a)(1) and (2) of this section:

* * * * *

(b) * * *

(2) The determination of applicability of this subpart to petroleum refining process units that are designed and operated as flexible operation units shall be reported as specified in § 63.655(h)(6)(i).

(c) For the purposes of this subpart, the affected source shall comprise all emissions points, in combination, listed in paragraphs (c)(1) through (c)(8) of this section that are located at a single refinery plant site.

* * * * *

(6) All marine vessel loading operations located at a petroleum refinery meeting the criteria in paragraph (a) of this section and the applicability criteria of subpart Y, § 63.560;

(7) All storage vessels and equipment leaks associated with a bulk gasoline terminal or pipeline breakout station classified under Standard Industrial Classification code 2911 located within a contiguous area and under common control with a refinery meeting the criteria in paragraph (a) of this section; and

(8) All heat exchange systems associated with petroleum refining process units meeting the criteria in paragraph (a) of this section and which are in organic hazardous air pollutants (HAP) service as defined in this subpart.

* * * * *

(e) The owner or operator of a storage vessel constructed on or before August 18, 1994, shall follow the procedures specified in paragraphs (e)(1) and (e)(2) of this section to determine whether a storage vessel is part of a source to which this subpart applies. The owner or operator of a storage vessel constructed after August 18, 1994, shall follow the procedures specified in paragraphs (e)(1), (e)(2)(i), and (e)(2)(ii) of this section to determine whether a storage vessel is part of a source to which this subpart applies.

* * * * *

(2) * * *

(iii) If the predominant use of a storage vessel varies from year to year, then the applicability of this subpart shall be determined based on the utilization of that storage vessel during the year preceding August 18, 1995.

This determination shall be reported as specified in § 63.655(h)(6)(ii).

(f) The owner or operator of a distillation unit constructed on or before August 18, 1994, shall follow the procedures specified in paragraphs (f)(1) through (f)(4) of this section to determine whether a miscellaneous process vent from a distillation unit is part of a source to which this subpart applies. The owner or operator of a distillation unit constructed after August 18, 1994, shall follow the procedures specified in paragraphs (f)(1) through (f)(5) of this section to determine whether a miscellaneous process vent from a distillation unit is part of a source to which this subpart applies.

* * * * *

(5) If the predominant use of a distillation unit varies from year to year, then the applicability of this subpart shall be determined based on the utilization of that distillation unit during the year preceding August 18, 1995. This determination shall be reported as specified in § 63.655(h)(6)(iii).

* * * * *

(h) Except as provided in paragraphs (k), (l), or (m) of this section, sources subject to this subpart are required to achieve compliance on or before the dates specified in paragraphs (h)(1) through (h)(6) of this section.

(1) Except as provided in paragraphs (h)(1)(i) and (iv) of this section, new sources that commence construction or reconstruction after July 14, 1994, shall be in compliance with this subpart upon initial startup or August 18, 1995, whichever is later.

(i) [Reserved]

(ii) Heat exchange systems at new sources that commence construction or reconstruction after August 18, 1995, but before September 4, 2007, shall comply with the existing source requirements for heat exchange systems specified in § 63.654 no later than October 29, 2012.

(iii) [Reserved]

(iv) Heat exchange systems at new sources that commence construction or reconstruction after September 4, 2007, shall be in compliance with the new source requirements in § 63.654 upon initial startup or October 28, 2009, whichever is later.

(2) Except as provided in paragraphs (h)(3) through (h)(6) of this section, existing sources shall be in compliance with this subpart no later than August 18, 1998, except as provided in § 63.6(c)(5) of subpart A of this part, or unless an extension has been granted by the Administrator as provided in § 63.6(i) of subpart A of this part.

* * * * *

(4) Existing Group 1 floating roof storage vessels shall be in compliance with § 63.646 of this subpart at the first degassing and cleaning activity after August 18, 1998, or August 18, 2005, whichever is first.

* * * * *

(6) Heat exchange systems at an existing source shall be in compliance with the existing source standards in § 63.654 no later than October 29, 2012.

* * * * *

(k) * * *

(1) The reconstructed source, addition, or change shall be in compliance with the new source requirements upon initial startup of the reconstructed source or by August 18, 1995, whichever is later; and

(2) * * *

(i) The application for approval of construction or reconstruction shall be submitted as soon as practical before the construction or reconstruction is planned to commence (but it need not be sooner than November 16, 1995);

(ii) The Notification of Compliance Status report as required by § 63.655(f) for a new source, addition, or change;

(iii) Periodic Reports and other reports as required by § 63.655(g) and (h);

* * * * *

(vi) Reports and notifications required by § 63.428(b), (c), (g)(1), (h)(1) through (h)(3), and (k) of subpart R. * * *

* * * * *

(l) If an additional petroleum refining process unit is added to a plant site or if a miscellaneous process vent, storage vessel, gasoline loading rack, marine tank vessel loading operation, or heat exchange system that meets the criteria in paragraphs (c)(1) through (8) of this section is added to an existing petroleum refinery or if another deliberate operational process change creating an additional Group 1 emissions point(s) (as defined in § 63.641) is made to an existing petroleum refining process unit, and if the addition or process change is not subject to the new source requirements as determined according to paragraphs (i) or (j) of this section, the requirements in paragraphs (l)(1) through (3) of this section shall apply. Examples of process changes include, but are not limited to, changes in production capacity, or feed or raw material where the change requires construction or physical alteration of the existing equipment or catalyst type, or whenever there is replacement, removal, or addition of recovery equipment. For purposes of this paragraph and paragraph (m) of this section, process changes do not include: Process upsets, unintentional temporary process changes, and changes that are within the equipment configuration and operating conditions documented in the Notification of Compliance Status report required by § 63.655(f).

* * * * *

(2) * * *

(i) If a petroleum refining process unit is added to a plant site or an emission point(s) is added to any existing petroleum refining process unit, the added emission point(s) shall be in compliance upon initial startup of any added petroleum refining process unit or emission point(s) or by August 18, 1998, whichever is later.

(ii) If a deliberate operational process change to an existing petroleum refining process unit causes a Group 2 emission point to become a Group 1 emission point (as defined in § 63.641), the owner or operator shall be in compliance upon initial startup or by August 18, 1998, whichever is later, unless the owner or operator demonstrates to the Administrator that achieving compliance will take longer than making the change.* * *

(3) The owner or operator of a petroleum refining process unit or of a storage vessel, miscellaneous process vent, wastewater stream, gasoline loading rack, marine tank vessel loading operation, or heat exchange system meeting the criteria in paragraphs (c)(1) through (8) of this section that is added to a plant site and is subject to the requirements for existing sources shall comply with the reporting and recordkeeping requirements that are applicable to existing sources including, but not limited to, the reports listed in paragraphs (l)(3)(i) through (vii) of this section.* * *

(i) The Notification of Compliance Status report as required by § 63.655(f) for the emission points that were added or changed;

(ii) Periodic Reports and other reports as required by § 63.655(g) and (h);

* * * * *

(vi) Reports and notifications required by § 63.428(b), (c), (g)(1), (h)(1) through (h)(3), and (k) of subpart R. * * *

(vii) Reports and notifications required by §§ 63.565 and 63.567 of subpart Y. * * *

* * * * *

(p) Overlap of subpart CC with other regulations for equipment leaks.

(1) After the compliance dates specified in paragraph (h) of this section, equipment leaks that are also subject to the provisions of 40 CFR parts 60 and 61 standards promulgated before

September 4, 2007, are required to comply only with the provisions specified in this subpart.

(2) Equipment leaks that are also subject to the provisions of 40 CFR part 60, subpart GGGa, are required to comply only with the provisions specified in 40 CFR part 60, subpart GGGa.

* * * * *

■ 6. Section 63.641 is amended by:

■ a. Adding, in alphabetical order, definitions for "Cooling tower," "Cooling tower return line," "Heat exchange system," and "Heat exchanger exit line"; and

■ b. Revising the definition of "Continuous record" to read as follows:

§ 63.641 Definitions.

* * * * *

Continuous record means documentation, either in hard copy or computer readable form, of data values measured at least once every hour and recorded at the frequency specified in § 63.655(i).

* * * * *

Cooling tower means a heat removal device used to remove the heat absorbed in circulating cooling water systems by transferring the heat to the atmosphere using natural or mechanical draft.

Cooling tower return line means the main water trunk lines at the inlet to the cooling tower before exposure to the atmosphere.

* * * * *

Heat exchange system means a device or series of devices used to transfer heat from process fluids to water without intentional direct contact of the process fluid with the water (*i.e.*, non-contact heat exchanger) and to transport and/or cool the water in a closed-loop recirculation system (cooling tower system) or a once-through system (*e.g.*, river or pond water). For closed-loop recirculation systems, the *heat exchange system* consists of a cooling tower, all heat exchangers that are serviced by that cooling tower, and all water lines to and from the heat exchanger(s). For once-through systems, the *heat exchange system* consists of one or more heat exchangers servicing an individual process unit and all water lines to and from the heat exchanger(s). Intentional direct contact with process fluids results in the formation of a wastewater.

Heat exchanger exit line means the cooling water line from the exit of one or more heat exchangers (where cooling water leaves the heat exchangers) to either the entrance of the cooling tower return line or prior to exposure to the atmosphere, in, as an example, a once-through cooling system, whichever occurs first.

* * * * *

■ 7. Section 63.642 is amended by revising paragraphs (k)(1) and (l)(2) to read as follows:

§ 63.642 General standards.

* * * * *

(k) * * *

(1) The owner or operator using this compliance approach shall also comply with the requirements of § 63.655 as applicable.

* * * * *

(l) * * *

(2) Comply with the requirements of §§ 63.652, 63.653, and 63.655, as applicable.

* * * * *

■ 8. Section 63.644 is amended by:

■ a. Revising paragraph (b) introductory text;

■ b. Revising paragraph (c)(1);

■ c. Revising paragraph (d); and

■ d. Revising paragraph (e) to read as follows:

§ 63.644 Monitoring provisions for miscellaneous process vents.

* * * * *

(b) An owner or operator of a Group 1 miscellaneous process vent may request approval to monitor parameters other than those listed in paragraph (a) of this section. The request shall be submitted according to the procedures specified in § 63.655(h). Approval shall be requested if the owner or operator:

* * * * *

(c) * * *

(1) Install, calibrate, maintain, and operate a flow indicator that determines whether a vent stream flow is present at least once every hour. Records shall be generated as specified in § 63.655(h) and (i). The flow indicator shall be installed at the entrance to any bypass line that could divert the vent stream away from the control device to the atmosphere; or

* * * * *

(d) The owner or operator shall establish a range that ensures compliance with the emissions standard for each parameter monitored under paragraphs (a) and (b) of this section. In order to establish the range, the information required in § 63.655(f)(3) shall be submitted in the Notification of Compliance Status report.

(e) Each owner or operator of a control device subject to the monitoring provisions of this section shall operate the control device in a manner consistent with the minimum and/or maximum operating parameter value or procedure required to be monitored under paragraphs (a) and (b) of this section. Operation of the control device in a manner that constitutes a period of excess emissions, as defined in § 63.655(g)(6), or failure to perform procedures required by this section shall constitute a violation of the applicable emission standard of this subpart.

■ 9. Section 63.645 is amended by revising paragraph (h)(2) to read as follows:

§ 63.645 Test methods and procedures for miscellaneous process vents.

* * * * *

(h) * * *

(2) Where the recalculated TOC emission rate is greater than 33 kilograms per day for an existing source or greater than 6.8 kilograms per day for a new source, the owner or operator shall submit a report as specified in § 63.655(f), (g), or (h) and shall comply with the appropriate provisions in § 63.643 by the dates specified in § 63.640.

* * * * *

■ 10. Section 63.646 is amended by revising paragraph (b)(1) to read as follows:

§ 63.646 Storage vessel provisions.

* * * * *

(b) * * *

(1) An owner or operator may use good engineering judgment or test results to determine the stored liquid weight percent total organic HAP for purposes of group determination. Data, assumptions, and procedures used in the determination shall be documented.

* * * * *

■ 11. Section 63.650 is amended by revising paragraph (a) to read as follows.

§ 63.650 Gasoline loading rack provisions.

(a) Except as provided in paragraphs (b) through (c) of this section, each owner or operator of a Group 1 gasoline loading rack classified under Standard Industrial Classification code 2911 located within a contiguous area and under common control with a petroleum refinery shall comply with subpart R, §§ 63.421, 63.422(a) through (c) and (e), 63.425(a) through (c) and (i), 63.425(e) through (h), 63.427(a) and (b), and 63.428(b), (c), (g)(1), (h)(1) through (3), and (k).

* * * * *

■ 12. Section 63.651 is amended by revising paragraphs (a) and (c) to read as follows:

§ 63.651 Marine tank vessel loading operation provisions.

(a) Except as provided in paragraphs (b) through (d) of this section, each

owner or operator of a marine tank vessel loading operation located at a petroleum refinery shall comply with the requirements of §§ 63.560 through 63.568.

* * * * *

(c) The notification reports under § 63.567(b) are not required.

* * * * *

■ 13. Section 63.652 is amended by:
■ a. Revising paragraph (a);
■ b. Revising paragraph (e)(5);
■ c. Revising the first sentence of paragraph (f)(3) introductory text;
■ d. Revising the first sentence in paragraph (g)(5)(ii)(B)(*1*); and
■ e. Revising paragraph (l)(1) to read as follows:

§ 63.652 Emissions averaging provisions.

(a) This section applies to owners or operators of existing sources who seek to comply with the emission standard in § 63.642(g) by using emissions averaging according to § 63.642(l) rather than following the provisions of §§ 63.643 through 63.647, and §§ 63.650 and 63.651. Existing marine tank vessel loading operations located at the Valdez Marine Terminal source may not comply with the standard by using emissions averaging.

* * * * *

(e) * * *

(5) Record and report quarterly and annual credits and debits in the Periodic Reports as specified in § 63.655(g)(8). Every fourth Periodic Report shall include a certification of compliance with the emissions averaging provisions as required by § 63.655(g)(8)(iii).

(f) * * *

(3) For emission points for which continuous monitors are used, periods of excess emissions as defined in § 63.655(g)(6)(i). * * *

* * * * *

(g) * * *

(5) * * *

(ii) * * *

(B) * * *

(*1*) The percent reduction for a control device shall be measured according to the procedures and test methods specified in § 63.565(d) of subpart Y. * * *

* * * * *

(l) * * *

(1) The owner or operator shall notify the Administrator of excess emissions in the Periodic Reports as required in § 63.655(g)(6).

* * * * *

■ 14. Section 63.653 is amended by:
■ a. Revising paragraph (a)(7);
■ b. Revising paragraph (b);
■ c. Revising paragraph (c); and
■ d. Revising paragraphs (d) introductory text, (d)(2)(vii) introductory text, and (d)(2)(viii)(G) to read as follows:

§ 63.653 Monitoring, recordkeeping, and implementation plan for emissions averaging.

* * * * *

(a) * * *

(7) If an emission point in an emissions average is controlled using a pollution prevention measure or a device or technique for which no monitoring parameters or inspection procedures are specified in §§ 63.643 through 63.647 and §§ 63.650 and 63.651, the owner or operator shall establish a site-specific monitoring parameter and shall submit the information specified in § 63.655(h)(4) in the Implementation Plan.

(b) Records of all information required to calculate emission debits and credits and records required by § 63.655 shall be retained for 5 years.

(c) Notifications of Compliance Status report, Periodic Reports, and other reports shall be submitted as required by § 63.655.

(d) Each owner or operator of an existing source who elects to comply with § 63.655(g) and (h) by using emissions averaging for any emission points shall submit an Implementation Plan.

* * * * *

(2) * * *

(vii) The information specified in § 63.655(h)(4) for:

* * * * *

(viii) * * *

(G) For each pollution prevention measure, treatment process, or control device used to reduce air emissions of organic HAP from wastewater and for which no monitoring parameters or inspection procedures are specified in § 63.647, the information specified in § 63.655(h)(4) shall be included in the Implementation Plan.

* * * * *

§§ 63.654 and 63.655 [Redesignated as §§ 63.655 and 63.656]

■ 15. Sections 63.654 and 63.655 are redesignated as §§ 63.655 and 63.656.

■ 16. Section 63.654 is added to read as follows:

§ 63.654 Heat exchange systems.

(a) Except as specified in paragraph (b) of this section, the owner or operator of a heat exchange system that meets the criteria in § 63.640(c)(8) must comply with the requirements of paragraphs (c) through (g) of this section.

(b) A heat exchange system is exempt from the requirements in paragraphs (c) through (g) of this section if it meets any one of the criteria in paragraphs (b)(1) through (2) of this section.

(1) All heat exchangers that are in organic HAP service within the heat exchange system that either:

(i) Operate with the minimum pressure on the cooling water side at least 35 kilopascals greater than the maximum pressure on the process side; or

(ii) Employ an intervening cooling fluid, containing less than 5 percent by weight of total HAP listed in Table 1 to this subpart, between the process and the cooling water. This intervening fluid must serve to isolate the cooling water from the process fluid and must not be sent through a cooling tower or discharged. For purposes of this section, discharge does not include emptying for maintenance purposes.

(2) The heat exchange system cools process fluids that contain less than 5 percent by weight of total HAP listed in Table 1 to this subpart (*i.e.*, the heat exchange system does not contain any heat exchangers that are in organic HAP service as defined in this subpart).

(c) The owner or operator must perform monthly monitoring to identify leaks of total strippable volatile organic compound (VOC) from each heat exchange system subject to the requirements of this subpart according to the procedures in paragraphs (c)(1) and (2) of this section.

(1) Collect and analyze a sample from each cooling tower return line prior to exposure to air for each heat exchange system in organic HAP service or from each heat exchanger exit line for each heat exchanger or group of heat exchangers in organic HAP service within that heat exchange system to determine the total strippable VOC concentration (as methane) from the air stripping testing system using "Air Stripping Method (Modified El Paso Method) for Determination of Volatile Organic Compound Emissions from Water Sources" Revision Number One, dated January 2003, Sampling Procedures Manual, Appendix P: Cooling Tower Monitoring, prepared by Texas Commission on Environmental Quality, January 31, 2003 (incorporated by reference—see § 63.14). The owner or operator of a once-through heat exchange system may elect to also monitor monthly (in addition to monitoring each heat exchanger exit line) the fresh water feed line prior to any heat exchanger to determine the total strippable VOC concentration (as methane) prior to the heat exchange system using the Modified El Paso Method.

(2) For a heat exchange system at an existing source, a leak is a total strippable VOC concentration (as methane) in the stripping gas of 6.2 ppmv or greater. For a heat exchange system at a new source, a leak is a total strippable VOC concentration (as methane) in the stripping gas of 3.1 ppmv or greater.

(d) If a leak is detected, the owner or operator must repair the leak to reduce the measured concentration to below the applicable action level as soon as practicable, but no later than 45 days after identifying the leak, except as specified in paragraphs (e) and (f) of this section. Actions that can be taken to achieve repair include but are not limited to:

(1) Physical modifications to the leaking heat exchanger, such as welding the leak or replacing a tube;

(2) Blocking the leaking tube within the heat exchanger;

(3) Changing the pressure so that water flows into the process fluid;

(4) Replacing the heat exchanger or heat exchanger bundle; or

(5) Isolating, bypassing, or otherwise removing the leaking heat exchanger from service until it is otherwise repaired.

(e) If the owner or operator detects a leak when monitoring a cooling tower return line under paragraph (c)(1) of this section, the owner or operator may conduct additional monitoring to identify leaks of total strippable VOC emissions using Modified El Paso Method from each heat exchanger or group of heat exchangers in organic HAP service associated with the heat exchange system for which the leak was detected. If the additional monitoring shows that the total strippable VOC concentration in the stripped air at the heat exchanger exit line for each heat exchanger in organic HAP service is less than 6.2 ppmv for existing sources or less than 3.1 ppmv for new sources, the heat exchange system is excluded from repair requirements in paragraph (d) of this section.

(f) The owner or operator may delay the repair of a leaking heat exchanger when one of the conditions in paragraphs (f)(1) through (3) of this section is met. The owner or operator must determine if a delay of repair is necessary as soon as practicable, but no later than 45 days after first identifying the leak.

(1) If the repair is technically infeasible without a shutdown and the total strippable VOC concentration (as methane) is initially and remains less than 62 ppmv for all monthly monitoring periods during the delay of repair, the owner or operator may delay repair until the next scheduled shutdown of the heat exchange system. If, during subsequent monthly monitoring, the total strippable VOC concentration (as methane) is 62 ppmv or greater, the owner or operator must repair the leak within 30 days of the monitoring event in which the leak was equal to or exceeded 62 ppmv total strippable VOC (as methane), except as provided in paragraph (f)(3) of this section.

(2) If the necessary equipment, parts, or personnel are not available and the total strippable VOC concentration (as methane) is initially and remains less than 62 ppmv for all monthly monitoring periods during the delay of repair, the owner or operator may delay the repair for a maximum of 120 calendar days. The owner or operator must demonstrate that the necessary equipment, parts, or personnel were not available. If, during subsequent monthly monitoring, the total strippable VOC concentration (as methane) is 62 ppmv or greater, the owner or operator must repair the leak within 30 days of the monitoring event in which the leak was equal to or exceeded 62 ppmv total strippable VOC (as methane).

(g) To delay the repair under paragraph (f) of this section, the owner or operator must record the information in paragraphs (g)(1) through (g)(4) of this section.

(1) The reason(s) for delaying repair.

(2) A schedule for completing the repair as soon as practical.

(3) The date and concentration of the leak as first identified and the results of all subsequent monthly monitoring events during the delay of repair.

(4) An estimate of the potential emissions from the leaking heat exchange system or heat exchanger following the procedures in paragraphs (g)(4)(i) and (g)(4)(ii) of this section.

(i) Determine the total strippable VOC concentration in the cooling water, in parts per million by weight (ppmw), using equation 7–1 from "Air Stripping Method (Modified El Paso Method) for Determination of Volatile Organic Compound Emissions from Water Sources" Revision Number One, dated January 2003, Sampling Procedures Manual, Appendix P: Cooling Tower Monitoring, prepared by Texas Commission on Environmental Quality, January 31, 2003 (incorporated by reference—see § 63.14), based on the total strippable concentration in the stripped air, ppmv, from monitoring.

(ii) Calculate the VOC emissions for the leaking heat exchange system or heat exchanger by multiplying the VOC concentration in the cooling water, ppmw, by the flow rate of the cooling water from the leaking tower or heat exchanger and by the expected duration of the delay.

■ 17. Newly redesignated § 63.655 is amended by:

■ a. Revising the first sentence of paragraph (b);

■ b. Revising the first sentence of paragraph (c);

■ c. Revising paragraph (f)(1) introductory text;

■ d. Adding paragraph (f)(1)(vi);

■ e. Revising paragraphs (g) introductory text and (g)(8)(ii)(C);

■ g. Adding paragraph (g)(9);

■ h. Redesignating existing paragraph (i)(4) as (i)(5); and

■ i. Adding paragraph (i)(4) to read as follows.

§ 63.655 Reporting and recordkeeping requirements.

* * * * *

(b) Each owner or operator subject to the gasoline loading rack provisions in § 63.650 shall comply with the recordkeeping and reporting provisions in § 63.428 (b) and (c), (g)(1), (h)(1) through (h)(3), and (k) of subpart R.* * *

(c) Each owner or operator subject to the marine tank vessel loading operation standards in § 63.651 shall comply with the recordkeeping and reporting provisions in § 63.567(a) and § 63.567(c) through (k) of subpart Y.* * *

* * * * *

(f) * * *

(1) The Notification of Compliance Status report shall include the information specified in paragraphs (f)(1)(i) through (f)(1)(vi) of this section.

* * * * *

(vi) For each heat exchange system, identification of the heat exchange systems that are subject to the requirements of this subpart.

* * * * *

(g) The owner or operator of a source subject to this subpart shall submit Periodic Reports no later than 60 days after the end of each 6-month period when any of the compliance exceptions specified in paragraphs (g)(1) through (6) of this section or paragraph (g)(9) of this section occur. The first 6-month period shall begin on the date the Notification of Compliance Status report is required to be submitted. A Periodic Report is not required if none of the compliance exceptions identified in paragraph (g)(1) through (6) of this section or paragraph (g)(9) of this section occurred during the 6-month period unless emissions averaging is utilized. Quarterly reports must be submitted for emission points included in emission averages, as provided in

paragraph (g)(8) of this section. An owner or operator may submit reports required by other regulations in place of or as part of the Periodic Report required by this paragraph if the reports contain the information required by paragraphs (g)(1) through (9) of this section.

* * * * *

(8) * * *

(ii) * * *

(C) The information required to be reported by § 63.567(e)(4) and (j)(3) of subpart Y for each marine tank vessel loading operation included in an emissions average, unless the information has already been submitted in a separate report;

* * * * *

(9) For heat exchange systems, Periodic Reports must include the following information:

(i) The number of heat exchange systems in HAP service.

(ii) The number of heat exchange systems in HAP service found to be leaking.

(iii) A summary of the monitoring data that indicate a leak, including the number of leaks determined to be equal to or greater than the leak definitions specified in § 63.654(c)(2);

(iv) If applicable, the date a leak was identified, the date the source of the leak was identified, and the date of repair;

(v) If applicable, a summary of each delayed repair, including the original date and reason for the delay and the date of repair, if repaired during the reporting period; and

(vi) If applicable, an estimate of VOC emissions for each delayed repair over the reporting period.

* * * * *

(i) * * *

(4) The owner or operator of a heat exchange system subject to the monitoring requirements in § 63.654 shall comply with the recordkeeping requirements in paragraphs (i)(4)(i) through (vi) of this section.

(i) Identification of all heat exchangers at the facility and the average annual HAP concentration of process fluid or intervening cooling fluid estimated when developing the Notification of Compliance Status report.

(ii) Identification of all heat exchange systems that are in organic HAP service. For each heat exchange system that is subject to this subpart, this must include identification of all heat exchangers within each heat exchange system, identification of the individual heat exchangers in organic HAP service within each heat exchange system, and, for closed-loop recirculation systems, the cooling tower included in each heat exchange system.

(iii) Results of the following monitoring data for each monthly monitoring event:

(A) Date/time of event.

(B) Barometric pressure.

(C) El Paso air stripping apparatus water flow (ml/min) and air flow, ml/min, and air temperature, °C.

(D) FID reading (ppmv).

(E) Heat exchange exit line flow or cooling tower return line flow at the El Paso monitoring location, gal/min.

(F) Calibration information identified in Section 5.4.2 of the Modified El Paso Method, incorporated by reference in § 63.14(n).

(iv) The date when a leak was identified and the date when the heat exchanger was repaired or taken out of service.

(vi) If a repair is delayed, the reason for the delay, the schedule for completing the repair, and the estimate of potential emissions for the delay of repair.

* * * * *

■ 18. Newly redesignated § 63.656 is amended by revising the first sentence of paragraph (c)(1) to read as follows:

§ 63.656 Implementation and enforcement.

* * * * *

(c) * * *

(1) Approval of alternatives to the requirements in §§ 63.640, 63.642(g) through (l), 63.643, 63.646 through 63.652, and 63.654. * * *

* * * * *

■ 19. Tables 1, 4, 5, 6, and 7 of the appendix to subpart CC are revised and footnotes d, f, and g to table 10 are revised to read as follows:

Appendix to Subpart CC of Part 63—Tables

TABLE 1—HAZARDOUS AIR POLLUTANTS

Chemical name	CAS No.[a]
Benzene	71432
Biphenyl	92524
Butadiene (1,3)	106990
Carbon disulfide	75150
Carbonyl sulfide	463581
Cresol (mixed isomers[b])	1319773
Cresol (m-)	108394
Cresol (o-)	95487
Cresol (p-)	106445
Cumene	98828
Dibromoethane (1,2) (ethylene dibromide)	106934
Dichloroethane (1,2)	107062
Diethanolamine	111422
Ethylbenzene	100414
Ethylene glycol	107211
Hexane	110543
Methanol	67561
Methyl isobutyl ketone (hexone)	108101
Methyl tert butyl ether	1634044
Naphthalene	91203
Phenol	108952
Toluene	108883
Trimethylpentane (2,2,4)	540841
Xylene (mixed isomers[b])	1330207
xylene (m-)	108383
xylene (o-)	95476
xylene (p-)	106423

[a] CAS number = Chemical Abstract Service registry number assigned to specific compounds, isomers, or mixtures of compounds.

[b] Isomer means all structural arrangements for the same number of atoms of each element and does not mean salts, esters, or derivatives.

* * * * *

TABLE 4—GASOLINE DISTRIBUTION EMISSION POINT RECORDKEEPING AND REPORTING REQUIREMENTS[a]

Reference (section of subpart Y)	Description	Comment
63.428(b) or (k)	Records of test results for each gasoline cargo tank loaded at the facility.	
63.428(c)	Continuous monitoring data recordkeeping requirements.	
63.428(g)(1)	Semiannual report loading rack information	Required to be submitted with the Periodic Report required under 40 CFR part 63, subpart CC.
63.428(h)(1) through (h)(3)	Excess emissions report loading rack information	Required to be submitted with the Periodic Report required under 40 CFR part 63, subpart CC.

[a] This table does not include all the requirements delineated under the referenced sections. See referenced sections for specific requirements.

TABLE 5—MARINE VESSEL LOADING OPERATIONS RECORDKEEPING AND REPORTING REQUIREMENTS [a]

Reference (section of subpart Y)	Description	Comment
63.562(e)(2)	Operation and maintenance plan for control equipment and monitoring equipment.	
63.565(a)	Performance test/site test plan	The information required under this paragraph is to be submitted with the Notification of Compliance Status report required under 40 CFR part 63, subpart CC.
63.565(b)	Performance test data requirements.	
63.567(a)	General Provisions (subpart A) applicability.	
63.567(c)	Request for extension of compliance.	
63.567(d)	Flare recordkeeping requirements.	
63.567(e)	Summary report and excess emissions and monitoring system performance report requirements.	The information required under this paragraph is to be submitted with the Periodic Report required under 40 CFR part 63, subpart CC.
63.567(f)	Vapor collection system engineering report.	
63.567(g)	Vent system valve bypass recordkeeping requirements.	
63.567(h)	Marine vessel vapor-tightness documentation.	
63.567(i)	Documentation file maintenance.	
63.567(j)	Emission estimation reporting and recordkeeping procedures.	

[a] This table does not include all the requirements delineated under the referenced sections. See referenced sections for specific requirements.

TABLE 6—GENERAL PROVISIONS APPLICABILITY TO SUBPART CC [a]

Reference	Applies to subpart CC	Comment
63.1(a)(1)	Yes.	
63.1(a)(2)	Yes.	
63.1(a)(3)	Yes.	
63.1(a)(4)	Yes.	
63.1(a)(5)	No	Reserved.
63.1(a)(6)	Yes	Except the correct mail drop (MD) number is C404–04.
63.1(a)(7)–63.1(a)(9)	No	Reserved.
63.1(a)(10)	Yes.	
63.1(a)(11)	Yes.	
63.1(a)(12)	Yes.	
63.1(b)(1)	Yes.	
63.1(b)(2)	No	Reserved.
63.1(b)(3)	No.	
63.1(c)(1)	Yes.	
63.1(c)(2)	No	Area sources are not subject to subpart CC.
63.1(c)(3)–63.1(c)(4)	No	Reserved.
63.1(c)(5)	Yes	Except that sources are not required to submit notifications overridden by this table.
63.1(d)	No	Reserved.
63.1(e)	No	No CAA section 112(j) standard applies to the affected sources under subpart CC.
63.2	Yes	§63.641 of subpart CC specifies that if the same term is defined in subparts A and CC, it shall have the meaning given in subpart CC.
63.3	Yes.	
63.4(a)(1)–63.4(a)(2)	Yes.	
63.4(a)(3)–63.4(a)(5)	No	Reserved.
63.4(b)	Yes.	
63.4(c)	Yes.	
63.5(a)	Yes.	
63.5(b)(1)	Yes.	
63.5(b)(2)	No	Reserved.
63.5(b)(3)	Yes.	
63.5(b)(4)	Yes	Except the cross-reference to §63.9(b) is changed to §63.9(b)(4) and (5). Subpart CC overrides §63.9 (b)(2).
63.5(b)(5)	No	Reserved.
63.5(b)(6)	Yes.	
63.5(c)	No	Reserved.
63.5(d)(1)(i)	Yes	Except that the application shall be submitted as soon as practicable before startup, but no later than 90 days after the promulgation date of subpart CC if the construction or reconstruction had commenced and initial startup had not occurred before the promulgation of subpart CC.
63.5(d)(1)(ii)	Yes	Except that for affected sources subject to subpart CC, emission estimates specified in §63.5(d)(1)(ii)(H) are not required.
63.5(d)(1)(iii)	No	Subpart CC §63.655(f) specifies Notification of Compliance Status report requirements.
63.5(d)(2)	Yes.	
63.5(d)(3)	Yes.	

TABLE 6—GENERAL PROVISIONS APPLICABILITY TO SUBPART CC [a]—Continued

Reference	Applies to subpart CC	Comment
63.5(d)(4)	Yes.	
63.5(e)	Yes.	
63.5(f)	Yes.	
63.6(a)	Yes.	
63.6(b)(1)–63.6(b)(5)	No	Subpart CC specifies compliance dates and notifications for sources subject to subpart CC.
63.6(b)(6)	No	Reserved.
63.6(b)(7)	Yes.	
63.6(c)(1)–63.6(c)(2)	No	§ 63.640 of subpart CC specifies the compliance date.
63.6(c)(3)–63.6(c)(4)	No	Reserved.
63.6(c)(5)	Yes	
63.6(d)	No	Reserved.
63.6(e)(1)	Yes	Except the startup, shutdown, or malfunction plan does not apply to Group 2 emission points that are not part of an emissions averaging group.[b]
63.6(e)(2)	No	Reserved.
63.6(e)(3)(i)	Yes	Except the startup, shutdown, or malfunction plan does not apply to Group 2 emission points that are not part of an emissions averaging group.[b]
63.6(e)(3)(ii)	No	Reserved.
63.6(e)(3)(iii)–63.6(e)(3)(ix)	Yes	Except the reports specified in § 63.6(e)(3)(iv) do not need to be reported within 2 and 7 days of commencing and completing the action, respectively, but must be included in the next periodic report.
63.6 (f)(1)	Yes	Except for the heat exchange system standards, which apply at all times.
63.6(f)(2) and (3)	Yes	Except the phrase "as specified in § 63.7(c)" in § 63.6(f)(2)(iii)(D) does not apply because subpart CC does not require a site-specific test plan.
63.6(g)	Yes.	
63.6(h)(1) and 63.6(h)(2)	Yes	Except § 63.6(h)(2)(ii), which is reserved.
63.6(h)(3)	No	Reserved.
63.6(h)(4)	No	Notification of visible emission test not required in subpart CC.
63.6(h)(5)	No	Visible emission requirements and timing is specified in § 63.645(i) of subpart CC.
63.6(h)(6)	Yes.	
63.6(h)(7)	No	Subpart CC does not require opacity standards.
63.6(h)(8)	Yes.	
63.6(h)(9)	No	Subpart CC does not require opacity standards.
63.6(i)	Yes	Except for § 63.6(i)(15), which is reserved.
63.6(j)	Yes.	
63.7(a)(1)	Yes.	
63.7(a)(2)	Yes	Except test results must be submitted in the Notification of Compliance Status report due 150 days after compliance date, as specified in § 63.655(f) of subpart CC.
63.7(a)(3)	Yes.	
63.7(a)(4)	Yes.	
63.7(b)	No	Subpart CC requires notification of performance test at least 30 days (rather than 60 days) prior to the performance test.
63.7(c)	No	Subpart CC does not require a site-specific test plan.
63.7(d)	Yes.	
63.7(e)(1)	Yes	Except the performance test must be conducted at the maximum representative capacity as specified in § 63.642(d)(3) of subpart CC.
63.7(e)(2)–63.7(e)(4)	Yes.	
63.7(f)	No	Subpart CC specifies applicable methods and provides alternatives without additional notification or approval.
63.7(g)	No	Performance test reporting specified in § 63.655(f).
63.7(h)(1)	Yes.	
63.7(h)(2)	Yes.	
63.7(h)(3)	Yes	Yes, except site-specific test plans shall not be required, and where § 63.7(g)(3) specifies submittal by the date the site-specific test plan is due, the date shall be 90 days prior to the Notification of Compliance Status report in § 63.655(f).
63.7(h)(4)(i)	Yes.	
63.7(h)(4)(ii)	No	Site-specific test plans are not required in subpart CC.
63.7(h)(4)(iii) and (iv)	Yes.	
63.7(h)(5)	Yes.	
63.8(a)	Yes	Except § 63.8(a)(3), which is reserved.
63.8(b)	Yes.	
63.8(c)(1)	Yes.	
63.8(c)(2)	Yes.	
63.8(c)(3)	Yes	Except that verification of operational status shall, at a minimum, include completion of the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system or other written procedures that provide adequate assurance that the equipment would monitor accurately.
63.8(c)(4)	Yes	Except Subpart CC specifies the monitoring cycle frequency specified in § 63.8(c)(4)(ii) is "once every hour rather" than "for each successive 15-minute period."
63.8(c)(5)–63.8(c)(8)	No.	

TABLE 6—GENERAL PROVISIONS APPLICABILITY TO SUBPART CC[a]—Continued

Reference	Applies to subpart CC	Comment
63.8(d)	No.	
63.8(e)	No	Subpart CC does not require performance evaluations; however, this shall not abrogate the Administrator's authority to require performance evaluation under section 114 of the Clean Air Act.
63.8(f)(1)	Yes.	
63.8(f)(2)	Yes.	
63.8(f)(3)	Yes.	
63.8(f)(4)(i)	No	Timeframe for submitting request is specified in § 63.655(h)(5)(i) of subpart CC.
63.8(f)(4)(ii)	Yes.	
63.8(f)(4)(iii)	No	Timeframe for submitting request is specified in § 63.655(h)(5)(i) of subpart CC.
63.8(f)(5)	Yes.	
63.8(f)(6)	No	Subpart CC does not require continuous emission monitors.
63.8(g)	No	Subpart CC specifies data reduction procedures in § 63.655(i)(3).
63.9(a)	Yes	Except that the owner or operator does not need to send a copy of each notification submitted to the Regional Office of the EPA as stated in § 63.9(a)(4)(ii).
63.9(b)(1)	Yes	Except the notification of compliance status report specified in § 63.655(f) of subpart CC may also serve as the initial compliance notification required in § 63.9(b)(1)(iii).
63.9(b)(2)	No	A separate Initial Notification report is not required under subpart CC.
63.9(b)(3)	No	Reserved.
63.9(b)(4)	Yes	Except for subparagraphs § 63.9(b)(4)(ii) through (iv), which are reserved.
63.9(b)(5)	Yes.	
63.9(c)	Yes.	
63.9(d)	Yes.	
63.9(e)	No	Subpart CC requires notification of performance test at least 30 days (rather than 60 days) prior to the performance test and does not require a site-specific test plan.
63.9(f)	No	Subpart CC does not require advanced notification of visible emissions test.
63.9(g)	No.	
63.9(h)	No	Subpart CC § 63.655(f) specifies Notification of Compliance Status report requirements.
63.9(i)	Yes.	
63.9(j)	No.	
63.10(a)	Yes.	
63.10(b)(1)	No	§ 63.644(d) of subpart CC specifies record retention requirements.
63.10(b)(2)(i)	Yes.	
63.10(b)(2)(ii)	Yes.	
63.10(b)(2)(iii)	No.	
63.10(b)(2)(iv)	Yes.	
63.10(b)(2)(v)	Yes.	
63.10(b)(2)(vi)	Yes.	
63.10(b)(2)(vii)	No.	
63.10(b)(2)(viii)	Yes.	
63.10(b)(2)(ix)	Yes.	
63.10(b)(2)(x)	Yes.	
63.10(b)(2)(xi)	No.	
63.10(b)(2)(xii)	Yes.	
63.10(b)(2)(xiii)	No.	
63.10(b)(2)(xiv)	Yes.	
63.10(b)(3)	No.	
63.10(c)(1)–63.10(c)(6)	No.	
63.10(c)(7) and 63.10(c)(8)	Yes.	
63.10(c)(9)–63.10(c)(15)	No.	
63.10(d)(1)	Yes.	
63.10(d)(2)	No	§ 63.655(f) of subpart CC specifies performance test reporting.
63.10(d)(3)	No	Results of visible emissions test are included in Compliance Status Report as specified in § 63.655(f).
63.10(d)(4)	Yes.	
63.10(d)(5)(i)	Yes[b]	Except that reports required by § 63.10(d)(5)(i) may be submitted at the same time as periodic reports specified in § 63.655(g) of subpart CC.
63.10(d)(5)(ii)	Yes	Except that actions taken during a startup, shutdown, or malfunction that are not consistent with the startup, shutdown, and malfunction plan and that cause the source to exceed any applicable emission limitation do not need to be reported within 2 and 7 days of commencing and completing the action, respectively, but must be included in the next periodic report.
63.10(e)	No.	
63.10(f)	Yes.	
63.11–63.16	Yes.	

[a] Wherever subpart A specifies "postmark" dates, submittals may be sent by methods other than the U.S. Mail (*e.g.*, by fax or courier). Submittals shall be sent by the specified dates, but a postmark is not required.

[b] The plan, and any records or reports of startup, shutdown, and malfunction do not apply to Group 2 emission points that are not part of an emissions averaging group.

TABLE 7—FRACTION MEASURED (F_M), FRACTION EMITTED (F_E), AND FRACTION REMOVED (FR) FOR HAP COMPOUNDS IN WASTEWATER STREAMS

Chemical name	CAS No.[a]	F_m	F_e	Fr
Benzene	71432	1.00	0.80	0.99
Biphenyl	92524	0.86	0.45	0.99
Butadiene (1,3)	106990	1.00	0.98	0.99
Carbon disulfide	75150	1.00	0.92	0.99
Cumene	98828	1.00	0.88	0.99
Dichloroethane (1,2-) (Ethylene dichloride)	107062	1.00	0.64	0.99
Ethylbenzene	100414	1.00	0.83	0.99
Hexane	110543	1.00	1.00	0.99
Methanol	67561	0.85	0.17	0.31
Methyl isobutyl ketone (hexone)	108101	0.98	0.53	0.99
Methyl tert butyl ether	1634044	1.00	0.57	0.99
Naphthalene	91203	0.99	0.51	0.99
Trimethylpentane (2,2,4)	540841	1.00	1.00	0.99
xylene (m-)	108383	1.00	0.82	0.99
xylene (o-)	95476	1.00	0.79	0.99
xylene (p-)	106423	1.00	0.82	0.99

[a] CAS numbers refer to the Chemical Abstracts Service registry number assigned to specific compounds, isomers, or mixtures of compounds.

* * * * *

Table 10—Miscellaneous Process Vents—Monitoring, Recordkeeping, and Reporting Requirements for Complying With 98 Weight-Percent Reduction of Total Organic HAP Emissions or a Limit of 20 Parts per Million by Volume

* * * * *

[d] NCS = Notification of Compliance Status Report described in § 63.655.

* * * * *

[f] When a period of excess emission is caused by insufficient monitoring data, as described in § 63.655(g)(6)(i)(C) or (D), the duration of the period when monitoring data were not collected shall be included in the Periodic Report.

[g] PR = Periodic Reports described in § 63.655(g).

* * * * *

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Part IV

Environmental Protection Agency

40 CFR Part 63
National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources; Final Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[EPA–HQ–OAR–2008–0334; FRL–8972–6]

RIN 2060–AM19

National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: EPA is issuing national emission standards for the control of hazardous air pollutants for nine area source categories in the chemical manufacturing sector: Agricultural Chemicals and Pesticides Manufacturing, Cyclic Crude and Intermediate Production, Industrial Inorganic Chemical Manufacturing, Industrial Organic Chemical Manufacturing, Inorganic Pigments Manufacturing, Miscellaneous Organic Chemical Manufacturing, Plastic Materials and Resins Manufacturing, Pharmaceutical Production, and Synthetic Rubber Manufacturing. The standards and associated requirements for the nine area source categories are combined in one subpart. This final rule establishes emission standards in the form of management practices for each chemical manufacturing process unit as well as emission limits for certain subcategories of process vents and storage tanks. The rule also establishes management practices and other emission reduction requirements for subcategories of wastewater systems and heat exchange systems.

DATES: This final rule is effective on October 29, 2009.

ADDRESSES: EPA has established a docket for this action under Docket ID No. EPA–HQ–OAR–2008–0334. 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, 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 EPA Docket Center, Public Reading Room, EPA West, Room 3334, 1301 Constitution Ave., NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566–1744, and the telephone number for the Air Docket is (202) 566–1742.

FOR FURTHER INFORMATION CONTACT: Mr. Randy McDonald, Coatings and Chemicals Group (E143–01), Sector Policies and Programs Division, Office of Air Quality Planning and Standards, Environmental Protection Agency, Research Triangle Park, North Carolina 27711, telephone number: (919) 541–5402; fax number: (919) 541–0246; e-mail address: *mcdonald.randy@epa.gov.*

SUPPLEMENTARY INFORMATION: *Outline.* The information in this preamble is organized as follows:

I. General Information

A. Does this action apply to me?

The regulated categories and entities potentially affected by this action are shown in the table below. This final rule applies to each chemical manufacturing process unit (CMPU) that uses as feedstocks,[1] generates as byproducts, or produces as products any of the following 15 hazardous air pollutants (HAP): 1,3-butadiene; 1,3-dichloropropene; acetaldehyde; chloroform; ethylene dichloride; methylene chloride; hexachlorobenzene; hydrazine; quinoline (*i.e.*, "chemical manufacturing organic urban HAP" or "Table 1[2] organic HAP"); or compounds of arsenic, cadmium, chromium, lead, manganese, or nickel (*i.e.*, "chemical manufacturing metal urban HAP" or "Table 1 metal HAP"). Consistent with the proposed rule, the standards do not apply to hydrogen halide and halogen HAP (*i.e.*, hydrogen chloride, chlorine, and hydrogen fluoride) at affected sources, except when these HAP are generated in combustion-based emission control devices that are used to meet the proposed standards for organic HAP on Table 1.[3] The affected source for this rule is the facility-wide collection of CMPUs that use, generate, or produce one or more of the Table 1 HAP and the wastewater systems and heat exchange systems associated with the CMPUs that use Table 1 HAP. A CMPU includes all process equipment and activities involved in the production of a material described by North American Industry Classification System (NAICS) Code 325.[4] If a CMPU uses, generates, or

[1] Feedstocks are reactants, solvents, or any other additives to the process.

[2] "Table 1" refers to Table 1 in the final rule.

[3] Collectively, the Table 1 organic and metal HAP are referred to as the "chemical manufacturing urban HAP" or "Table 1 HAP."

[4] The CMPU is defined by a facility's production of materials described by NAICS code 325. A facility producing such a material (or family of materials) may use more than one train or series of equipment to make it. All equipment (*i.e.*, unit operation) used to produce a specific product (as well as all the vents and activities associated with making this product) are considered to be part of a single CMPU for purposes of this rule. For example, facility X makes a pharmaceutical product that requires the use of methylene chloride as a solvent. The product is produced in any of three different size reactors, depending on the quantity needed or equipment availability. All of the reactors; other process equipment (*e.g.*, for

produces one of the chemical manufacturing organic urban HAP listed above, then the standards apply to all listed Clean Air Act (CAA) section 112(b) organic HAP emitted from that CMPU. Similarly, if a CMPU uses, generates, or produces one of the chemical manufacturing metal urban HAP listed above, then the standards apply to all listed CAA section 112(b) metal HAP emitted from that CMPU.

The regulated categories and entities potentially affected by this action include:

Industry category	NAICS code[1]	Examples of regulated entities
Chemical Manufacturing	325	Chemical manufacturing area sources that use as feedstock, generate as byproduct, or produce as product, any of the HAP subject to this subpart except for: (1) Processes classified in NAICS Code 325222, 325314, or 325413; (2) processes subject to standards for other listed area source categories[2] in NAICS 325; (3) certain fabricating operations; (4) manufacture of photographic film, paper, and plate where material is coated or contains chemicals (but the manufacture of the photographic chemicals is regulated); and (5) manufacture of radioactive elements or isotopes, radium chloride, radium luminous compounds, strontium, and uranium.

[1] North American Industry Classification System.
[2] The source categories in NAICS 325 for which other area source standards apply are: Acrylic Fibers/Modacrylic Fibers Production, Chemical Preparation, Carbon Black, Chemical Manufacturing: Chromium Compounds, Polyvinyl Chloride and Copolymers Production, Paint and Allied Coatings, and Mercury Cell Chlor-Alkali Manufacturing.

Area sources in NAICS 325 not specifically identified in the chart above may also be affected by this action. To determine whether your chemical manufacturing area source is regulated by this action, you should examine the applicability criteria in 40 CFR 63.11494 of subpart VVVVVV (National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources). For additional information about applicability provisions, see sections III.A, IV.A, and V.A of this preamble. If you have any questions regarding the applicability of this action to a particular entity, consult either the air permit authority for the entity or your EPA regional representative as listed in 40 CFR 63.13 of subpart A (General Provisions).

B. Where can I get a copy of this document?

In addition to being available in the docket, an electronic copy of this final action will also be available on the Worldwide Web (WWW) through the Technology Transfer Network (TTN). Following signature, a copy of this final action will be posted on the TTN's policy and guidance page for newly proposed or promulgated rules at the following address: *http://www.epa.gov/ttn/oarpg/*. The TTN provides information and technology exchange in various areas of air pollution control.

C. Judicial Review

Under section 307(b)(1) of the CAA, judicial review of this final rule is available only by filing a petition for review in the United States Court of Appeals for the District of Columbia Circuit by December 28, 2009. Under section 307(b)(2) of the CAA, 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.

Section 307(d)(7)(B) of the CAA further provides that "[o]nly an objection to a rule or procedure which was raised with reasonable specificity during the period for public comment (including any public hearing) may be raised during judicial review." This section also provides a mechanism for EPA 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, U.S. EPA, Room 3000, Ariel Rios Building, 1200 Pennsylvania Ave., NW., Washington, DC 20460, with a copy to both 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), U.S. EPA, 1200 Pennsylvania Ave., NW., Washington, DC 20460.

II. Background Information for This Final Rule

Section 112(d) of the CAA requires EPA to establish national emission standards for hazardous air pollutants (NESHAP) for both major and area sources of HAP that are listed for regulation under CAA section 112(c). A major source is any stationary source that emits or has the potential to emit 10 tons per year (tpy) or more of any single HAP or 25 tpy or more of any combination of HAP. An area source is a stationary source that is not a major source.

Section 112(k)(3)(B) of the CAA calls for EPA to identify at least 30 HAP which, as the result of emissions from area sources, pose the greatest threat to public health in the largest number of urban areas. EPA implemented this provision in 1999 in the Integrated Urban Air Toxics Strategy, (64 FR 38715, July 19, 1999) (Strategy). Specifically, in the Strategy, EPA identified 30 HAP that pose the greatest potential health threat in urban areas, and these HAP are referred to as the "30 urban HAP." Section 112(c)(3) of the CAA requires EPA to list sufficient categories or subcategories of area sources to ensure that area sources representing 90 percent of the emissions of the 30 urban HAP are subject to regulation. We selected the nine chemical manufacturing area source categories based on these requirements. A primary goal of the Strategy is to achieve a 75 percent reduction in cancer incidence attributable to HAP emitted from stationary sources.

Under CAA section 112(d)(5), EPA may elect to promulgate standards or requirements for area sources "which provide for the use of generally available control technologies or management practices (GACT) by such sources to reduce emissions of hazardous air pollutants." Additional information on GACT is found in the Senate report on the legislation (Senate Report Number 101–228, December 20, 1989), which describes GACT as:

separation, drying, *etc.*); connecting piping and related pumps, valves, *etc.;* storage tanks; transfer operations; surge control vessels; bottoms receivers; and other activities (*e.g.*, routine cleaning) are part of a single CMPU.

* * * methods, practices, and techniques which are commercially available and appropriate for application by the sources in the category considering economic impacts and the technical capabilities of the firms to operate and maintain the emissions control systems.

Consistent with the legislative history, we can consider costs and economic impacts in determining GACT, which is particularly important when developing regulations for source categories that have many small businesses.

Determining what constitutes GACT involves considering the control technologies and management practices that are generally available to the area sources in the source category. We also consider the standards applicable to major sources in the same industrial sector to determine if the control technologies and management practices are transferable and generally available to area sources. In appropriate circumstances, we may also consider technologies and practices at area and major sources in similar categories to determine whether such technologies and practices could be considered generally available for the area source category at issue. Finally, as we have already noted, in determining GACT for a particular area source category, we consider the costs and economic impacts of available control technologies and management practices on that category.

We are issuing these national emission standards in response to a court-ordered deadline that requires EPA to issue standards for nine source categories listed pursuant to CAA section 112(c)(3) and (k)(3)(B) by October 16, 2009 (*Sierra Club* v. *Johnson*, no. 01–1537, D.D.C., March 2006).

III. Summary of Major Changes Since Proposal

A. Applicability

In the proposed rule, we proposed that the affected source include the entire facility if the facility emitted any of the chemical manufacturing urban HAP. Specifically, under the proposal, all process vents, storage tanks, transfer operations, wastewater systems, and cooling towers at the facility would be subject to the standards if any emissions source at the facility emitted one of the chemical manufacturing urban HAP. In response to comments, we narrowed the scope of applicability of this final rule, and we made several changes to clarify the applicability provisions. The most significant change is that only CMPU that emit one or more of the 15 chemical manufacturing urban HAP and the wastewater systems and heat exchange systems associated with those CMPUs are subject to the rule. A CMPU includes all process equipment and activities involved in the production of a material (or family of materials) described by NAICS code 325. Additionally, a CMPU includes each surge control vessel, bottoms receiver, pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, connector, storage tank, transfer rack, and instrumentation system associated with the production of a subject NAICS 325 material. The final rule provides that a CMPU consists of one or more processing steps used in the production of the subject NAICS 325 material.

The final rule further specifies that each CMPU within an affected source that emits one of the chemical manufacturing urban HAP is subject only to requirements that apply to the same type of HAP that triggered applicability, not requirements for all types of HAP. For example, a CMPU that uses only chemical manufacturing organic urban HAP is required to control all CAA section 112(b) organic HAP. Similarly, a CMPU that uses only chemical manufacturing metal urban HAP is required to control all CAA section 112(b) metal HAP. For the purposes of this provision, hydrazine is considered to be an organic HAP.

In response to comments, we are clarifying that the rule does not extend to structural items (*e.g.*, piping) and items that exist as "articles" as defined in 40 CFR 372.3, and are used under normal conditions, because these items do not emit any HAP, including the chemical manufacturing urban HAP.[5]

B. Emission Standards

1. Management Practices

EPA proposed management practices for a number of emission points, including for process vents (batch, continuous, and metal HAP); storage tanks; transfer operations; and equipment leaks. The proposed management practices for process vents included covering all process tanks and mixing vessels during operation; maintaining covers in the closed position on all openings and access points in other process vessels; conducting quarterly inspections to check for leaks from the process vessels and determining the integrity of the process vessels and ensuring covers are being used; and repairing leaks within 15 days. EPA proposed these management practice requirements for all affected sources. For storage tanks, EPA proposed GACT as management practices consisting of quarterly inspections for leaks, minimizing and promptly cleaning up spills, and ensuring all openings and access points are closed for all storage tanks. For transfer operations, EPA proposed to minimize emissions using management practices, such as minimizing spills, cleaning up spills promptly, covering open containers when not in use, and minimizing discharges to open waste collection systems.

In the final rule, the separate proposed management practices for process vents, storage tanks, transfer operations, and equipment leaks were consolidated and simplified into one comprehensive set of management practices that are applicable to each CMPU. The comprehensive management practices in the final rule include requirements to equip each process vessel with a cover or lid that must be in place at all times when the vessel contains HAP, except for material addition and sampling. The management practices also include sensory-based inspections of process vessels and equipment in each CMPU. Changes to management practices specific to small heat exchange systems are described in section III.B.2.f of this preamble.

2. Emission Limits and Emission Control Requirements

a. Continuous Process Vents and Batch Process Vents

For continuous process vents with a total resource effectiveness (TRE) index of 1 or less, EPA proposed management practices and 95 percent emission reduction of organic HAP emissions. After consideration of the public comments, we are finalizing management practices and the 95 percent emission reduction requirement for organic HAP emissions from continuous process vents. Based on public comments, the final rule includes a definition of continuous process vent that is based on the process vent definition in 40 CFR part 63, subpart F of the Hazardous Organics NESHAP (HON). In addition, the final rule includes a mass emission threshold of 0.1 pound per hour (lb/hr) or less, below which the TRE index calculation is not required.

For facilities with batch process vents, EPA proposed management practices and a 90 percent organic HAP emission

[5] "Article" means a manufactured item: "(1) Which is formed to a specific shape or design during manufacture; (2) which has end use functions dependent in whole or in part upon its shape or design during end use; and (3) which does not release a toxic chemical under normal conditions of processing or use of that item at the facility or establishment." 40 CFR 372.3.

reduction if the collective uncontrolled total organic HAP emissions from the sum of all batch process vents within the affected facility was 19,000 pounds per year (lbs/yr) or greater. The final rule requires management practices and 85 percent control (90 percent for new sources) if the total organic uncontrolled HAP emissions from batch process vents within a CMPU are 10,000 lbs/yr or greater. We established the control efficiency of 85 percent as GACT for existing area sources based on additional information provided by commenters. Under the final rule, emissions from any batch process vents may be estimated based on process knowledge, engineering assessment, and/or test data. The proposed requirement to use the calculation methodology in 40 CFR 63.1257(d)(2)(i) for certain types of emission episodes is not required, but it is authorized under the final rule. The final rule also includes an expanded definition of batch process vent that includes examples of batch process vents and lists types of equipment and gas streams that are not batch process vents.

b. Metal HAP Process Vents

EPA proposed management practices and 95 percent metal HAP emission reduction if the collective uncontrolled total metal HAP emissions from the sum of all metal HAP process vents was greater than 400 lbs/yr on a facility-wide basis. In addition to the 400 lbs/yr level, EPA co-proposed a metal HAP threshold level of 100 lbs/yr on a facility-wide basis, and asked for public comment on the appropriate threshold to use for purposes of subcategorizing metal HAP process vents based on the factors discussed in the proposed rule. For metal HAP process vents with total uncontrolled metal HAP emissions less than the threshold, management practices would be required to reduce HAP emissions. After considering public comments, the final rule requires management practices and 95 percent reduction in metal HAP emissions from each CMPU with uncontrolled metal HAP process vent emissions of 400 lbs/yr or greater.

c. Storage Tanks

The proposed rule cross-referenced the thresholds for control, as well as the standards and compliance procedures in 40 CFR part 60, subpart Kb. The final rule replaces the references to subpart Kb with references to the standards and compliance procedures in 40 CFR part 63, subparts SS and WW and by directly specifying the applicable thresholds for control in Table 5 to the final rule. The capacity and maximum true vapor pressure thresholds for control in the final rule are the same as at proposal, but the final rule specifies that the maximum true vapor pressure (MTVP) threshold is to be based on the organic HAP content of the stored liquid, not the volatile organic liquid (VOL) content as specified in subpart Kb. As in other NESHAP, we intended to require MTVP determinations based on the organic HAP content in the stored liquid, but we inadvertently neglected to override the reference to VOL in the MTVP definition in subpart Kb. The standards and compliance procedures are essentially the same as at proposal, but the final rule references standards and compliance procedures in 40 CFR part 63 (Subparts SS and WW, and the General Provisions, Subpart A). The final rule also includes a vapor balancing compliance alternative that provides at least equivalent levels of HAP emission reductions as the GACT requirements that we are finalizing. Based on public comments, we have determined that GACT for storage tanks that vent to a control device includes alternative procedures during periods of planned routine maintenance of the control device. Therefore, the final rule specifies that no material may be added to the storage tank during periods of planned routine maintenance, and periods of planned routine maintenance may not exceed 240 hours per year (hrs/yr).

Surge control vessels and bottoms receivers were included in the proposed definition of storage tank because we proposed that these types of vessels would be subject to the same standards as storage tanks. Surge control vessels and bottoms receivers remain subject to the storage tank standards in the final rule. However, based on public comments, we removed surge control vessels and bottoms receivers from the definition of storage tank, and instead explicitly specify in section 63.11496(h) of the final rule that the storage tank standards apply to surge control vessels and bottoms receivers that meet the applicability criteria for storage tanks set forth in Table 5 of the final rule. All storage tanks that store liquid containing organic HAP and are part of a CMPU subject to the final rule are subject to the management practice requirements. In addition, the definition of storage tank in the final rule is changed to make the definition consistent with definitions in other NESHAP such as the Miscellaneous Organic NESHAP (MON), HON, and Pharmaceutical maximum achievable control technology (MACT) standards by excluding wastewater storage tanks and tanks storing liquid containing organic HAP only as impurities.

d. Wastewater

EPA proposed to subcategorize wastewater streams based on the size of the wastewater stream and determined that large wastewater streams were those with partially soluble HAP (PSHAP) concentrations of 10,000 parts per million by weight (ppmw) or greater. For wastewater streams with PSHAP concentrations of less than 10,000 ppmw discharge, we proposed as GACT to send the wastewater stream to an onsite or offsite wastewater treatment process, and, for wastewater streams containing PSHAP concentrations of 10,000 ppmw or greater, we proposed as GACT use of gravity separation or other techniques to separate organic and water layers and to send the water layer to a wastewater treatment process. We proposed that the organic layer must be recovered and reused in a process, used as a fuel, or disposed of as hazardous waste.

Based on comments, we are revising our subcategorization determination to account for wastewater streams with PSHAP concentrations of 10,000 ppmw or greater that do not have a separate organic layer. The separation techniques that we established as GACT for larger wastewater streams will not work for wastewater streams that contain only a water phase. For this reason, we are also now considering the type of stream in our subcategorization determination to account for the wastewater streams that do not separate at PSHAP concentrations of 10,000 ppmw. In the final rule, the larger wastewater stream subcategory is defined as those wastewater streams with PSHAP concentrations of 10,000 ppmw or greater that also have a separate organic layer.

As stated above, the proposed GACT requirement for a wastewater stream that contains PSHAP concentrations of 10,000 ppmw or greater was to separate the stream into the organic and aqueous phase and treat them according to the requirements in the proposed standards. The final rule retains these provisions for the newly defined large wastewater systems subcategory and also provides an alternative compliance option to hard-pipe the total stream to a combustion unit or other onsite hazardous waste treatment facility (or to a tank from which it is collected and shipped offsite). This alternative provides at least equivalent levels of HAP emission reductions as the emission control requirements contained in this proposed rule. We are also finalizing the proposed requirement

for single phase wastewater streams and the aqueous phase for two phase streams that requires the wastewater streams be sent to a wastewater treatment process.

Based on public comments, we also revised the definition of wastewater stream to be consistent with MON and HON wastewater stream definitions.

e. Transfer Operations

EPA proposed that management practices to minimize evaporation losses and use of submerged loading were GACT for transfer operations. After considering public comments on the transfer operations requirements, we have replaced in some cases and revised in others the management practices for transfer operations and are promulgating a comprehensive management practice requirement (see discussion in section III.B.1 of this preamble), which includes inspection of transfer operations. In addition to the management practices, we have determined that GACT for most material transfers is the use of submerged loading or bottom loading. In response to public comments, we have added an alternative compliance option to route emissions to a fuel gas system or process in accordance with 40 CFR part 63, subpart SS. This alternative provides at least equivalent levels of HAP emission reductions as the GACT requirements that we are finalizing.

Based on public comments, we have also determined that submerged or bottom loading is neither general industry practice nor GACT for the transfer of reactive and resinous materials because sources do not currently employ submerged or bottom loading for these materials due to operational issues. Therefore, the final rule defines reactive and resinous materials and requires sources to include in the initial Notifications of Compliance Status a list of any materials that meet these definitions. Source must also keep records of the use of these materials and report in the semiannual compliance report the use of any additional resinous or reactive materials occurring during the reporting period. Reactive materials are defined in the final rule as energetics, organic peroxides, and other unstable chemicals such as chemicals that react violently with water and chemicals that vigorously polymerize, decompose, condense, or become self-reactive under conditions of pressure or temperature. Resinous materials are defined in the final rule as viscous, high-boiling point material resembling pitch or tar that sticks to or hardens in the fill pipe under normal transfer conditions.

f. Heat Exchange Systems

The proposed rule used the term "cooling tower" systems; however, we intended to regulate "heat exchange" systems as is consistent with the HON. We also intended to include "once-through" systems as part of the affected source. Therefore, the final rule uses the term "heat exchange system" in place of the proposed term "cooling tower system." The final rule also includes a definition of "heat exchange system" that is consistent with the definition in 40 CFR 63.101 of the HON and clearly specifies that once-through systems are included.

After considering public comments, we have retained the proposed inspection and leak repair requirements for small heat exchange systems and monitoring and leak repair requirements for large heat exchange systems as the GACT requirements in the final rule. The proposed rule also required compliance with 40 CFR 63.104(a), and several commenters did not understand what that requirement meant. To address the confusion caused by the proposed rule, we clarified in the final rule that heat exchange systems meeting the conditions set forth in 40 CFR 63.104(a) are not subject to the inspection or monitoring requirements contained in the final rule, as that is what we intended when we proposed the rule.

As a compliance alternative to the requirement to perform repairs after an inspection of a small heat exchange system reveals indications of a potential leak into cooling water, the final rule also allows the owner or operator to demonstrate that the HAP concentration in the cooling water does not constitute a leak, as defined in 40 CFR 63.104(b)(6). For both large and small heat exchange systems, the final rule also allows compliance with the HON heat exchange system requirements in 40 CFR 63.104(b) or (c). For equipment that meets Current Good Manufacturing Practice (CGMP) requirements in 21 CFR part 211, the physical integrity of the reactor may be used as the surrogate indicator of heat exchange system leaks under 40 CFR 63.104(c). These compliance alternatives provide at least equivalent levels of HAP emission reductions as the emission control requirements contained in this final rule.

g. Equipment Leaks

As discussed in section III.B.1 of this preamble, the proposed equipment leak requirements have been incorporated as part of the management practice requirements that apply to each CMPU subject to the final rule. However, following review of public comments, we added an alternative for equipment leaks in the final rule that allows an owner or operator to use Method 21 in lieu of sensory-based leak detection. Method 21 is at least equivalent to the leak inspection requirements we are finalizing in this rule.

h. Overlapping Rules

The final rule specifies that when equipment at an affected source is subject to both this rule and the provisions of another rule, compliance with the requirements of the other rule constitutes compliance with this final rule for the subject equipment if the owner or operator determines that the other emission control, monitoring, recordkeeping, and/or reporting requirements provide at least equivalent levels of HAP emission reductions and compliance assurance as the requirements in the final rule. For example, if the control requirements in the other rule are at least as stringent as those provided in this rule, but the monitoring, recordkeeping, or reporting requirement in the other rule are not as stringent or comprehensive, the source may comply with the control requirements from the other rule, but must comply with the more stringent monitoring, recordkeeping, and reporting requirements in this rule. The final rule requires a source that is subject to overlapping standards to identify in its Notification of Compliance Status all of the alternative requirements with which the source will be complying and provide an explanation of why the selected requirement is more stringent than this rule. The final rule also states that sources are responsible for making accurate determinations concerning the more stringent standard and noncompliance with this rule is not excused if it is later determined that the source was in error in its initial notification of compliance and, as a result, is violating this rule. Compliance with this rule is the responsibility of the affected source regardless of any notification of compliance.

C. Initial Compliance

For some control devices, the proposed rule allowed initial compliance to be demonstrated using either design evaluations or performance tests, but performance tests were required for certain other control devices. In response to comments, the final rule allows design evaluations as an alternative to performance tests for all control devices.

To clarify the initial compliance requirements for batch process vents and continuous process vents, some of the language from 40 CFR part 63, subpart FFFF that was referenced in Table 2 to the proposed rule has been written directly into 40 CFR 63.11496(g) of the final rule.

D. Monitoring, Recordkeeping, and Reporting

The proposed rule referenced parts of the General Provisions as well as subparts SS, FFFF, and NNNNNN in 40 CFR part 63 for all control device monitoring requirements. With two exceptions, these monitoring requirements are retained in the final rule. One change in the final rule is that pH may be measured once per day rather than continuously for any halogen scrubber. The second change from proposal is that Table 9 to the final rule specifies that 40 CFR 63.8(a)(2) does not apply to affected sources under this rule. We made this change so that EPA Performance Specification 17 (PS–17) and EPA Quality Assurance Procedure 4, when finalized, will not apply to affected sources under this rule.

In addition to monitoring requirements, the proposed rule referenced recordkeeping requirements in several other rules. To clarify these requirements, 40 CFR 63.11501(c) of the final rule lists all of the recordkeeping requirements and references the specific section in each rule that requires it. The notification and reporting requirements have also been revised in the final rule. For example, additional notification requirements have been incorporated into the final rule for certain transfer operations and overlapping rules as discussed above.

E. Startup, Shutdown, and Malfunction (SSM)

During the comment period of the proposed rule, the United States Court of Appeals for the District of Columbia Circuit vacated two provisions in EPA's CAA Section 112 regulations governing the emissions of HAP during periods of startup, shutdown, and malfunction (SSM). *Sierra Club* v. *EPA*, 551 F.3d 1019 (D.C. Cir. 2008). Specifically, the Court vacated 40 CFR 63.6(f)(1) and 40 CFR 63.6(h)(1), that are part of a regulation, commonly referred to as the "General Provisions Rule," that EPA promulgated under section 112 of the CAA. When incorporated into CAA Section 112(d) regulations for specific source categories, these two provisions exempt sources from the requirement to comply with the otherwise applicable CAA section 112(d) emission standard during periods of SSM.

Industry intervenors appealed the December 2008 *Sierra Club* decision by filing petitions for rehearing. On July 30, 2009, the District of Columbia Circuit denied these petitions. On August 5, 2009, EPA filed a motion seeking a 60-day stay of the mandate. On August 6, 2009, industry intervenors filed a motion to stay the mandate pending their appeal of the decision to the United States Supreme Court. The Court recently denied industry intervenors' motion to stay the mandate and granted EPA's motion, directing the Clerk of the Court not to issue the mandate prior to October 6, 2009. Until the District of Columbia Circuit issues the mandate effectuating the vacatur, 40 CFR 63.6(f)(1) and (h)(1) remain in effect.

The proposed rule included a reference to 40 CFR 63.6(f)(1) and (h)(1). In light of *Sierra Club* v. *EPA*, we revised Table 9, which addresses the applicability of the Part 63 General Provisions to the source categories at issue in this rule, to state that 40 CFR 63.6(f)(1) and (h)(1) do not apply. As such, the final emission standards summarized in section IV of this preamble apply at all times. As noted in section IV of this preamble, we are setting a separate emission standard for the nine source categories at issue here that applies to continuous process vents during periods of startup and shutdown, and that standard is 85 percent control, instead of the 95 percent control required at all other times. We are establishing a separate emission standard for these periods because they are characterized by activities such as the filling, emptying, and inerting of vessels, which generally result in significantly different emissions than normal operations. As for batch processes, startup and shutdown are part of their normal operations and, therefore, are already addressed by the standards. In addition, storage tanks, heat exchange systems, and transfer operations do not include startup and shutdown activities.

We have also added language making clear that, to the extent this rule incorporates by reference emission standards from other CAA section 112(d) rules, and those rules contain an exemption from the applicable emission standard during periods of SSM, that exemption does not apply for purposes of this rule.

F. Title V

Pursuant to section 502(a) of the CAA, the Administrator may "in the Administrator's discretion and consistent with the applicable provisions of [the Act], promulgate regulations to exempt one or more [non-major] source categories (in whole or in part) from the requirements of [title V] if the Administrator finds that compliance with such requirements is impracticable, infeasible, or unnecessarily burdensome on such categories. * * *" We proposed to exempt the sources in the chemical manufacturing area source categories subject to this rule from compliance with the requirements of title V. Since proposal, we have reconsidered the proposed exemption and determined that it is not appropriate to finalize the exemption for certain synthetic area sources. Specifically, in proposing the exemption for these categories, we did not consider the large number of synthetic area sources that reduced their HAP emissions to below the major source thresholds by installing air pollution control devices. The oversight occurred because most sources subject to the other area source rules that exempted facilities from title V permitting have very low emissions before control (and most emit metal HAP). Conversely, for the chemical manufacturing area source category, we estimate 75 facilities are synthetic area sources for HAP and at least 10 percent of these facilities have uncontrolled HAP emissions over 100 tpy. Therefore, in the final rule, title V permits are required for area sources in the nine chemical manufacturing source categories that are synthetic area sources by virtue of the fact that they have reduced their HAP emissions to below the major source thresholds by installing air pollution control devices. We are, however, finalizing the exemption from the requirements of title V for those synthetic area sources that limited their HAP emissions to below the major source thresholds solely by complying with operational limits (*e.g.*, limiting the hours the facility can operate) and for natural area sources, which are sources that neither installed controls nor took operational limits to become an area source. The analysis in the proposed rule finding that compliance with title V is unnecessarily burdensome on these source categories remains accurate for the sources we are exempting.

Based on our additional review of the source categories since proposal, we conclude that exemption for the synthetic area sources that installed controls is not appropriate given the facts associated with these sources as set forth below, and we do not believe title V is unnecessarily burdensome on these area sources. Unlike many other area

source categories that we have exempted from title V while implementing the requirements of CAA sections 112(c)(3) and 112(k)(3)(B), the nine chemical manufacturing area source categories include a large number of synthetic area sources that installed air pollution controls to become area sources. We evaluated other area source categories and determined that most sources subject to the other area source rules that exempted facilities from title V permitting have very low emissions before control. For the chemical manufacturing area source categories, we estimate that at least seven of the 47 facilities that are synthetic area sources for HAP by virtue of installing controls would have uncontrolled HAP emissions over 100 tons per year. Synthetic area sources that installed controls represent more than 10 percent of the total number of sources that will be subject to the final rule. In fact, these sources are much more like the major sources of HAP subject to the HON and the MON. In addition, many of these sources are located in cities, and often in close proximity to residential and commercial centers where large numbers of people live and work. The record also indicates that many of these synthetic area sources have significantly higher emissions potential when uncontrolled than the other sources in the nine chemical manufacturing area source categories. For example, we have identified seven facilities that have uncontrolled emissions that exceed 100 tpy.

For these reasons, we believe that the additional public participation and compliance benefits of additional informational, monitoring, reporting, certification, and enforcement requirements that exist in title V should be the same for a major source that installed a control device after 1990 to become an area source as for a source that is major and installed a control device to comply with an applicable major source NESHAP, and thereby reduced emissions below major source levels (10 tpy of a single HAP or 25 tpy of total HAP). Many of the synthetic area sources that became area sources by virtue of installing add-on controls are large facilities with comprehensive compliance programs in place because their uncontrolled emissions would far exceed the major source threshold. We maintain that requiring additional public involvement and compliance assurance requirements through title V is important to ensure that these sources are maintaining their emissions at the area source level and, while there is some burden on the affected facilities, we think that the burden is not significant because these facilities are generally larger and more sophisticated than the natural area sources and sources that took operational limits to become area sources.

For these reasons above, we have decided not to finalize the title V exemption for these facilities. The final rule requires title V permits for major sources of HAP emissions that installed controls after 1990 to become area sources of HAP emissions. We estimate that approximately 150 sources that will be subject to this rule are required to have title V permits because of criteria pollutants and the final rule will require an additional 47 affected area sources to obtain title V permits.

We are not requiring title V permits for sources that reduced their emissions to area source levels by taking operational restrictions, such as restricting hours of operation or production, or for natural area sources. We conclude that our analysis in the proposed rule that title V is unnecessarily burdensome for sources in the Chemical Manufacturing source categories remains accurate for the sources we are exempting.

IV. Summary of Final Rule

A. Applicability

The final NESHAP applies to each CMPU that is located at an area source of HAP emissions that uses as feedstocks, generates as byproducts, or produces as products any of the Table 1 HAP, where the Table 1 HAP are present in the feedstocks or are generated and present in the process fluid at concentrations greater than 0.1 percent for carcinogens, as defined by the Occupational Safety and Health Administration, and greater than 1.0 percent for noncarcinogens. A CMPU includes all process equipment, vents, and activities involved in the production of a material described by NAICS code 325, and it consists of one or more unit operations and all associated recovery devices. A CMPU also includes each surge control vessel, bottoms receiver, pump, compressor, agitator, pressure relief device or valve, sampling connection system, open-ended valve or line, valve, connector, storage tank, transfer rack, and instrumentation system associated with the production of NAICS code 325 materials. An affected source is the facility-wide collection of all CMPUs that use, generate, or produce one or more Table 1 HAP. An affected source also includes each heat exchange system and wastewater system that is associated with any CMPU that uses, generates, or produces one or more Table 1 HAP.

The nine chemical manufacturing area source categories include production of most of the materials classified under NAICS 325. The final rule specifies applicability based on CMPUs that are used to produce chemicals classified under NAICS 325, except for production of materials in NAICS 325 that are subject to other area source standards, as specified in the rule, see 40 CFR 63.11494(c)(1), and specific operations that are not considered to be chemical manufacturing, such as photographic paper (NAICS 325992), as described in 40 CFR 63.11494(c)(2) of the final rule.

To be subject to the rule, the CMPU must use as feedstocks, generate as byproducts, or produce as products any of the 15 chemical manufacturing urban HAP. If the CMPU is subject to the final rule, the standards apply to all CAA section 112(b) organic HAP emitted from the CMPU and all CAA section 112(b) metal HAP emitted from the CMPU, depending on the type of HAP that triggers applicability under the rule. Specifically, a CMPU using only Table 1 organic HAP is required to control all CAA section 112(b) organic HAP from the CMPU, a CMPU using only Table 1 metal HAP is required to control all CAA section 112(b) metal HAP from the CMPU, and a CMPU using both metal and organic Table 1 HAP is required to control all CAA section 112(b) metal and organic HAP

B. Compliance Dates

All existing area source facilities with operations subject to this final rule must comply with the final rule requirements for their existing operations no later than October 29, 2012. A new area source must comply with the final rule requirements by October 29, 2009 or upon startup, whichever is later. For the purposes of determining compliance with the rule, a new source is a source that commenced construction or reconstruction after October 6, 2008.

C. Standards

For each CMPU that is part of an affected source, the final rule requires you to implement management practices that apply to all process equipment and other equipment (*e.g.*, pumps, valves, and connectors) in the CMPU. In addition to the management practices, the final rule requires compliance with numerical emission limits and additional emission control requirements for certain process vents, storage tanks, surge control vessels, bottoms receivers, wastewater systems,

and heat exchange systems that meet specified conditions. Management practice requirements and all numerical emission limits and other emission control requirements, except the emission limit for batch process vents, are the same at existing and new sources.

1. Management Practices

Owners and operators of CMPUs subject to this rule are required to comply with the following management practice requirements. All process vessels must be equipped with a cover or lid that is in place at all times when the vessel contains HAP, except for material addition and sampling. Transfer of liquids containing chemical manufacturing organic urban HAP to tank trucks or railcars must be conducted using submerged loading or bottom loading, except for reactive or resinous materials. You must identify each reactive or resinous material in your Notification of Compliance Status or the semiannual compliance report that covers the period when the material is first transferred. You must also conduct inspections of equipment within the CMPU quarterly to demonstrate compliance with the above management practices and confirm that all CMPU are sound and free of leaks. Any leaks must be repaired within 15 days of finding the leak or you must document the reason for the delay. In addition, you must keep records of the inspection dates, inspection results, and the dates of equipment repairs.

Owners or operators of small heat exchange systems that are part of a CMPU subject to this subpart with a cooling water flow rate of less than 8,000 gallons per minute (gal/min) and that do not meet the criteria in 40 CFR 63.104(a) are required to develop a heat exchange system inspection plan that describes the inspections that will be performed to identify hydrocarbons in the cooling water. The inspections must be conducted quarterly and may include a number of sensory inspection options for determining indications of a leak, such as visible floating hydrocarbon, hydrocarbon odor, discolored water, or chemical addition rates. You must either perform repairs to eliminate indications of a leak or take samples and determine there is no leak (as defined in 40 CFR 63.104(b)(6)). Repairs must be completed within 45 days after the inspection during which you observe indications of a leak, or you must document the reason for the delay. In addition, you must keep records of the heat exchange system inspection dates, inspection results, and the dates of leak repairs.

As an alternative to the management practice requirements for small heat exchange systems, the final rule allows compliance with the requirements for large heat exchange systems with flow rates of 8,000 gal/min or greater (*i.e.*, the HON heat exchange system requirements in 40 CFR 63.104(b) or (c)).

2. Standards for Batch Process Vents

Owners and operators of a CMPU with collective uncontrolled organic HAP emissions greater than or equal to 10,000 lbs/yr from all batch process vents associated with an affected CMPU must meet emission limits for the organic HAP emissions. Examples of batch process vents include, but are not limited to, vents on reactors, filters, centrifuges, condensers used for product recovery, and process tanks. These vents include intermittent emissions from continuous operations as well as emissions from batch operations.

For an existing source, one control option is to reduce the collective uncontrolled organic HAP emissions from the CMPU by at least 85 percent by venting emissions from a sufficient number of vents through one or more closed vent system to any combination of control devices (excluding a flare). Alternatively, you may route uncontrolled organic HAP emissions from one or more batch process vents within the CMPU through one or more closed vent systems and meet an outlet concentration limit of 20 parts per million by volume (ppmv) (as total organic carbon or total organic HAP) or through a closed vent system to a flare, and comply with the 85 percent reduction for the remaining vents in the CMPU. For a new source, the requirements are the same as for an existing source, except the required reduction is 90 percent instead of 85 percent.

When halogenated organic HAP compounds from batch process vents are controlled by combustion, you must also reduce the hydrogen halide and halogen HAP generated in the combustion device by at least 95 percent, to no more than 0.45 kilograms per hour (kg/hr), or to no more than 20 ppmv. As an alternative to post-combustion halogen control, you may instead reduce the halogen atom mass emissions prior to the combustion device to no more than 0.45 kg/hr or 20 ppmv.

3. Standards for Continuous Process Vents

We are finalizing the proposed GACT requirements for organic HAP emissions from each continuous process vent with a TRE index value less than or equal to 1.0. Specifically, organic HAP emissions from each continuous process vent with a TRE index value less than or equal to 1.0 must meet any one of several emission control alternatives. One option is to reduce the organic HAP emissions by at least 95 percent by routing through a closed vent system to one or more control devices. Alternatively, you may route the emissions to a flare, or you may meet the concentration option described above for batch process vents. Because a continuous process vent is determined after the last recovery device, another option is to use a recovery device from which the vent stream is determined to have a TRE greater than 1.0. In addition, we are establishing a requirement to reduce the organic HAP emissions from continuous process vents with a TRE less than 1.0 by at least 85 percent during periods of startup and shutdown. Halogenated organic emissions from continuous process vents are subject to the same requirements described above for halogenated organic HAP emissions from batch process vents.

4. Standards for Metal HAP Process Vents

Owners and operators are required to reduce metal HAP emissions by at least 95 percent from each CMPU with uncontrolled metal HAP emissions of 400 lbs/yr or more. The metal HAP process vent emissions must be routed through a closed-vent system to a control device.

5. Standards for Storage Tanks, Surge Control Vessels, and Bottoms Receivers

We are finalizing the proposed emission controls for emissions from storage tanks, surge control vessels, and bottoms receivers that have (1) a capacity of 40,000 gallons or greater with vapor pressure of total organic HAP of 5.2 kilopascals (kPa) or greater and less than 76.6 kPa or (2) a capacity of 20,000 gallons or greater and less than 40,000 gallons with vapor pressure of total organic HAP of 27.6 kPa or greater and less than 76.6 kPa. Control options in the final rule include: (1) Use of an internal or external floating roof; (2) venting through a closed vent system to a control device that reduces organic HAP emissions by at least 95 percent; (3) vapor balancing to the tank truck or railcar from which the tank is filled; (4) routing to a flare; or (5) routing to a fuel gas system or process. Storage tanks, surge control vessels, and bottoms receivers with capacity of 20,000 gallons or greater with vapor pressure of total organic HAP of 76.6 kPa or greater must be controlled using any of the above

options except a floating roof. Storage tanks, surge control vessels, or bottoms receivers with a vent stream that contains halogenated compounds and that is controlled by combustion must also meet the same requirements described above for halogenated batch process vents.

6. Standards for Wastewater Systems

All wastewater discarded from a CMPU subject to the rule must be treated. In addition, each process wastewater stream and each maintenance wastewater stream in which the total PSHAP concentration is 10,000 ppmw or greater, and which contains both an organic and an aqueous phase, must be decanted or separated by other techniques. Alternatively, wastewater streams that meet these conditions may be hard piped to onsite treatment as hazardous waste or hard piped to a collection tank or other vessel and shipped offsite for any of the same types of treatment. If the wastewater is separated into organic and aqueous layers, the organic material must be recycled to a process, used as fuel, or disposed of as hazardous waste. The separated aqueous phase, like other process wastewater and maintenance wastewater that does not separate into an organic and an aqueous phase, must receive some type of treatment, either onsite or offsite, as described above.

7. Standards for Heat Exchange Systems

Owners or operators of heat exchange systems with cooling water flow rate of 8,000 gal/min or greater must develop and operate in accordance with a monitoring plan that documents the procedures to be used to detect leaks of process fluids into cooling water. The plan must require monitoring of one or more surrogate indicators or monitoring of one or more process parameters or other conditions that indicate a leak. You must conduct the monitoring at least quarterly. Leaks must be repaired within 45 calendar days after detection unless specified conditions for delay of repair are met. You must keep records of leaks detected by methods described in your monitoring plan or by other methods, and you must keep records of the dates of repairs. A compliance alternative has been incorporated into the final rule that allows compliance with the HON heat exchange system requirements in 40 CFR 63.104(b). This alternative provides at least equivalent levels of HAP emission reductions as the standards that we are finalizing today.

D. Initial Compliance Requirements

To demonstrate initial compliance with the management practices in the final rule, owners and operators of affected new and existing sources must certify that they have implemented all required management practices by the compliance date. To demonstrate initial compliance with the emissions control requirements, by the compliance date, the source must install and have operational, any required add on control equipment and/or have implemented any design requirements necessary to comply with the applicable standard.

For batch process vents and metal HAP process vents, owners and operators must either calculate uncontrolled emissions or demonstrate that organic HAP usage is below 10,000 lb/yr or metal HAP usage is below 400 lb/yr. The final rule specifies that HAP emissions or usage may be determined based on process knowledge, engineering assessments, or test data. For continuous process vents with an organic HAP emission rate greater than 0.1 lb/hr, owners and operators must determine the TRE index value. For wastewater streams, owners and operators must determine if the PSHAP concentration exceeds 10,000 ppmw and contains separate aqueous and organic layers. All wastewater stream characterization determinations may be based on process knowledge, engineering assessments, or test data.

To demonstrate initial compliance with a percent reduction or outlet concentration emission limit in this final rule, owners and operators must conduct either a performance test or design evaluation. Limits for operating parameters that will be monitored to demonstrate ongoing compliance must be established during the performance test or design evaluation.

E. Continuous Compliance Requirements

Quarterly inspections are required to demonstrate compliance with the management practice requirements and the standards for large heat exchange systems. Storage tanks equipped with floating roofs are also subject to periodic inspections and, for external floating roofs, seal gap measurements. Control device operating parameters must be continuously monitored to demonstrate ongoing compliance with percent reduction or outlet concentration emission limits, and the continuous presence of a pilot flame must be verified in flares. Closed vent systems that convey emissions to a control device must be monitored using Method 21 or by audible, visual, or olfactory (AVO) techniques, depending on the construction material and the source of the emissions.

F. Notification, Recordkeeping, and Reporting Requirements

The owner or operator of a new or existing affected source is required to comply with certain requirements of the General Provisions to part 63 (40 CFR part 63, subpart A), which are identified in Table 9 of the final rule. Each facility is required to submit an Initial Notification and a Notification of Compliance Status according to the requirements in 40 CFR 63.9 of the General Provisions and 40 CFR 63.11501 of the final rule. Among other things, the owner or operator must submit a compliance report for each semiannual reporting period during which a deviation occurred, a leak was not repaired within the specified time period, or a process change occurred that affected a previous compliance determination or resulted in a new compliance determination, including changes in the method of compliance.

V. Summary of Comments and Responses

We received a total of 35 comments on the proposed rule from industry representatives, trade associations, State and Federal agencies, industry consultants, one environmental group, and the general public during the public comment period. In addition, two speakers provided testimony at a public hearing. Sections V.A through V.H of this preamble summarize the significant comments and explain our response. Other comments addressed minor clarifications to this rule or other issues that we did not consider to be significant; these comments and our responses to them are provided in the Response to Comments Document.

A. Applicability

Comment: Several commenters requested that EPA establish one or more *de minimis* applicability thresholds below which area sources that process or emit small amounts of urban HAP would be exempt from the rule. For example, some commenters requested a more comprehensive version of the proposed concentration thresholds of 0.1 and 1.0 percent urban HAP in feedstocks and products that would also apply to fuels, by-products, co-products, intermediates, HAP generated in the process, and/or catalysts. Other commenters requested a mass-based HAP usage or processing threshold (*e.g.*, 2 megagrams per year or 25,000 lbs/yr), actual or uncontrolled HAP emissions thresholds between 50

lbs/yr and 6.25 tpy, a threshold based on the quantity of HAP stored onsite (consistent with the criteria that are used to determine Superfund Amendments and Reauthorization Act 311/312 Tier 2 reporting thresholds), or a combination of thresholds.

Two commenters argued that EPA has legal authority to set *de minimis* applicability thresholds. One commenter noted that the courts have determined that EPA has the authority to establish *de minimis* thresholds where the application of the statutory requirements would be of trivial or no value environmentally (see *Alabama Power Co.* v. *Costle,* 636 F 2d 323.360–61; D.C. Cir. 1979). Another commenter noted that none of the provisions in the CAA related to EPA's obligation to regulate area sources expressly prohibits EPA from using thresholds to define the applicability of GACT standards, and they do not implicitly mandate that EPA must regulate every HAP emission from an area source.

Furthermore, one commenter noted that the proposed rule already includes *de minimis* thresholds (the 0.1 percent and 1.0 percent urban HAP concentrations in feedstocks and products), and previous rules have included *de minimis* thresholds.

Response: Regulation of the nine chemical manufacturing area source categories is necessary for the Agency to meet the requirements of CAA sections 112(c)(3) and 112(k)(3)(B) to regulate area source categories representing 90 percent of the emissions of the 30 urban HAP. We listed the nine chemical manufacturing area source categories because they emit urban HAP and these categories were necessary to satisfy our requirement to regulate area sources representing 90 percent of the area source emissions of 15 of the 30 urban HAP. Area sources are, by definition, smaller sources and we recognize that the nine area source categories at issue are comprised of a large number of relatively small facilities. But we note that, although area sources individually may emit relatively low amounts of HAP, collectively, the level of emissions is significant.

As discussed above and in the preamble to the proposed rule, the Agency determined that it was necessary to regulate these nine area source categories to fulfill the mandate of CAA sections 112(c)(3) and 112(k)(3)(B) to regulate area sources accounting for 90 percent of the emissions of the urban HAP. In listing the nine chemical manufacturing area source categories at issue, the Agency did not condition the listing of any of the categories based on a *de minimis* level of emissions of the 15 chemical manufacturing urban HAP, beyond the feedstock and product limitations discussed below and in the proposed rule. We are, therefore, appropriately issuing emission standards that regulate the emissions of the 15 chemical manufacturing urban HAP.

One commenter noted that EPA has included *de minimis* concentrations of urban HAP in feedstocks and products for purposes of determining applicability. In the proposed rule, feedstocks and products were defined as materials that contain the Table 1 HAP in concentrations greater than 0.1 percent for carcinogens or greater than 1.0 percent for noncarcinogens. As we have pointed out in several other area source rulemakings, the CAA section 112(k) inventory was primarily based on the 1990 Toxics Release Inventory (TRI), and that is the case for the chemical manufacturing area source categories as well. The reporting requirements for the TRI do not include *de minimis* concentrations of toxic chemicals in mixtures, as reflected in the above concentration levels; therefore, the CAA section 112(k) inventory would not have included emissions from operations involving chemicals below these concentration levels. See 40 CFR 372.38, Toxic Chemical Release Reporting: Community Right-To-Know (Reporting Requirements). Accordingly, the percentages noted above define the scope of the listed source category; they are not exemptions. We received no adverse comment on this issue, and we are finalizing the Table 1 HAP thresholds for feedstocks and products in this rule.

We have reviewed the listing decision for the nine chemical manufacturing area source categories and have not identified any information suggesting that small sources were not included in our listing decision. As such, we do not believe we can satisfy our requirement to regulate sources representing 90 percent of the emissions of the chemical manufacturing urban HAP unless we subject all sources that emit those HAP to regulation in this rule.

Comment: Many commenters stated that applicability of the affected source should be limited to individual emission points, individual process units, or the group of process units that involve urban HAP, not all chemical manufacturing operations, as was proposed. According to the commenters, this change is needed in order to alleviate burden and establish a cost-effective rule, particularly for specialty batch manufacturers that may operate processes that use an urban HAP infrequently. Commenters stated that EPA is not required to regulate HAP other than the 15 chemical manufacturing urban HAP needed to meet the 90 percent threshold. One commenter disagreed with EPA's basis for establishing the two batch process vent subcategories where EPA concluded that emissions > 19,000 lbs/yr represents solvent based, high production volume processes with concentrated emission streams. The commenter stated that this is only valid when applied to individual processes, but invalid when applied to entire sites. Another commenter stated that specialty chemical manufacturers would be disproportionately impacted by the proposed rule because of frequent variations and changes in product lines along with the unique aspects of batch processing. This commenter stated that specialty chemical producers will have to use thermal oxidizers with halogen controls, not condensers as EPA assumed, if all chemical manufacturing operations are covered. Commenters noted that costs to characterize wastewater streams that contain no urban HAP would be significant if all chemical manufacturing operations are covered. One commenter also expressed concern that a facility-wide grouping of operations is subject to various interpretations, which could lead to inconsistent implementation among the nine industry sectors covered by the rule. On the other hand, several commenters suggested that applicability be based on the familiar concept of "chemical manufacturing process units" as in other rules. Also, several commenters noted that a primary concern is that the proposed rule would require compliance facility-wide upon startup of any individual process that involves an urban HAP and that their concerns would be minimized, if not eliminated, if the affected source were based on process units that involve urban HAP rather than all chemical manufacturing operations.

Response: In the preamble to the proposed rule we explained the Agency's authority to regulate all HAP, not only urban HAP, for those area source categories needed to achieve the 90 percent requirement in CAA section 112(c)(3). See 73 FR 58358. In the proposal, we explained that we were applying the standards to the entire facility and all HAP because the management practice requirements are equally effective for all HAP and there is little, if any, additional cost for implementing the management practices for all emission sources. In addition, where add-on controls are required, demonstrating compliance for total HAP

is less burdensome than demonstrating compliance for speciated HAP and that the controls are equally effective at reducing non-urban HAP emissions. We also explained that it was our understanding that process vents could be ducted together easily so that the cost for controlling HAP emissions from all process vents would not greatly increase if the rule so applied. We also assumed when proposing the rule that facilities in these categories generally have only one or two processes and that the processes are in close proximity to one another and that facilities are not changing products or processes on a regular basis.

Commenters contend that many of our assumptions were in error and that if we based rule applicability on a CMPU basis instead of a facility wide basis the cost of compliance with the rule and many of their concerns would be addressed. As discussed below, based on the commenters' suggestion and an evaluation of the industry and costs associated with the proposed rule, we have in the final rule defined the affected source as the CMPUs that emit the Table 1 HAP and the heat exchange systems and wastewater systems associated with those CMPUs instead of requiring compliance for the entire facility if one process contains Table 1 HAP. As discussed in more detail below, we believe that most of our assumptions at proposal remain accurate because of this change.

In addition, as we stated in the proposal, we continue to believe that we have the authority to address all CAA section 112(b) organic and metal HAP for those CMPUs subject to this final rule. Commenters argue that EPA is not legally required to address all HAP, but they do not state that the Agency has exceeded its discretion in doing so. For the reasons set forth in the proposal, we appropriately exercised our discretion to regulate the HAP at issue in this final rule. Moreover, the commenter does not refute that the management practices and emission limits are equally effective at removing non-urban metal and organic HAP, and that demonstrating compliance for total HAP is less burdensome than demonstrating compliance for speciated HAP for those sources required to install add-on controls. For these reasons, the final rule requires area sources to control all 112(b) organic HAP from a CMPU that emits a Table 1 organic HAP and control all 112(b) metal HAP from a CMPU that emits Table 1 metal HAP, as well as the heat exchange systems and wastewater systems associated with those CMPUs.

At proposal we estimated four facilities would have uncontrolled batch process vent emissions greater than 19,000 lbs/yr, we assumed condensers could be used to control the emissions, and we estimated the total annual control cost would be $0.1 million/yr. We did not consider costs for facilities that are currently controlled to levels less than the proposed 90 percent level. After reevaluating the data, we estimate that 19 facilities have uncontrolled emissions greater than 19,000 lbs/yr, including the four uncontrolled facilities from the proposed analysis and another four facilities with control levels greater than 90 percent. If we had accounted for facilities with low current control levels, assumed centralized thermal oxidizers would be needed, and assumed considerably more duct work and related manifolding equipment was needed to connect numerous vents from several processes rather than only one or two processes, then the costs would be at least $2.1 million/yr, and the cost-effectiveness would be at least $17,000/ton of HAP controlled.

Because of our misunderstanding of the sources' configuration, we significantly underestimated the costs of compliance with the proposed rule when we defined the affected source as the entire facility if Table 1 HAP was emitted from any process. As stated above, we are revising the rule to require compliance only by CMPUs that emit one of the Table 1 HAP and heat exchange systems and wastewater systems associated with those CMPUs. Under the new construct, the cost and technological assumptions we made in the proposal are correct because the process vents of a CMPU are most likely to be located in the same building or otherwise in close proximity. In addition, estimating HAP in process vents and wastewater on a process basis is more consistent with normal operating practices for batch processes, and the owner or operator can estimate annual emissions by tracking the number of batches.

With this change, we are addressing the concern raised by some commenters that for complex facilities (according to a commenter the number of processes can exceed 100) costs may be significant for ducting all batch vents to a central control device. The change will also limit applicability such that the commenters' concern that the proposed rule would require compliance facility-wide upon startup of any individual process that involves an urban HAP will be eliminated. The Agency was mindful of the concern that requiring facility-wide compliance for each new process using a Table 1 HAP could affect a source's willingness to experiment with new products containing a Table 1 HAP. In addition, the costs to comply with such a rule would be significant and sources would not know whether new product lines would be profitable before being developed or whether the attempts to develop new products would be successful. Under the final rule, facilities using, producing, or generating a Table 1 HAP in a CMPU will only have to comply with the rule for that specific CMPU.

The change in scope of the affected source in the final rule from the entire facility to the CMPUs that emit Table 1 HAP is necessary because of our incorrect assumptions at proposal, as explained above. The actual costs and environmental benefits for the final rule will be similar to what was projected in the proposed rule. The rule will regulate the same number of facilities, the rule will require add-on controls for approximately the same number of units that we estimated at the time of proposal, and the rule will achieve comparable reductions of HAP and particulate matter (PM) emissions.

Although commenters agreed that EPA has the authority to regulate non-urban HAP, they suggest that the Agency only regulate the Table 1 HAP to reduce the burden and costs of compliance for some area sources. We believe we have addressed these concerns by redefining the affected source to be on a CMPU basis. If the CMPU uses, generates, or produces one of the chemical manufacturing organic urban HAP, then the standards apply to all CAA section 112(b) organic HAP in the affected CMPU. Similarly, if the CMPU uses, generates, or produces one of the chemical manufacturing metal urban HAP, then the standards apply to all CAA section 112(b) metal HAP in the process units and the associated vents. We continue to believe that the costs of controlling all organic or metal HAP, as applicable, are reasonable. We find here, as we explained at proposal, that the management practices and control requirements in this rule that reduce urban organic HAP and urban metal HAP from the affected sources are equally affective at reducing all CAA section 112(b) organic HAP or metal HAP, respectively.

Comment: Several commenters suggested exempting biological products (NAICS 325414), tall oil recovery systems, and carbon monoxide so that the area source rule is consistent with the MON. One commenter requested that the rule explicitly state whether or not it applies to ethanol production facilities.

Response: We have not exempted the cited processes, including industrial ethanol production, because they are

included in the scope of the nine listed area source categories (NAICS 325). However, the rule does not apply to beverage alcohol production, which is in NAICS 312.

Comment: Several commenters requested that facilities not be required to consider the presence of urban metal HAP in catalysts when determining applicability of the rule because the catalysts remain unchanged in the process equipment for significant periods of time, and their use results in little, if any, emissions. One commenter observed that, for catalysts, the potential for emissions is only from their production and recycling, not their use in fixed beds.

Other commenters requested exemptions for other forms of metals (*e.g., in nutrients for biological* processes and metals in piping).

Response: We are concerned only with metal HAP emissions. Metal HAP in structures and metal HAP existing as articles (as defined in 40 CFR 372.3), where no metal HAP is released to the atmosphere, are not covered by this rule. However, if the use of catalysts in the processes results in Table 1 metal HAP emissions from the CMPU, then the CMPU is subject to the applicable standards for the affected CMPU. If the commenters' assessment of the level of emissions is accurate, management practices would likely apply in these cases because the sources would likely not fall within the subcategory for which add-on emission controls are required.

B. Compliance Dates

Comment: Several commenters requested adequate compliance time for existing sources that do not become subject to the rule until a change introduces urban HAP for the first time after promulgation of the final rule or the initial compliance date. The commenters indicated that such a situation would occur if a facility (1) adds a new process, with or without new equipment, that introduces an urban HAP, or (2) makes a process change that introduces an urban HAP (perhaps unexpectedly as an impurity in a feedstock or generated as a byproduct). Several commenters also requested adequate compliance time for new sources.

Response: The rule has a compliance period of 3 years for existing sources as authorized in the Part 63 General Provisions and section 112(i)(3) of the CAA. New processes at an existing source, whether for a new process unit or to expand an existing process unit, would become part of the existing source. If an existing source starts using a Table 1 HAP after the compliance date for existing sources has passed, the affected CMPU must comply with the standards at the time the new process begins. New sources must be in compliance upon startup or the date of publication of the final rule in the **Federal Register**, whichever is later.

C. Standards

1. General Issues

Comment: One commenter stated that, while the CAA gives the Agency the authority to issue GACT standards under section 112(d)(5) for area sources, EPA's decision to issue GACT standards instead of MACT standards is only valid if the Agency provides a rational explanation to support the decision. The commenter further stated that EPA provided no explanation for its decision to issue GACT standards instead of MACT standards and that this alone makes the Agency's decision arbitrary and capricious. The commenter also maintains that the Agency evaluated proposed GACT measures by considering only cost-effectiveness. The commenter states that the Agency rejected on cost-effectiveness grounds the control options for the following emission sources: continuous process vents with a TRE greater than 1; batch process vents for facilities emitting less than 19,000 lbs/yr of organic HAP emissions; metal HAP process vents for facilities emitting less than 100 lbs/yr; cooling tower systems with cooling water flow rates less than 8,000 gal/min; equipment leaks; and transfer operations. The commenter maintains that the statute does not direct EPA to set standards based on cost-effectiveness, and that the Agency cannot and does not argue that the control measures that were rejected are not appropriate for application by chemical manufacturing plants. The commenter also argues that the Agency does not claim that the economic impacts are too great, explain how profitable the plants are, or how economically significant the controls would be on the sources if required in this rule. The commenter maintains that EPA based its decision only on the Agency's views on cost-effectiveness and that EPA's views on this issue are not relevant under CAA section 112(d)(5) and, therefore, the standards are unlawful.

Response: As the commenter recognizes, in CAA section 112(d)(5), Congress gave EPA explicit authority to issue alternative emission standards for area sources. Specifically, CAA section 112(d)(5), which is entitled "Alternative standard for area sources," provides:

> With respect *only* to categories and subcategories of area sources listed pursuant to subsection (c) of this section, the Administrator *may, in lieu of* the authorities provided in paragraph (2) and subsection (f) of this section, elect to promulgate standards or requirements applicable to sources in such categories or subcategories which provide for the use of generally available control technologies or management practices by such sources to reduce emissions of hazardous air pollutants.

See CAA section 112(d)(5) (*Emphasis added*).

There are two critical aspects to CAA section 112(d)(5). First, CAA section 112(d)(5) applies only to those categories and subcategories of area sources listed pursuant to CAA section 112(c). The commenter does not dispute that EPA listed the nine area source categories noted above pursuant to CAA section 112(c)(3). Second, CAA section 112(d)(5) provides that, for area sources listed pursuant to CAA section 112(c), EPA "*may, in lieu of*" the authorities provided in CAA section 112(d)(2) and 112(f), elect to promulgate standards pursuant to CAA section 112(d)(5). CAA Section 112(d)(2) provides that emission standards established under that provision "require the maximum degree of reduction in emissions" of HAP (also known as MACT). CAA section 112(d)(3), in turn, defines what constitutes the "maximum degree of reduction in emissions" for new and existing sources. See CAA section 112(d)(3).[6] Webster's dictionary defines the phrase "in lieu of" to mean "in the place of" or "instead of." See Webster's II New Riverside University (1994). Thus, CAA section 112(d)(5) authorizes EPA to promulgate standards under CAA section 112(d)(5) that provide for the use of GACT, *instead of* issuing MACT standards pursuant to CAA section 112(d)(2) and (d)(3). The statute does not set any condition precedent for issuing standards under CAA section 112(d)(5) other than that the area source category or subcategory at issue must be

[6] Specifically, CAA section 112(d)(3) sets the minimum degree of emission reduction that MACT standards must achieve, which is known as the MACT floor. For new sources, the degree of emission reduction shall not be less stringent than the emission control that is achieved in practice by the best controlled similar source, and for existing sources, the degree of emission reduction shall not be less stringent than the average emission limitation achieved by the best performing 12 percent of the existing sources for which the Administrator has emissions information. CAA Section 112(d)(2) directs EPA to consider whether more stringent emission reductions (so called beyond-the-floor limits) are technologically achievable considering, among other things, the cost of achieving the emission reduction.

one that EPA listed pursuant to CAA section 112(c), which is the case here.[7]

The commenter argues that EPA must provide a rationale for issuing GACT standards under CAA section 112(d)(5), instead of MACT standards. The commenter is incorrect, however. Had Congress intended that EPA first conduct a MACT analysis for each area source category, and only if cost or some other reason made applying the MACT standard inappropriate for the category, would EPA be able to issue a standard under CAA section 112(d)(5), Congress would have stated so expressly in CAA section 112(d)(5). Congress did not require EPA to conduct any MACT analysis, floor analysis, or beyond-the-floor analysis, before the Agency could issue a CAA section 112(d)(5) standard. Rather, Congress authorized EPA to issue GACT standards for area source categories listed under CAA section 112(c), and that is precisely what EPA has done in this rulemaking.

Although EPA has no obligation to justify why it is issuing a GACT standard for an area source category as opposed to a MACT standard, we did explain at proposal that being able to consider costs and economic impacts is important when establishing standards for categories like these with many small sources. Furthermore, EPA must set a GACT standard that is consistent with the requirements of CAA section 112(d)(5) and have a reasoned basis for its GACT determination. As explained in the proposed rule and below, in determining what constitutes GACT for a particular area source category, EPA evaluates the control technologies and management practices that reduce HAP emissions that are generally available for the area source category. See 73 FR 58354. The legislative history supporting CAA section 112(d)(5) provides that EPA may consider costs in determining what constitutes GACT for the area source category.[8] EPA cannot consider cost in setting MACT floors, pursuant to CAA section 112(d)(3). Congress plainly recognized that area sources differ from major sources, which is why Congress permitted EPA to consider costs in setting GACT standards for area sources under CAA section 112(d)(5), but did not permit that consideration in setting MACT floors for major sources. This important dichotomy between CAA section 112(d)(3) and CAA section 112(d)(5) provides further evidence that Congress sought to do precisely what the title of CAA section 112(d)(5) states—provide EPA the authority to issue "[a]lternative standards for area sources."

Notwithstanding the commenter's claim, EPA properly issued standards for the area source categories at issue here under CAA section 112(d)(5), and cost-effectiveness was not the only consideration in setting the standards. As stated in the preamble to the proposed rule:

> Determining what constitutes GACT involves considering the control technologies and management practices that are generally available to the area sources in the source category. We also consider the standards applicable to major sources in the same industrial sector to determine if the control technologies and management practices are transferable and generally available to area sources. In appropriate circumstances, we may also consider technologies and practices at area and major sources in similar categories to determine whether such technologies and practices could be considered generally available for the area source category at issue. Finally, as noted above, in determining GACT for a particular area source category, we consider the costs and economic impacts of available control technologies and management practices on that category.

73 FR 58354, October 6, 2008.

As the commenter noted, EPA proposed emission standards for eight identified emission sources at chemical manufacturing area sources: Continuous process vents; batch process vents; metal HAP process vents; storage tanks; cooling tower systems; equipment leaks; transfer operations; and wastewater systems. We also proposed to subcategorize continuous process vents, batch process vents, metal HAP process vents, storage tanks, cooling tower systems, and wastewater systems based on variations of the size and type of the facility or the affected operation. We reviewed the GACT applied at area sources in the chemical manufacturing source categories at issue for each of the emission sources covered in the proposed rule. In determining what was generally available, we first considered what was generally available for each category or subcategory of emission source based on what was being applied at facilities or for emissions sources of a similar size and/or type of facility or emission source. For example, for continuous process vents, we considered what controls and management practices were in place for units with a TRE greater than 1 and what controls and management practices were in place for units with a TRE less than 1. For batch process vents, we considered what controls and management practices were in place at facilities that emitted more than 19,000 lbs/yr of organic HAP emissions and what controls and management practices were in place at facilities that emitted less than 19,000 lbs/yr of organic HAP emissions. We also considered the control technologies and management practices employed by chemical manufacturing area sources already subject to standards, by facilities in other areas source categories, and by chemical manufacturing major sources. 73 FR 58366.

After determining what controls and management practices were generally available to the emission sources in the nine source categories at issue, we considered the costs and economic impacts associated with requiring the various controls and management practices before determining what constituted GACT for each emission source. The Agency specifically considered the cost-effectiveness of the different control technologies and management practices on the categories and subcategories of emission sources as a means of evaluating the costs of those emission standards. EPA evaluated the controls and management practices that were generally available and, in certain circumstances, determined that GACT was not add-on controls because the cost-effectiveness of such controls would not have been reasonable if applied to all facilities or emission sources in a given category or subcategory.

Contrary to the commenter's assertions, the Agency's consideration of cost-effectiveness in establishing GACT and the Agency's views on what is a cost-effective requirement under CAA section 112(d)(5) are relevant. The United States Court of Appeals for the District of Columbia Circuit has stated that cost-effectiveness is a reasonable measure of cost as long as the statute does not mandate a specific method of determining cost. See *Husqvarna AB* v. *EPA*, 349 U.S. App. D.C. 118, 254 F.3d 195, 201 (D.C. Cir. 2001) (Finding EPA's decision to consider costs on a per ton of emissions removed basis reasonable because CAA section 213 did not mandate a specific method of cost analysis). CAA section 112(d)(5) does

[7] CAA Section 112(d)(5) also references CAA section 112(f). See CAA section 112(f)(5) (entitled "Area Sources" and providing that EPA is not required to conduct a review or promulgate standards under CAA section 112(f) for any area source category or subcategory listed pursuant to CAA section 112(c)(3), and for which an emission standard is issued pursuant to CAA section 112(d)(5)).

[8] Additional information on the definition of "generally available control technology or management practices" (GACT) is found in the Senate report on the 1990 amendments to the CAA (S. Rep. No. 101–228, 101st Cong. 1st session. 171–172). That report states that GACT is to encompass:

> * * * methods, practices and techniques which are commercially available and appropriate for application by the sources in the category considering economic impacts and the technical capabilities of the firms to operate and maintain the emissions control systems.

not mandate a specific method for considering cost when setting GACT standards.

The commenter has provided no information to support the argument that add-on control requirements for process vents, storage tanks, and heat exchange systems are generally available for all such emission sources in each of the subcategories. The commenter also failed to provide any information indicating that our cost-effectiveness determinations were unreasonable and, likewise, failed to provide any information concerning the economic impacts associated with requiring the standards that the commenter suggests represent GACT. The commenter appears to take issue with the manner in which the Agency establishes GACT but provides no alternative approach, instead only attacking the Agency's consideration of cost (*i.e.*, cost-effectiveness) as a consideration in the establishment of GACT. The Agency proposed GACT standards for the nine chemical manufacturing area source categories and subcategories that were established consistent with the requirements of CAA section 112(d)(5).

Comment: To avoid duplicative and conflicting requirements and to minimize burden, several commenters requested clarification of requirements when parts of an affected source under the area source NESHAP are also subject to requirements under other rules. Collectively, the commenters requested that the final rule address overlap with Part 60 NSPS in subparts Kb, VV, VVa, DDD, III, NNN, RRR, and the proposed YYY; Part 61 NESHAP in subparts V (as referenced from subparts F and J), L, Y, BB, and FF; subparts AA, BB, and CC in parts 264 and 265; State and local leak detection and repair (LDAR) requirements; other area source rules; and permit requirements that incorporate MACT standards. The commenters made three types of suggestions: (1) Specify that compliance with provisions in the other rule demonstrates compliance with the requirements in 40 CFR part 63, subpart VVVVVV, (2) allow compliance with whichever rule is the most stringent, or (3) exempt sources from the requirements in the area source rule when another rule applies. For example, one commenter requested that compliance with any existing Federal, State, local, or permitted LDAR requirements be allowed to demonstrate compliance with the subpart VVVVVV equipment leak standards, provided the current requirements are at least as stringent as the final subpart VVVVVV standards. This commenter also requested exclusions from the wastewater standards for any wastewater stream that is subject to 40 CFR part 61, subpart FF, whether or not treatment is required under subpart FF, and for any wastewater streams that become subject to 40 CFR part 60, subpart YYY after the compliance date of subpart YYY. Another commenter stated that when more than one area source rule applies, sources should be allowed to opt for compliance with the more stringent requirements.

Response: Provisions regarding overlap between 40 CFR part 63, subpart VVVVVV and other rules are included in the final rule. Compliance with provisions in overlapping rules as a means of demonstrating compliance with this final rule is allowed to the extent that requirements in the overlapping rule are at least as stringent as the requirements in subpart VVVVVV. For example, if the emission limits, monitoring requirements, and associated recordkeeping and reporting requirements in the overlapping rule are all at least as stringent as the requirements in subpart VVVVVV, then compliance with the overlapping rule demonstrates compliance with subpart VVVVVV. Conversely, if all of the provisions in subpart VVVVVV are more stringent than the corresponding requirements in the overlapping rule, then the final rule requires compliance with all of the provisions in subpart VVVVVV. In all other situations where some provisions in the overlapping rule are more stringent and others are less stringent than those in this final rule, an owner or operator may demonstrate compliance with the final rule by complying with all of the most stringent requirements, whichever rule they are from. Specifically, to comply with any requirement (emission limit, monitoring requirement, recordkeeping requirement, and/or reporting requirement) in an overlapping rule as an alternative to the requirement in subpart VVVVVV, an owner or operator must first determine that the requirement in the overlapping rule is at least as stringent as the corresponding requirement in subpart VVVVVV. This determination also must be documented in the notification of compliance status or, for processes added in the future, in the semiannual compliance report that covers the period when the process starts up. The final rule also states that sources are responsible for making accurate determinations concerning the more stringent standard and noncompliance with this rule is not excused if it is later determined that the source was in error in its initial notification of compliance and, as a result, is violating this rule. Compliance with this rule is the responsibility of the affected source regardless of any notification of compliance or semiannual compliance report.

Although the final rule includes these provisions for minimizing the compliance burden associated with overlapping rules, we did not include all of the commenters' other suggestions, for the reasons discussed below.

We disagree with one commenter's suggestion that a wastewater stream subject to 40 CFR part 61, subpart FF, but exempt from treatment under subpart FF should also be exempt from treatment requirements under 40 CFR part 63, subpart VVVVVV. The subpart FF requirements apply to the benzene content of the stream (or the total benzene in all waste). The benzene content has no relationship to the urban HAP (or other PSHAP) content of the stream. Therefore, treatment in accordance with subpart FF satisfies the treatment requirement under the final rule, but a stream that contains PSHAP and is exempt from treatment under subpart FF must receive treatment under this final rule.

40 CFR part 63, Subpart VVVVVV and another area source rule should never apply at the same time because the affected sources do not overlap. However, equipment could be subject to subpart VVVVVV and either the chemical preparations or paint and allied products area source rules at different times depending on what is being produced. In these situations, sources should comply with each rule, whenever it is applicable. Alternatively, the owner or operator may determine the most stringent requirements in the applicable rules and comply with that combination of requirements at all times.

Coke by-product recovery plants are not part of the chemical manufacturing area source category (*i.e.*, they are described by NAICS 324199, All Other Petroleum and Coal Products Manufacturing); therefore, 40 CFR part 61, subpart L does not overlap with 40 CFR part 63, subpart VVVVVV.

Comment: Several commenters stated that the proposed management practice requirements for process vents and storage tanks should not be finalized. Each of these commenters objected to the management practice requirements for one or more of the following reasons: (1) The proposed requirements are not GACT because they are not industry practice, are not required in other rules, achieve little or no emission reduction, and cost more than EPA has estimated;

(2) some equipment is not designed to operate with covers or enclosed, often because to do so would jeopardize the physical integrity of the unit (*i.e.*, pressure/vacuum vents on storage tanks); and/or (3) the requirements duplicate and/or potentially conflict with the proposed requirements for equipment leaks.

Several commenters made additional points. Two commenters stated that operating under vacuum should be exempted from or allowed as an alternative to having all closure mechanisms in the closed position. One commenter stated that equipment integrity verification procedures that are part of CGMP required by the U.S. Food and Drug Administration for pharmaceutical production processes should be recognized as an acceptable alternative to the management practices. One commenter requested an exemption from inspection requirements for inaccessible and unsafe openings, and another commenter noted that the burden estimates did not appear to reflect the cost to inspect openings that are not generally accessible. One commenter stated that, in order to protect themselves against disagreements with enforcement agencies, facilities will feel the need to use instrument-based LDAR techniques instead of the required sensory-based inspections.

One commenter indicated that facilities supplement applicable equipment leak regulations by having operation personnel watch for AVO indications of a hydrocarbon leak during their rounds, but they do not specifically check "openings" in equipment. Another commenter suggested that EPA rely on the equipment leak provisions because many of the elements in the proposed management practice requirements are already addressed in the equipment leak provisions.

Several commenters presented estimates of the level of effort and costs to implement the proposed management practices. One commenter estimated that total setup and training time would involve 100 hours for operations personnel, 20 hours of technical time, and 10 hours of administrative support. This commenter also estimated 20 to 40 hours to conduct each inspection, and an additional 5 to 10 hours of administrative support per inspection to manage the program.

A second commenter estimated 40 hours of engineering time to develop the initial list of openings and equipment, and 4 hours per year to maintain the list. In addition, this commenter estimated each inspection would take 24 hours of technician time, and a cost of several thousand dollars would be incurred for scaffolding and man-lift rentals. Overall, this commenter estimated the average cost to be about $6,000/yr per facility; however, the commenter estimated the cost for one facility would be cut by a factor of 5 if the rule applied only to processes using or emitting urban HAP rather than all processes.

A third commenter estimated the cost for process vent inspections to be about $1,200/yr rather than the $300/yr estimated by EPA because of the potentially large number of process vents that would have to be considered under the proposed applicability requirements.

A fourth commenter estimated 4 hours per process for setup of the data management system, 1.25 hours per inspection per process, and a contractor fee of $125/hr.

Response: In consideration of the specific comments on management practices as well as comments above regarding the scope of the affected source, we have made several changes to the proposed management practices. We made these changes because the proposed management practice requirements were redundant for CMPU with both batch and continuous process vents because the proposed requirements for both emission points applied to all process equipment. In addition, a more streamlined approach reduces the compliance burden without causing an increase in emissions.

In the final rule, the various proposed management practices for process vents, equipment leaks, transfer operations, and storage tanks were consolidated and simplified into one comprehensive set of management practices that are applicable to each affected CMPU. The comprehensive management practices in the final rule include requirements to equip each vessel with a cover or lid that must be in place when the vessel contains HAP (except for material addition and sampling) and to conduct sensory inspections for leaks throughout each affected CMPU on a quarterly basis. The proposed inspections for equipment leaks are included without change in the final management practice requirements, but the final rule also requires comparable inspections for leaks from process equipment in a CMPU (*e.g.*, reactors, distillation units, process tanks) and for storage tanks that are part of a CMPU and that store liquid that contains any Table 1 organic urban HAP.

We have also reevaluated the costs of the management practices. In the proposal, we estimated the cost of inspections for equipment leaks to be $1,187 per year per affected facility. This estimate included initial costs of $1,200 for 15 hours for planning and training that were annualized over 10 years plus estimated costs for quarterly inspection, recordkeeping, and program administration. The average time for an inspection and related recordkeeping was estimated to be 2 hours (8 hours per year) per facility, and an additional 7 hours per year were estimated for administration. We also estimated in the proposal that management practice inspections for batch process vents, continuous process vents, metal HAP process vents, and storage tanks each would take four hours per year, and that recordkeeping related to the inspections would require 1 hour per year. The total cost per inspection was estimated to be $276 per year (or $1,100/yr for a facility with all four types of emission points). This total is consistent with the low end of the range presented by commenters.

As discussed in sections III.A and V.A of this preamble, the final rule includes a narrower definition of the affected source and we believe that this will result in a lower level of effort for conducting the inspections required by the management practices. Instead of facility-wide inspections as anticipated at proposal, the final rule requires inspections only for CMPUs that use, generate or produce Table 1 urban HAP. Therefore, we think that the overall estimates from commenters are higher than warranted for the final rule. This is supported by one commenter's estimate of $240/yr (instead of $1,200/yr) for management practice costs if the inspections apply only to process units containing chemical manufacturing urban HAP.

The overall time estimated for the final management practice requirements is less than the total time for the proposed equipment leak inspections and management practices for process vents and storage tanks. This is due to fewer process units being subject to management practice requirements under the final rule. For the final standards, we assumed 3 hours for each inspection of an average affected facility with organic HAP and 2 hours for each inspection of an average facility with metal HAP. The estimated time is lower for facilities with metal HAP because the inspections will be focused more on openings than on leak points (*e.g.*, inspections of pumps and valves are not relevant because metal HAP is only released from process units). We also assumed 2 hours per year for recordkeeping at an average facility. Overall, the inspection and recordkeeping time was estimated to be

14 hrs/yr per facility for organic HAP and 10 hrs/yr per facility for metal HAP. We also estimated that the average initial planning and setup costs for management practices is the same as the proposed estimate for the equipment leak inspections. As a result, the total cost was estimated to be $1,500 per year for an affected facility with organic HAP and $1,200 per year for an affected facility with metal HAP emissions. These estimates are in reasonable agreement with the estimates of costs for management practices put forth by several of the commenters that suggested the applicability of the rule be based on the CMPUs using Table 1 HAP as opposed to the entire facility as in the proposed rule.

One commenter stated that some equipment is not designed to operate with covers or enclosed, often because to do so would jeopardize the physical integrity of the unit, but the commenter only listed pressure/vacuum vents on storage tanks. Because pressure/vacuum vents are not openings as we contemplate them in the final rule, and are instead part of the necessary design of certain tanks used for storage, we have determined that there is no need to amend the final rule to address this comment.

2. Batch and Continuous Process Vents

Comment: One commenter supported the proposed GACT control level of 90 percent for batch process vents as a reasonable approach for pharmaceutical manufacturing area sources. Other commenters, however, stated that the proposed control levels for both batch process vents and continuous process vents are too high to be GACT. According to one commenter, most State implementation plans (*e.g.*, Ohio) contain volatile organic compounds (VOC) reasonably available control technology (RACT) requirements that set control efficiency between 81 and 90 percent. Instead of using combustion controls that are typical at major sources, this commenter further stated that area sources most likely use condensers, carbon adsorption systems, or other material recovery systems, which have emission removal efficiencies in the 85 to 95 percent range. Therefore, the commenter encouraged EPA to adopt 85 percent removal as GACT for both batch process vents and continuous process vents. According to another commenter, the control level at existing sources should be set at 90 percent for combustion devices other than flares and 80 percent for process condensers. This commenter noted that a condenser at one of their facilities is permitted for 85 percent control and pointed out that the efficiency of condensers varies with changes in ambient temperature, humidity, and the type and concentration of HAP in the emission stream.

In addition to (or instead of) changing the required control level, several commenters suggested that existing controls be grandfathered because it would not be cost-effective to replace them. For example, one commenter suggested grandfathering any control equipment currently in compliance with State air pollution rules and permits until the next reconstruction or replacement of the control device or 10 years after the effective date of the rule, whichever occurs first. Another commenter requested grandfathering provisions for control devices achieving at least 80 percent reductions, either voluntarily or in accordance with State rules or permits. Another commenter stated that EPA should grandfather controls installed recently to meet RACT requirements.

Response: Based on comments received on the control efficiency requirements, we have reviewed and revised the GACT analysis for batch process vents. At proposal, detailed information on the control levels achieved at area sources was limited. Because we had limited control information, we pointed to various control level data at major source facilities in the source categories of interest and we assumed that these major source controls were used at or were transferable to area sources. Multiple commenters pointed out that the control efficiency requirement in the proposal was too high and reflective of major sources only and was not consistent with the typical control efficiencies achieved for batch process vents at their area source facilities. Multiple comments provided information that the control efficiency at area sources was lower than the control levels achieved at major sources. Commenters stated that control efficiency at an area source is in the range of 81 percent to 95 percent. Commenters also noted that area sources use condensers and recovery systems with control efficiencies lower than 90 percent. Based on a revised cost analysis, which considers existing control devices and efficiencies, we have determined that the GACT control efficiency for existing batch process vents should be 85 percent. We estimated that 13 process units that will be subject to the emission limit for batch process vents in the final rule are not already controlled to at least 85 percent. The total annual costs to control the batch process vents in these process units are estimated to be $360,000 and the cost-effectiveness is estimated to be $8,500/ton organic HAP. We do not have sufficient information to estimate the number of process units that have batch process vents controlled to levels between 85 percent and 90 percent. Based on the comments, there may be many such processes. However, if there are as few as two such processes (*i.e.*, total of 15 process units controlled to less than 90 percent), the total annual costs are estimated to be $0.43 million/yr, and the incremental cost-effectiveness relative to the 85 percent control option is estimated to be $13,500/ton. This cost is unreasonable; therefore, we have determined GACT for batch process vents at existing sources is 85 percent control and not 90 percent control. We are finalizing the proposed requirements for batch process vents at new sources (90 percent control) because the estimated cost-effectiveness relative to uncontrolled vents is reasonable ($2,300/ton as proposed).

The commenters have provided no legal analysis in support of their request that we grandfather existing controls as suggested. However, given the change to the control requirements for batch vents, we believe we have resolved the commenters' concerns with the proposed rule and established final GACT standards that reflect the efficiencies generally available at area sources. We have not revised the GACT control efficiency for new batch process vents or new and existing continuous process vents because we continue to believe that the standards that we are finalizing are generally available and reasonable from a cost perspective.

Comment: Several commenters requested that the MON batch process vent definition be used to be consistent with the preamble, database, other regulations applicable to chemical manufacturing, and general industry practice. Another commenter requested exclusions from the definition for the following: Opening of a safety device, heating, ventilation, and air conditioning exhaust vents, storage tank vents, and wastewater treatment unit vents.

One commenter asked that EPA exclude emissions from bottles and other containers from the batch process vent definition. According to the commenter, emissions from these containers are negligible and controlling them was not considered in the rulemaking record, is not cost-effective, and does not reflect GACT.

Response: As noted in the response to a comment about subcategorization of batch process vents later in this section,

applicability and standards for control of batch process vents in the final rule are consistent with the MON. Therefore, the definition for the term "batch process vent" is very similar to the definition of this term in the MON. A key feature of this definition is that it cites examples of equipment with emissions that may be batch process vents, and it specifies types of streams that are not batch process vents. For example, the definition states that storage tanks, surge control vessels, and bottoms receivers do not have batch process vents (because they are classified separately and subject to separate standards). Process tanks, however, do have batch process vents. Process tanks collect material discharged from a feedstock storage tank or unit operation within the process, discharge the material to another unit operation or product storage tank, have emissions related to the characteristics of the batch cycle, and do not accumulate product over multiple batches.

Comment: Several commenters asked that 40 CFR 63.11496(a)(1) be revised to allow alternatives to the referenced emissions calculations procedures in 40 CFR 63.1257(d)(2)(i) of the Pharmaceuticals Production NESHAP because the referenced procedures are difficult, costly, and do not allow the use of historical information. For example, one commenter requested that area sources be allowed to use mass balances, other calculation methodologies published by EPA (such as AP–42 and control techniques guidelines), and other technically acceptable methods (otherwise, the commenter estimated that small sources would need to spend $5,000 to $10,000 for emission estimation software).

Two commenters encouraged EPA to allow use of the emissions calculations procedures in 40 CFR 63.1323(b) and (e) of the Polymers and Resins IV NESHAP. One commenter asked that calculation procedures in the Batch Alternative Control Techniques (ACT) document be allowed, and another commenter asked that area sources be allowed to use (1) engineering estimates (in accordance with 40 CFR 63.1257(d)(2)(ii)) for any calculation rather than only if the 40 CFR 63.1257(d)(2)(i) procedures do not apply, (2) existing emissions calculations developed for compliance with a State or Federal rule for batch process vents, and (3) procedures to back-calculate uncontrolled emissions using inlet HAP and VOC concentrations based on controlled outlet permit limits, control removal capability, or knowledge of HAP and VOC concentrations in the vent (if not indicated in permit).

Response: Emissions must be calculated to determine whether the batch process vents are in the subcategory of greater than or equal to uncontrolled emissions of 10,000 lbs/yr, which requires management practices and compliance with emissions limits and control requirements, or in the subcategory of less than 10,000 lbs/yr of uncontrolled emissions, which requires only management practices for the process. For the purpose of this determination at area sources, we have concluded that all of the methods suggested by the commenters to calculate uncontrolled emissions at area sources are acceptable. Having choices also reduces the burden on affected sources. Therefore, the final rule specifies that organic HAP emissions from batch process vents may be estimated using process knowledge, engineering assessments, or test data. The procedures specified in 40 CFR 63.1257 of subpart GGG, in the Polymers and Resins IV rule, or in the Batch ACT are classified as engineering assessments.

Comment: One commenter stated that the GACT analysis for batch process vents is flawed and inconsistent with rule applicability. The commenter noted that batch process vent control requirements should be on a process unit basis to better reflect the Agency's analysis, industry practice, and GACT. This commenter also stated that the control threshold of 19,000 lb/yr HAP emissions for batch process vents is GACT, but only if EPA adopts a process unit basis.

Another commenter asked that EPA sharply limit control requirements for process vents in order to achieve GACT. To do this, the commenter suggested limiting source applicability to a process unit basis, setting a threshold for control at 10,000 lbs/yr/process as in MON, and requiring only management practices for all affected process units below 10,000 lbs/yr/process.

Response: It appears the commenters are addressing the basis for the proposed subcategorization of batch process vents. As we noted in the preamble for the proposed rule, the CAA provides EPA authority to distinguish among classes, types or sizes of sources within a source category. For the proposal, we concluded that "factors relating to the type of operation (high solvent use) and size of operation (based on the number of batches) provide a reasonable basis for subcategorization" of batch process vents. The commenters did not address application of these factors directly, but they stated that control requirements should be applied on a process unit basis. The process unit construct is consistent with standards for batch process vents in several MACT standards. We have considered this point in response to comments on applicability and concluded that the factors we considered at proposal in support of our subcategorization determinations for the entire facility apply equally to individual CMPUs. Furthermore, as noted above, the affected source for the final rule is defined as the collection of specific CMPUs that use, generate, or produce Table 1 HAP rather than the entire chemical manufacturing operations. Therefore, for the final rule, we determined that establishing subcategories based on individual CMPUs is also appropriate.

For the proposal, we "considered the relative emissions reduction and costs for the area sources in the category in determining the appropriate emissions level at which to subcategorize the batch process vents." Specifically, we established two subcategories based on whether the total organic HAP emissions from all batch process vents in the entire affected source are less than 19,000 lbs/yr or equal to or greater than 19,000 lbs/yr. One commenter stated that this threshold is reasonable, but only if it is applied to an individual CMPU. Another commenter suggested using a threshold of 10,000 lbs/yr per CMPU.

We considered both suggestions. We do not believe 19,000 lbs/yr per CMPU is appropriate because the 19,000 lb threshold was intended to represent emissions from multiple CMPUs, several of which may not be part of the affected source under the final rule because we changed the scope of the rule to cover only those CMPUs that emit one of the chemical manufacturing urban HAP. Based on the results of a survey of five facilities by one commenter, area sources have, on average, two CMPUs that use, generate, or produce Table 1 HAP. Facilities in the MON database with urban HAP emissions also had an average of two process units with urban HAP emissions. A threshold of 10,000 lbs/yr per process was also used in the MON and that provides indicia of the size of a CMPU because the MON applies to major sources of HAP. Furthermore, as discussed in the response to another comment in this section, the estimated costs to meet an 85 percent control requirement for existing CMPUs with uncontrolled organic HAP emissions equal to or greater than 10,000 lbs/yr are reasonable ($8,700/ton). Therefore, we have established two subcategories for

the final rule. One subcategory is for batch process vents with uncontrolled organic HAP emissions less than 10,000 lbs/yr per CMPU, and the other is for batch process vents with uncontrolled organic HAP emissions equal to or greater than 10,000 lbs/yr per CMPU.

Comment: Three commenters suggested that the definition of "continuous process vent" should be consistent with the definitions in other rules such as the HON, MON, and/or Generic MACT (40 CFR part 63, subpart YY). One commenter requested this change because the proposed definition does not reflect the description given in the preamble, the supporting analyses, the rulemaking database, industry practice, or other chemical industry regulations. Another commenter requested that definitions for items that are exempted from the definition of "continuous process vent" such as "relief device or valve" and "equipment leak" be added to the rule.

Response: The final rule includes a definition for "continuous process vent" that is consistent with the definition of "process vent" in 40 CFR 63.101 and 40 CFR 63.107 of the HON. Terms or items in the definition mentioned by the commenters have the same meaning given in the HON.

Comment: One commenter recommended that small continuous process vents (*i.e.*, <0.1 lb/hr and <800 lbs/yr) be exempt from requirements to calculate a TRE value because the commenter estimated that the lowest TRE index for a HAP emission stream with these characteristics would be 30 or higher. Another commenter estimated the burden of establishing the variables needed to calculate the TRE index to be at least 4 hours per process vent.

Response: We have considered this issue and determined that, at an emission rate of 0.1 lb/hr, the TRE will be well above 1.0 regardless of other characteristics of the stream (*e.g.*, type of HAP, HAP concentration, and ratio of HAP to total VOC). The minimum TRE is obtained for streams with high concentrations of organic compounds. For streams containing common non-halogenated HAP (*i.e.*, benzene, toluene, and/or methanol), the lowest TRE values were determined to be between 16 and 30. As the concentration of these HAP decreases (due to increased air and other VOC in the emission stream) the TRE increases, typically to values above 30, as noted by the commenter. For streams with the halogenated compound methylene chloride, the minimum and typical TRE values were determined to be over 80. Therefore, to minimize the burden of characterizing streams, the final standards specify that calculation of the TRE is not required if the organic HAP emission rate is less than 0.1 lb/hr. We did not include a corresponding annual mass limit (*i.e.*, 800 lbs/yr, which is approximately equal to 0.1 lb/hr venting continuously for an entire year) because the TRE varies with changes in the operating hours per year. For a process that operates only a few weeks during the year, emissions of 800 lbs could result in a TRE less than 1.0.

Comment: One commenter stated that the impacts analysis for batch process vents is unrealistic and incomplete. According to this commenter, a more appropriate cost evaluation would include several batch vents per process, several processes per site, and either multiple control devices or expensive collection systems. In addition, the commenter stated that the cost analysis for incinerators should include the cost of halogen scrubbers when halogenated organics (*e.g.*, methylene chloride) are controlled in the incinerator. The commenter further stated that more widespread use of combustion devices in place of or in addition to existing scrubbers and condensers would be needed to meet the facility-wide 90 percent reduction requirement. Even if existing controls are grandfathered, the commenter stated all sites with emissions in the subcategory subject to control would incur costs to meet performance test, monitoring, recordkeeping, and reporting requirements.

One commenter stated that the impacts analysis for continuous process vents must include costs associated with existing controls, including control upgrades, performance tests, monitoring, and recordkeeping and reporting. Even with grandfathering of controls, all continuous process vents with TRE ≤1.0 would have to meet performance test, monitoring, and recordkeeping and reporting requirements.

Response: We have reevaluated the costs for control of batch process vents because the final rule applies to a smaller affected source than the proposed rule. We have also reevaluated the costs because the analysis in the proposed rule did not account for facilities that are achieving some level of control, but less than the required percent reduction. As stated above, we have also redefined GACT as 85 percent control for existing batch process units (90 percent for new units) that have uncontrolled organic HAP emissions equal to or greater than 10,000 lbs/yr, and our cost analysis at proposal was based on 90 percent control for batch process vents subject to emission limits.

In reevaluation of the costs, we concluded that information regarding the number of CMPU per area source, the number of CMPU with emissions of chemical manufacturing organic urban HAP, the fraction of total organic HAP emissions from batch process vents in process units with chemical manufacturing organic urban HAP, the typical control levels, flow rates, concentrations, operating hours, and other relevant data are either lacking or limited. Therefore, information from the baseline facility database from development of the MON was extrapolated to area sources. Details of this revised analysis are in the docket, but a summary of the analysis is set forth below.

We estimated that four facilities have uncontrolled batch process vent emissions from one CMPU with emissions greater than 10,000 lbs/yr per process. Another seven facilities have an estimated one or two CMPUs per facility with batch process vent emissions (for a total of nine CMPUs at the seven facilities) controlled to some level less than 85 percent. Information available to EPA indicates that each CMPU at the remaining facilities that have chemical manufacturing organic urban HAP emissions have uncontrolled batch process vent emissions less than 10,000 lbs/yr.

Based on this analysis, we estimated that the capital cost to add controls for the 13 CMPUs at 11 facilities that do not meet the 85 percent standard is $390,000, and the annual cost is $370,000/yr. These costs are based on the use of condensers. We do not believe incinerators will be needed, as suggested by a commenter, because the final standards apply to individual CMPUs (rather than facility-wide), and the required control for existing batch process vents (85 percent) can be averaged over all batch process vents within the CMPU. Because the analysis is based on the use of condensers, halogen reduction devices are not needed and have not been included in the analysis. Costs for performance tests (or design evaluations), monitoring, recordkeeping, and reporting are included in the final information collection request, not this cost analysis. The estimated HAP reductions are 43 tpy (versus 45 tpy at proposal). Thus, the cost-effectiveness is $8,700/ton of organic HAP reduced, which we consider to be reasonable for GACT.

For continuous process vents, we have not changed the cost impacts to include control equipment upgrades. Typically, if a continuous process vent is controlled in the absence of a regulatory driver, the vent has relatively

large emissions. We anticipate that such controls will be achieving the required 95 percent reduction requirement. Performance test, monitoring, recordkeeping, and reporting costs are estimated in the information collection request. We have updated these costs in two ways. First, we increased the number of affected facilities that must conduct initial and ongoing compliance to include facilities with controlled continuous process vents. Second, we increased the percentage of facilities that will conduct design evaluations instead of performance tests because the final rule allows design evaluations for all control devices used to reduce emissions from continuous process vents. Monitoring, recordkeeping, and reporting costs are minimal in the current information collection request because it covers only the 3 years after the promulgation date. Most existing sources will not be in compliance during this time because the compliance date is 3 years after promulgation. Subsequent information collection requests will have higher costs for these activities.

3. Metal HAP Process Vents

Comment: Several commenters recommended that EPA apply the threshold for control on a vent basis rather than facility-wide because the commenters interpreted the impacts analysis as applying to model plants where all emissions were assumed to come from a single vent and routed to a single control device. Two commenters noted that, unlike organic HAP, particulate-containing emission streams can be ducted only small distances. Numerous commenters recommended using the proposed 400 lbs/yr threshold for control rather than the alternative proposed threshold of 100 lbs/yr because the incremental cost to lower the threshold from 400 lbs/yr to 100 lbs/yr is unreasonable at an incremental cost-effectiveness of $33,660 per ton of particulate and $442,000 per ton of metal HAP.

Response: After careful consideration, we have decided to set the threshold for the subcategory of metal HAP process vents that are subject to emission limits of 95 percent reduction at the proposed level of 400 lbs/yr, for each CMPU that emits a Table 1 metal HAP (not the entire facility, as proposed). We selected the CMPU basis rather than the proposed facility-wide basis for the same reasons as for organic HAP process vents (see response above), although we estimate that a higher percentage of facilities that emit Table 1 metal HAP subject to this control requirement have only a single process that emits metal HAP, which means the affected source on a CMPU basis under the final rule may be the same as the facility-wide affected source under the proposed rule.[9] For example, the four largest emitters all make electrolytic manganese dioxide. Even if these facilities make the product in multiple processing "lines," they have only a single CMPU under the rule because a CMPU is defined based on the product produced. Many other facilities make inorganic pigments, catalysts, or animal feed products. These facilities likely make a number of products with slight variations that are grouped in "families" that qualify as a single CMPU under the rule. For example, these manufacturers may make a variety of similar products that differ only in the form or purity of the final product (such as powders versus pellets), or the animal feed products may differ only in the specific mix of additives. But in each case, the metal HAP feedstock is the same, the processing steps and emissions are comparable, and the end-use or functionality of each product is the same; therefore, the activities would all be part of a single CMPU under this rule.

As we stated above, the final rule requires consideration of emissions from all vents associated with a CMPU when determining if the threshold for the 400 lbs/yr or greater subcategory is exceeded. We did not base the threshold for the subcategory on the emissions levels from individual vents because the CMPU may emit metal HAP from a number of different steps such as roasting, calcining, grinding, blending, drying, and packaging. The end result of basing the emission rate threshold on a vent basis would be to drastically reduce the urban HAP emission reductions under the rule.

Under the final rule, we estimate that up to 3 of the 30 facilities with uncontrolled metal HAP emissions greater than 400 lbs/yr on a facility basis may not be part of the subcategory when the threshold is applied on a CMPU basis.

In the preamble to the proposed rule, as part of our subcategorization discussion, we determined that the level of metal HAP emissions from the vents is a function of the purpose for which the metal HAP is present in the process. We found that emissions varied according to whether the metal HAP were intended to be incorporated into the product of the chemical manufacturing process and that metal HAP emissions from those types of facilities were generally larger where the metal was incorporated into the product. We also identified some vents that emit larger amounts of metal HAP, even though the metal HAP is not incorporated into the final product, and we determined that, in those circumstances, there were likely higher metal HAP emissions because of the large size of the facility or because the facility is using raw materials and/or fuel with higher levels of metal HAP impurities. We concluded that it was appropriate to base the subcategory on the amount of emissions of metal HAP from the process vents as a proxy for the type and size of the vent. In determining the appropriate emissions level, we considered relative emissions reductions and costs to the affected area sources and co-proposed subcategorizing based on either 100 lbs/yr or 400 lbs/yr of metal HAP emissions. We received no adverse comments on the proposed subcategorization approach.

The preamble to the proposed rule stated that costs for both the 100 lbs/yr and 400 lbs/yr thresholds are comparable to costs for PM control in other area source rules and for mobile sources. However, as noted above, numerous commenters stated that the incremental costs do not justify the 100 lbs/yr threshold and recommended selecting the 400 lbs/yr threshold. We recognize that the incremental cost for PM would be at the high end of the range of costs for other area source rules. The high incremental cost-effectiveness reflects a small incremental PM reduction (40 tpy from 25 facilities), and, in regards to the basis for the subcategory, the 400 lbs/yr level indicates a much higher emission potential (*i.e.*, size of facility) and we have decided that the 400 lbs/yr threshold best defines the subcategory. We received no adverse comments on the proposed 400 lbs/yr threshold.

4. Storage Tanks

Comment: Two commenters asked that the storage tank requirements be based on the organic HAP partial vapor pressure instead of the VOL vapor pressure, as specified in 40 CFR part 60, subpart Kb because it is the HAP that are subject to standards.

Response: Most rules in 40 CFR part 63 (*i.e.*, NESHAP rules) establish MTVP thresholds for total organic HAP because HAP is the regulated pollutant.

[9] We assumed at proposal that facilities emitting Table 1 metal HAP would generally have one process so the change of affected source from the facility to the CMPU does not require us to reevaluate our subcategorization determination as with the change in batch process subcategories. The factors we considered in establishing the subcategories for metal HAP process vents at proposal still apply under this final rule.

This area source rule also regulates only HAP. As with the other rules, we intended to base the MTVP thresholds in the proposed rule on organic HAP, but we inadvertently neglected to override the provisions in the referenced section of 40 CFR part 60, subpart Kb that specify the threshold is based on the MTVP of the entire VOL. We have corrected this error in the final rule. Table 5 to the final rule specifies all applicable thresholds, and each MTVP threshold is based on the organic HAP vapor pressure.

Comment: Several commenters requested that the definition of "storage tank" be changed to match the language in the preamble to the proposed rule and/or definitions in MACT rules. Specific requested changes included: (1) Exclude wastewater storage because wastewater storage tanks are included under the wastewater provisions (similar to other MACT standards); (2) exclude bottoms receivers and surge control vessels because these vessels are typically used in the chemical industry as process vessels; (3) exclude process tanks to be consistent with language in the MON; (4) exclude waste tanks because they are ancillary to the process and are typically subject to regulation under the Resource Conservation and Recovery Act (RCRA) (40 CFR Parts 264/265 and Subpart BB); and (5) limit the definition to tanks that store liquid that contains any of the urban HAP listed in Table 1 to 40 CFR part 63, subpart VVVVVV, not all HAP.

Response: We have considered the comments and determined that using similar definitions across the multiple standards is appropriate. The definition in the final rule is consistent with the preamble and definitions in the MON, the HON, and the Pharmaceutical MACT. The definition of "storage tank" in the final rule excludes tanks storing organic liquids containing HAP only as impurities. It excludes process tanks because these tanks are subject to the process vent standards. Wastewater tanks are excluded from the definition of "storage tank." It also excludes surge control vessels and bottoms receivers because these vessels are associated with continuous process operations; note, however, that, as in the proposed rule, they are subject to the same standards as storage tanks (*i.e.*, all are subject to management practice requirements, and controls are required for those that contain Table 1 HAP and meet the same size and MTVP thresholds specified for storage tanks).

Comment: Several commenters asked that the rule include alternative storage tank control options such as vapor balancing, the procedures specified in 40 CFR part 63 subparts WW and SS, and the procedures specified in the Consolidated Federal Air Rule (CAR) (40 CFR part 65, subpart C).

Response: Vapor balancing is a technique whereby the vapor space of the storage tank is connected to the vapor space of a tank truck or railcar that contains liquid that will be transferred to the storage tank. As liquid from the tank truck or rail car is transferred to the storage tank, vapors displaced from the storage tank are routed back to the tank truck or railcar. This technique has been determined to provide at least equivalent reductions in HAP emissions as the use of an internal or external floating roof or routing displaced vapor to a control device, provided several conditions are met: (1) The tank vent pressure setting must be high enough to prevent breathing losses, (2) the tank truck or railcar must be vapor tight, and (3) the tank truck or railcar cleaning or reloading facility must also vapor balance or route the collected vapors to a control device.

The tank vent pressure setting must be high enough to prevent breathing losses because vapor balancing controls only the working loss emissions that are generated by filling the tank. As discussed in the preamble to proposed amendments to 40 CFR part 63, subpart GGG (69 FR 19161, April 10, 2000), we determined that a setting of at least 2.5 lbs per square inch gage will eliminate breathing losses from tanks.

If a system is leak-tight and very little or no air is drawn into the system to become saturated with HAP, a source of emissions is essentially eliminated. To ensure that the tank truck or rail car is vapor-tight, the vapor balancing provisions in MACT rules (*e.g.*, 40 CFR 63.1253(f) of the Pharmaceuticals Production NESHAP) require tank trucks and railcars to have a current certification in accordance with the U.S. Department of Transportation pressure test requirements of 49 CFR part 180 for tank trucks and 49 CFR 173.31 for railcars. To further ensure the system is leak tight, the vapor balancing provisions in MACT rules require that pressure relief devices on the storage tank and the railcar or tank truck from which the storage tank is filled shall not open during loading. To ensure that the applicable emission limit is met, vapor balancing provisions in MACT rules require that the cleaning or reloading facility shall implement vapor balancing when filling the tank truck or railcar or the tank truck or railcar shall be connected to a closed-vent system with a control device that reduces emissions by the required amount. Because GACT for storage tanks in the subcategory of larger tanks storing liquids with higher vapor pressures for which an emission control device is required at chemical manufacturing area sources is equivalent to the NESHAP requirements applicable to MON and HON facilities, we determined that vapor balancing requirements of the MON and HON also achieves HAP emission reductions at least equivalent to the emission reductions required by the standards set forth in this final rule. Therefore, the final rule allows vapor balancing in accordance with the provisions in 40 CFR 63.2470(e) of the MON as a compliance option for storage tanks at chemical manufacturing area sources.

Subpart WW in part 63 includes design, operational, and inspection requirements for internal and external floating roofs that are comparable to the GACT requirements that are based on 40 CFR part 60, subpart Kb. The primary difference between the two subparts is that subpart WW allows up to 10 years to come into full compliance with seal and deck fitting control requirements if the tank is currently equipped with a floating roof that does not meet these requirements. In the preamble to the final Gasoline Distribution Area Source NESHAP (40 CFR part 63, subpart BBBBBB) (73 FR 1926, January 10, 2008), we determined that the requirements in subpart WW are equivalent to the GACT requirements that were based on subpart Kb for gasoline distribution facilities. Since the GACT requirements for chemical manufacturing area sources are also based on subpart Kb requirements, implementing the subpart WW requirements at chemical manufacturing area sources also will achieve HAP reductions that are at least equivalent to the HAP reductions resulting from implementing the subpart Kb requirements. Therefore, the final rule allows compliance with subpart WW as an alternative compliance option, but without the 10 year compliance period. All storage tanks must be in full compliance by the relevant compliance date, as set forth in this final rule.

40 CFR part 63, subpart SS contains provisions for flare and non-flare control devices that are comparable to the requirements for control devices in 40 CFR part 60, subpart Kb. For example, both require the closed-vent system to operate with no detectable emissions as indicated by an instrument reading less than 500 parts per million (ppm) above background and visual inspections; subpart SS may even be more stringent in that it requires bypass monitoring and it specifies how frequently to conduct both instrument and visual inspections. Both subpart Kb

and subpart SS require the owner or operator to demonstrate initial compliance based on a design evaluation, although subpart SS provides more details of what to consider in the design evaluation, and subpart SS explicitly allows performance test results as a means to demonstrate initial compliance. Both subpart Kb and subpart SS also require the owner or operator to develop and operate in accordance with an operating or monitoring plan that specifies what parameter(s) will be monitored to demonstrate ongoing compliance with the percent reduction emission limit. Based on these similarities, we have determined that compliance with subpart SS will achieve HAP emission reductions at least equivalent to the reductions achieved by compliance with subpart Kb. Therefore, the final rule allows compliance with subpart SS as an alternative compliance option.

The CAR was developed as an alternative for facilities to comply with a single rule in place of a variety of different new source performance standards (NSPS) and NESHAP rules. We do not think it is appropriate to allow compliance with the CAR as an alternative for area sources subject to this final rule because 40 CFR part 60, subpart VVVVVV is the only NESHAP that applies to most chemical manufacturing area sources. While we are not including compliance with the CAR as an option, the final rule includes provisions that allow an owner or operator to comply with the most stringent requirements from both an overlapping rule and the final subpart VVVVVV as a means of demonstrating compliance with the final rule.

Comment: Two commenters stated that EPA significantly underestimated the number of storage tank controls that will be required and, thus, the capital cost and burden. Based on their review of Docket Document EPA–HQ–OAR–2008–0334–0008, the commenters concluded that EPA only considered controls for tanks storing urban HAP. However, as drafted, the proposed rule requires control of all storage vessels at a site meeting the size and vapor pressure criteria and storing any material containing any HAP above impurity levels.

Response: As discussed above, the final rule applies only to storage tanks that are part of a CMPU in the affected source and that contain a chemical manufacturing organic urban HAP. Although management practices are required for all storage tanks that are part of an affected CMPU, add-on controls are required only for tanks that meet specified size and organic HAP vapor pressure thresholds. Many of these tanks are likely already subject to 40 CFR part 60, subpart Kb and already in compliance. We believe that the number of tanks that will be subject to the control requirement applicable to the subcategory for large storage tanks under the final rule is consistent with the proposed impacts analysis.

5. Wastewater

Comment: Numerous commenters requested changes to the definition of "wastewater" to clarify which streams are included and to limit the scope of the term. Each of the commenters requested one or more of the following changes: (1) Clarify that wastewater streams are water that is discarded from the CMPU or control device (or, alternatively, the chemical manufacturing operations), not from the affected source; (2) specify that the water must contain PSHAP, not any HAP listed in Table 9 to 40 CFR part 63, subpart G; (3) specify that wastewater must be at least 50 percent water or "primarily" water; (4) include flow and HAP concentration thresholds; (5) identify types of water streams that are not considered wastewater, as in the preamble to the proposed rule and previous MACT rules; and/or (6) make the definition consistent with the definition of wastewater in previous MACT rules.

Response: We have considered the comments and decided that using similar definitions across the multiple standards is appropriate. The definition in the final rule includes most of the suggestions made by commenters and is consistent with definitions in the MON and the HON. However, the definition does not include a minimum water percentage. As in the HON and other NESHAP, EPA intends to regulate as wastewater any stream that: (1) Exits process unit equipment; and (2) meets the concentration and flow rate criteria that are specified in the definition because such wastewater streams have a significant potential for emissions and should, therefore, be regulated.

Comment: One commenter noted that the solubility in water of some PSHAP is greater than 10,000 ppmw. Therefore, the commenter requested that decanting not be required if no separable organic phase is present in the wastewater stream.

Response: Based on the comments and our additional analysis, we have determined it is appropriate to redefine the subcategories of wastewater. Specifically, we are amending the subcategories to account for wastewater that has 10,000 ppmw or greater concentration of PSHAP but does not have a water phase and an organic phase. In the proposed rule, we determined that removal of the organic layer by gravity separation was GACT, but gravity separation is not feasible for wastewater that does not contain separate organic and water phases. Under the final rule, we are establishing one subcategory based on both the PSHAP concentration of 10,000 ppmw or greater and the presence of a separate organic phase. Wastewater with a PSHAP concentration of 10,000 ppmw or greater, but without a separate organic phase, and wastewater with a PSHAP concentration of less than 10,000 ppmw represent the other subcategory.

As in the proposed rule, we have determined that GACT is removal of a separate organic layer by gravity separation when the PSHAP concentration exceeds 10,000 ppmw and there is a separate organic phase. The treatment requirements in the final rule for both the organic and wastewater phases are consistent with the requirement set forth in the proposed rule.

Comment: Several commenters requested additional compliance options for streams that contain more than 10,000 ppmw PSHAP, particularly for wastewater that is collected for shipment offsite for treatment or disposal. For example, one commenter recommended that decanting be required only when the aqueous phase will be sent to on-site or offsite treatment, but facilities should not have to separate a free organic phase from wastewater that is managed in recycle, energy use, or hazardous disposal operations that either have integral organic phase separation or do not require such separation before recycle, energy use, or disposal. Another commenter stated that wastewater sent to a permitted wastewater treatment facility (such as a publicly owned treatment works (POTW)) should be exempt. Another commenter stated that separation should not be required for wastewater collected for shipment offsite to be treated by a RCRA-permitted hazardous waste incinerator, a POTW, or oil recycling operations. According to one commenter, the rule should allow both direct piping to biological treatment and combustion of the entire stream without separating out the water phase, and another commenter added that combustion should be allowed for streams that contain small amounts of water relative to the organic phase. One commenter also noted that other separation techniques, such as stripping or distillation, may be more effective than

decanting, and some oil-water separators do not rely on the principle of gravity.

Response: The final rule contains provisions for alternative control of organic HAP from streams with >10,000 ppmw PSHAP. The final rule allows: (1) Several separation techniques; (2) hard piping to an on-site hazardous waste treatment unit; or (3) shipment offsite for any similar treatment. These compliance options are included in Table 6 of the final rule and provide at least equivalent emission reductions. The other alternatives cited by the commenters may not provide at least equivalent emission reductions as the final rule and, therefore, we are not including them in the final rule.

Comment: One commenter argued that the proposed requirements for wastewater streams that contain >10,000 ppmw of PSHAP are not GACT because the actual costs are significantly higher than EPA estimated. According to the commenter, EPA's impacts analysis omitted the cost to determine the partially soluble HAP concentration in each wastewater stream, which ranged from 10 to 250 streams per facility at facilities the commenter surveyed.

Response: In the burden analysis for the information collection requirements for the proposed rule, we estimated compliance demonstration costs assuming that all area sources with organic urban HAP would have wastewater. We also assumed that a typical area source would spend 20 hours characterizing the wastewater (*e.g.*, based on knowledge of the wastewater), and that 50 percent of the facilities would conduct sampling and analysis for an average of 10 streams. The cost of analysis was assumed to be $435. The total cost was estimated to be $169,400 per year for characterizing the streams according to process knowledge and $210,400 per year for sampling and analysis.

For the final burden estimate, we believe the number of streams will be lower than the 10 estimated at proposal because only those wastewater streams that are discarded from a CMPU that uses, generates, or produces chemical manufacturing organic urban HAP are part of the affected source for the final standards. According to one commenter, the average number of points of determination for five surveyed facilities is approximately two wastewater streams per process. We are estimating two CMPUs per facility and 2 points of determination per CMPU for a total of four process streams per facility.

The final rule allows PSHAP concentration to be determined based on either process knowledge or sampling and analysis. We assumed that 50 percent of facilities would perform sampling and analysis and the other 50 percent would rely on process knowledge. For the process knowledge approach, we assumed 20 hours of in-house labor per facility at a total cost of $1,750, as in the proposed analysis. However, we corrected an error in the proposed analysis and applied this cost to only 50 percent of the facilities rather than all of them for the final rule. For the sampling and analysis approach, we assumed $435 per sample for analysis and 20 hours of time for a contractor ($125 per hour labor rate) to collect one sample per wastewater stream per facility; thus, the total cost of this approach is estimated to be $4,240 per year per facility. We assumed one sample per stream because one sample would be sufficient to meet the compliance requirements. The estimate of 20 hours at $125 per hour is based on a commenter's estimate for retrieving four samples. One commenter noted that the cost of triplicate analysis is approximately $885. Assuming that the average cost per sample is not based on the number of samples, the cost on a per sample basis would be $295. We retained the $435 sampling cost used at proposal for consistency and to be somewhat conservative in our estimate.

The total respondent burden for the final wastewater standards was estimated to be $84,700 per year for characterizing the streams according to process knowledge and $205,100 per year for sampling and analysis, which we believe is reasonable. The overall respondent burden for wastewater streams has decreased by $90,000 from proposal to the final standards.

Comment: According to several commenters, decanting is not justified for small streams, given the expense of the equipment and the small potential benefit. For example, one commenter indicated the capital and operating cost for a facility could exceed $100,000 while achieving only minimal emissions reductions because of low throughput or low volatility of the HAP. Another commenter requested that streams containing up to 200 lbs/yr of PSHAP be excluded from the decanting requirement.

One commenter stated that small streams that contact only highly insoluble materials and streams that are excluded from the definition of wastewater in other rules should not be subject to the treatment requirement because such streams are not currently treated, the cost and burden to treat such streams were not considered in the rulemaking record and, therefore, treatment for all streams cannot be GACT.

Response: The revised definition of wastewater clarifies the types of water discharges that are wastewater. With the changes to the final rule for wastewater systems, we do not agree that our cost estimates are in error and that there will be additional costs incurred to meet the treatment requirements in the final rule.

Comment: Several commenters objected to the proposed maintenance wastewater requirements and stated that the wastewater requirements should be limited to process wastewater. One commenter stated that the proposed requirement to decant the organic phase from maintenance wastewater is particularly problematic because maintenance wastewater is often generated in small volumes and collected in various vessels prior to on-site or offsite energy recovery, reuse, or recycling. The maintenance wastewater is not discharged directly into an individual drain system. The commenter pointed out that decanting these streams first would add a second transfer step, which would increase the emissions potential relative to the current operating practice.

Response: By adding the compliance options discussed above, we have addressed industry concerns regarding wastewater generated in small quantities, wastewater that is reused or recycled, and wastewater shipped offsite. For example, instead of requiring only decanting, the final rule allows an owner or operator the alternative to collect a small wastewater stream and send it to an offsite hazardous waste treatment facility. This option applies to maintenance wastewater as well as to process wastewater. Considering the requirements of the final rule, we see no reason to distinguish between a process wastewater stream and a maintenance wastewater stream.

6. Transfer Operations

Comment: One commenter stated that the data and analysis supporting the proposed rule demonstrate that the controls currently in place at chemical manufacturing area sources are already GACT and that no additional requirements are justified. The commenter indicated the rule should be revised to incorporate criteria that reflect the submerged fill or equivalent controls currently in place and should impose no additional requirements. This commenter also stated the management practice requirements that are based on requirements for transfer at gasoline distribution facilities should be deleted. According to the commenter, these requirements generally are not

GACT (because they impose significant cost but achieve no emission reduction), are unclear, and conflict with other requirements and regulations. The commenter provided labor hour estimates for the various management practice tasks and estimated that the total cost would be more than 10 times higher than EPA estimated.

Response: As discussed in section III of this preamble, the management practice requirements have been revised in the final rule to better reflect what is generally available for these categories. Upon review of the comments, we recognized that the proposed management practice requirements were redundant for CMPU with both batch and continuous process vents because the proposed requirements for both emission points applied to all process equipment. In this final rule, the various proposed management practices for process vents, equipment leaks, transfer operations, and storage tanks were consolidated and simplified into one comprehensive set of management practices that are applicable to each affected CMPU. The comprehensive management practices in the final rule include requirements to equip each vessel with a cover or lid that must be in place when the vessel contains HAP (except for material addition and sampling) and to conduct sensory inspections for leaks throughout each affected CMPU on a quarterly basis. The proposed inspections for equipment leaks are included without change in the final management practice requirements, but the final rule also requires comparable inspections for leaks from process equipment in a CMPU (*e.g.*, reactors, distillation units, process tanks) and for storage tanks that are part of a CMPU and that store liquid that contains any Table 1 organic urban HAP.

For transfer operations, we retained in the final rule the requirement to use submerged/bottom filling or other controls for all loading of tank trucks and railcars (excluding reactive and resinous materials). As the commenter noted, the combination of these loading procedures and process unit-wide management practices is consistent with operation at most area sources and has been determined to be GACT, unlike the proposed requirements that were based on the requirements in the gasoline distribution rule. Therefore, the final standards generally do not impose many additional requirements except for the few facilities that may not already be implementing these procedures. Although emissions from transfer operations are less than emissions from other emission points at chemical manufacturing area sources, we believe that the reason for this is, in part, that most facilities are implementing submerged loading or other control techniques. The standards ensure that these practices continue.

Comment: Three commenters requested that the submerged (and bottom) fill requirement be deleted for transfer of resins because of operational and safety concerns. One commenter noted that resins can stratify and some of the layers formed might be flammable. Another commenter noted that submerged fill may be dangerous for certain resins and polymers, particularly those that contain styrene. The third commenter noted that the Amino and Phenolic Resins NESHAP (40 CFR part 63, subpart OOO) has no requirements for transfer of resins because EPA determined that the resins contain insignificant quantities of HAP and are not cost-effective to regulate. One commenter also requested an exemption from the submerged/bottom loading requirement for loading of all reactive, viscous, and sticky materials due to safety concerns, the fact that such procedures are not general industry practice, and because past efforts have shown the liquids stick and sometimes harden in the fill pipe, resulting in a significant expense to replace the fill pipe and dispose of the hardened material as a RCRA hazardous waste.

Response: In response to commenters concerns, we reevaluated types of liquid transfers to determine GACT for transfers of the types of materials described by the commenters. We determined that submerged loading is not a generally available industry practice for transferring reactive or resinous materials for the reasons articulated by the commenters. To address this issue, the final rule specifies that submerged or bottom loading is not required for reactive or resinous material. However, transfer operations associated with these materials must comply with the other management practices.

7. Heat Exchange Systems

Comment: One commenter stated that EPA should regulate cooling towers where process fluid contains not less than 5- or 10-percent HAP to keep applicability consistent with historic LDAR applicability criteria and to minimize burden. Other commenters stated only re-circulating cooling towers serving process heat exchangers containing 5 percent by weight organic HAP that could leak into the water should be subject to cooling tower requirements.

Two commenters requested EPA clarify whether "once-through" cooling systems, comfort cooling towers, or other non-process cooling towers are excluded. These commenters suggested that exemptions in the HON under 40 CFR 63.104(a) be included in the rule, with some modifications, and that the exemptions apply to all cooling towers, not only those with >8,000 gal/min circulation rates.

Response: Although the proposed rule used the term "cooling tower" systems, we intended it to mean "heat exchange" systems as is consistent with the HON. Furthermore, the language in item 5.b of Table 2 to the proposed rule required affected sources to comply with the requirements contained in 40 CFR 63.104(a)(1) through (6) of the HON. That provision listed systems that were not subject to the proposed rule (*i.e.*, systems with cooling water side pressure that is at least 35 kPa greater than the process side, systems with intervening fluids with <5 weight percent total HAP, systems used to cool process fluids containing <5 weight percent HAP [as specified in Table 4 of 40 CFR part 63, subpart F for recirculating systems, and as specified in Table 9 of 40 CFR part 63, subpart G for once-through systems], and once-through systems that meet specified National Pollution Discharge Elimination System permit requirements).

Therefore, the final standards for heat exchange systems apply to all heat exchange systems that are part of the affected source and that do not meet conditions in 40 CFR 63.104(a) of the HON. The heat exchange systems covered by the final rule are also exactly the same as the cooling tower systems we intended to cover under the proposal and on which our cost and emission reduction estimates were based.

While a commenter noted that once-through systems are exempted in the HON, it should be noted that the HON covers both recirculating and once-through heat exchange systems under the 40 CFR 63.104 heat exchange system requirements. Consistent with the proposal, the final rule applies to once-through cooling waters in accordance with 40 CFR 63.104(a).

We believe that control of once-through heat exchanger cooling systems is appropriate for several reasons. Emissions of volatile HAP occur readily from open water sources. While the stripping process may not be as fast as in a cooling tower, once-through cooling water will have a much longer exposure to the atmosphere than a system with a cooling tower. While the emissions may occur over a longer time period, all

available scientific evidence and fate modeling studies of open water systems leads us to conclude that essentially all volatile HAP will be released into the atmosphere. Therefore, we see no reason why HAP leaks from heat exchange systems into once-through cooling water should be treated any differently than HAP leaks from heat exchange systems that have cooling towers.

For the final rule, we clarify that heat exchange systems are part of the affected source and specifically address once-through cooling systems. We have included a definition of "heat exchange system" as in the HON. These changes clarify the applicable requirements and also clarify that comfort cooling towers and any other non-process cooling towers are not subject to standards.

Comment: Two commenters stated that the management practice requirement for systems with <8,000 gal/min circulation rate should be clarified. These commenters requested that area sources be allowed to sample to determine if indications of a leak identified by an inspection actually reflect a leak that is large enough to justify a costly repair or a process shutdown. Because § 63.104(b) of the HON defines a leak as 1 ppm, and this level was also used in the impacts analysis for the proposed standards, the commenters requested that area sources be allowed to determine if this condition is met before being required to repair after an inspection reveals indications of a leak.

Response: The final rule specifies that the owner or operator must either eliminate indications of a potential leak or demonstrate that the HAP concentration in the cooling water does not constitute a leak, as defined in 40 CFR 63.104(b)(6). If the concentration threshold is not met, the system is assumed not to be leaking, and no other requirements apply for that inspection cycle. We believe this is appropriate because HAP may be inadvertently introduced to the heat exchange system in ways other than through a leak. Requiring the facility to cease operations based on minimal HAP present is not GACT as it would create considerable cost with virtually no HAP reductions. In addition, an alternative has been added for small heat exchange systems to allow compliance with the same requirements that apply to large heat exchange systems instead of the requirements that would otherwise apply to the small heat exchange system.

Comment: One commenter stated the costs estimated for the cooling tower requirements are significantly underestimated and suggested several specific revisions to the cost analysis involving the number of cooling towers per site, number of samples to be collected, operator sampling time, and sample analysis costs. Specifically, commenters suggested that EPA should: Assume two cooling towers per site; assume four samples per quarter for Options 2 and 3 because many cooling towers have several return headers that each must be monitored and because both inlet and outlet monitoring will be required for many cooling towers to account for organic cooling tower additives, heavy HAP and soluble HAP which build up in the system; operator sampling time should be 1 hour under Options 2 and 3; sampling of total hydrocarbons or surrogate species costs $200 to $400 per sample under Option 2; sampling for HAP speciation requires multiple samples or gas chromatography/mass spectroscopy for $300 to $800 per analysis; HON procedures require triplicate samples; and add cost associated with check samples and identifying the source of the leak.

Response: We have made several revisions to the costs based on comments and to correct omissions at proposal. While commenters suggested that there are two cooling towers at each facility, after limiting the affected source to CMPUs and associated heat exchange systems and wastewater systems that use, produce, or generate chemical manufacturing urban HAP, it is likely that area sources have one cooling tower (or heat exchange system) in the affected source. Option 1 in both the proposed and final analyses is a quarterly sensory inspection and leak repair program, and Option 2 consists of the requirements for surrogate monitoring and leak repair in 40 CFR 63.104(c) of the HON. As discussed in section III.B.2.f of this preamble, the Option 1 requirements were determined to be GACT for small heat exchange systems, and the Option 2 requirements were determined to be GACT for large heat exchange systems.

For the final Option 2 cost analysis, we increased the number of quarterly samples as suggested by one commenter, *i.e.,* increased the number to be taken from one sample to three samples, given that some operators will monitor the heat exchange exit stream before the outlet cooling water is manifolded with other streams. We included a 1-hour sampling time for Option 2, as suggested by a commenter. We also revised the recordkeeping time to 1 hour per quarter for both Options 1 and 2 because the type and amount of information to be recorded are comparable under the two options. We inadvertently omitted the labor costs to conduct the quarterly sensory inspections for Option 1 at proposal and have included those cost estimates in the final analysis.

We did not incorporate other suggested changes from the commenters in the final impacts analysis. One suggestion was to incorporate costs for identifying the specific source of the leak. However, with the changes noted above regarding the monitoring of individual heat exchangers, *i.e.,* conducting three samples per quarterly event at heat exchanger exits rather than one sample at a manifolded location, we assumed that no additional cost would be associated with finding the specific leaking heat exchanger because the leak will be easier to locate based on HAP concentrations in the samples taken at different locations. Other suggested changes were to include costs for "water sampling," monitoring both inlet and outlet locations, and conducting sampling in triplicate. We did not include costs for these activities because they are not required under either Option 1 or Option 2. An owner or operator may elect to conduct monitoring in accordance with 40 CFR 63.104(b) of the HON, which does require sampling at the inlet and outlet of each heat exchange system and in triplicate, but we did not include costs for compliance with these procedures because we do not expect many facilities to choose to comply with this option. Similarly, facilities that choose to conduct water sampling to meet the surrogate indicator monitoring under Option 2 could incur additional lab analysis costs and would perhaps choose to take two or three samples; however it is not required by the rule.

8. Equipment Leaks

Comment: One commenter requested that the rule allow use of Method 21 as an option to confirm that AVO indication of a leak is or is not actually a leak, *i.e.,* less than 10,000 ppmv, as is consistent with HON. Another commenter asked that Method 21 inspections be allowed in lieu of sensory inspections.

Response: The final rule allows Method 21 inspections in lieu of sensory inspections. This alternative is equivalent to the method in the proposed rule at detecting organic HAP leaks. The leak definition in the final rule for Method 21 is set at 500 ppmv, the most stringent level used in any Federal LDAR program.

D. Initial Compliance Demonstrations

Comment: Three commenters requested that sources be allowed to demonstrate initial compliance using

design evaluations (or a combination of design evaluation, engineering calculation, or information from the equipment supplier) as an alternative to performance testing for any control device and any type of HAP, not just under the conditions where it is already allowed in the MON and 40 CFR part 63, subpart SS. One commenter also stated that sources should be allowed to designate vents as having a TRE <1.0 and allow engineering estimates as an alternative to testing in all cases (rather than requiring testing when estimating procedures result in a TRE between 1.0 and 4.0). These commenters stated that this would be a way to reduce burden and costs while having little impact on emissions reductions, and they pointed out that, in some cases, testing is impossible (*e.g.*, at the inlet to sintered metal filters that are used to control particulate emissions from storage bins). One commenter added that some problems that area sources with limited testing experience are likely to encounter include the need to modify sampling methods, the lack of inlet sampling ports and the lack of a location that will allow ports to meet EPA Method 1 location requirements, and difficulty sampling inlet streams due to toxicity or flammability of the gas.

Response: Performance tests provide the greatest assurance that required control levels are being achieved. However, they can be costly (>$20,000 per test). Design evaluations based on engineering principles are allowed in the MON and other MACT rules for small control devices primarily due to cost considerations and the limited emission potential from small control devices. Considering the cost of testing and the fact that overall emissions from area sources are much lower than emissions from major sources, we do not think a requirement for testing at area sources is justified. Therefore, the final rule specifies that design evaluations may be used to demonstrate initial compliance with any organic HAP emission limits, hydrogen halide and halogen HAP emission limits for scrubbers associated with combustion controls for halogenated vent streams, and metal HAP emission limits.

The final rule also does not require compliance with the referenced requirements in § 63.115(d)(1)(ii) that specify the owner or operator must either perform measurements to verify that the TRE determined using an engineering assessment is really between 1 and 4 or consider the TRE to be <1; thus, an engineering assessment is sufficient to determine the TRE in this range.

E. Monitoring Requirements

Comment: Several commenters urged EPA to specify that the proposed PS–17 and EPA Quality Assurance Procedure 4 do not apply to chemical manufacturing area sources because the burden and cost of these requirements is significant. Another commenter stated that the costs for complying with the proposed PS–17 and EPA Quality Assurance Procedure 4 need to be considered in the impacts analysis if they are to apply to chemical manufacturing area sources. One commenter noted that sophisticated instrumentation systems, centralized computer data systems, and on-site instrumentation specialists would be needed to comply with the proposed PS–17 and EPA Quality Assurance Procedure 4 requirements.

Response: PS–17 and EPA Quality Assurance Procedure 4 have not been finalized. As one commenter pointed out, these requirements go beyond existing MACT and NSPS standards, area sources in the categories being regulated today do not generally comply with these procedures, and the costs to comply with PS–17 and EPA Quality Assurance Procedure 4 are not reasonable. For these reasons, PS–17 and EPA Quality Assurance Procedure 4 do not apply to affected sources under 40 CFR part 63, subpart VVVVVV.

F. Recordkeeping and Reporting

Comment: Two commenters stated that imposing almost all 40 CFR part 63 General Provisions is overly burdensome and unjustified, because area sources have limited technical expertise and staff resources and small emission potential compared to major sources. For example, one commenter indicated that the "negative" records required by 40 CFR 63.1(b)(3) and 40 CFR 63.10(b)(3) should be indicated as "No" in Table 4; the performance testing and monitoring provisions in 40 CFR part 63, subpart SS should supersede 40 CFR 63.7 and 40 CFR 63.8; and only the 40 CFR part 63 General Provisions, not the 40 CFR part 60 General Provisions, should apply.

Response: In consideration of these comments, we have reviewed the General Provisions and made a few minor changes to Table 9 of the final rule with respect to recordkeeping and reporting requirements (Applicability of General Provisions to Subpart VVVVVV). We determined that 40 CFR 63.7(a)(2) does not apply because the rule references the procedures in 40 CFR part 63, subpart SS for certain control device compliance requirements, and 40 CFR 63.997(c)(1) of subpart SS contains performance testing schedule requirements that are comparable, although slightly more descriptive, than the schedule requirements in 40 CFR 63.7(a)(2). To ensure that area sources do not have to comply with PS–17 and EPA Quality Assurance Procedure 4 when they are finalized, we determined that 40 CFR 63.8(a)(2) does not apply. We also specify in Table 9 that references to SSM in the General Provisions requirements for recordkeeping and reporting do not apply. Finally, we determined that the notification of changes to information already provided that is required by 40 CFR 63.9(j) does not apply because it is redundant with 40 CFR 63.11501(d)(4) of the final rule, which specifies that notifications of process changes that affect a compliance determination, result in a new compliance determination, or change the method of compliance must be reported in the semi-annual compliance reports.

In addition to the changes in Table 9, we also added a statement in 40 CFR 63.11501(a) of the final rule to clarify that an affected source must only comply with those Part 63 General Provisions as specified in 40 CFR Table 9. The General Provisions in other Parts, such as Part 60, do not apply except to the extent that a source is subject to an overlapping requirement, and that requirement calls for compliance with the General Provisions of another part.

G. Requirements During Periods of Startup, Shutdown, and Malfunction (SSM)

Comment: Several commenters suggested changes to simplify and reduce the burden of SSM requirements. One commenter stated that no special reporting should be required after an SSM event if the SSM plan was followed, and sources should not have to submit revised plans if the plan is modified in a timely fashion. One commenter recommended that 40 CFR part 63, subpart VVVVVV explicitly state that emission limits and control requirements do not apply during SSM periods. Three commenters stated that facilities subject only to management practice requirements should not be required to develop an SSM plan because no purpose is served by requiring an SSM plan for anything that does not impact required controls.

One commenter stated EPA should simplify SSM reporting requirements by: (1) Waiving immediate reporting as required by 40 CFR 63.10(d)(5); (2) requiring the information required by 40 CFR 63.10(d)(5) to be recorded and maintained onsite and submitted in the periodic report; (3) requiring SSM

reporting only if excess emissions occurred and they did not follow their SSM plan; and (4) allowing SSM reporting to be consolidated with semiannual compliance reports.

One commenter stated that Table 4 should indicate that the immediate reporting requirements and separate SSM reports required in 40 CFR 63.6(e)(3)(iii) and (iv) do not apply to 40 CFR part 63, subpart VVVVVV, and that failure to follow the SSM plan during an event where there are excess emissions should be reported in the deviation report. This commenter also requested that EPA use time and labor rate assumptions provided by the commenter in revised burden estimates related to SSM plans.

This same commenter stated that EPA developed the emission limitations and work practices in the proposed rule without considering any emission data during SSM of control or process equipment. As such, the EPA cannot legally impose the emission limitations required during normal operations on sources during periods of SSM. The commenter points out that EPA may set a standard based on GACT or management practices, and management practices is the most appropriate requirement for SSM. The commenter suggests provisions of the HON be used as a model for SSM management practices. The commenter also requested that EPA clarify that area sources may take all actions necessary to ensure that sources operate safely at all times, including during SSM events, by including language similar to that in the MON in regards to opening a safety device.

Another commenter also submitted comments in response to the court decision on SSM issues. The commenter submitted additional compliance options that would show compliance at all times, including periods of SSM because, according to the commenter, these periods are not steady state conditions and, therefore, operating parameter limits determined through performance testing or engineering evaluations would not be indicative of those periods. The commenter stated that SSM provisions should still be included in the final rulemaking for area sources. Alternatives suggested by the commenter include demonstration of compliance of emission limit using a long term rolling average; conduct performance testing for periods of startup and shutdown; allow use of storage tank when control device is not operational if tank is not filled and has a tight fitting cover; run no new batches until malfunction is over; and ensure that the control device is at normal operating conditions before the process is started.

Response: Table 9 to the final rule (Table 4 to the proposed rule) contains references to the 40 CFR part 63 General Provisions and lists the applicability of the General Provisions to the sources subject to the rule. As explained above, in *Sierra Club* v. *EPA, 551 F.3d 1019,* the Court vacated 40 CFR 63.6(f)(1) and 63.6(h)(1). In light of this court decision, we revised Table 9 to state that 40 CFR 63.6(f)(1) and (h)(1) do not apply. Table 9 also states that the requirements for SSM plans and reports in 40 CFR 63.6(e)(3) and 40 CFR 63.10(d)(5) do not apply. The final emission standards summarized in section IV above apply at all times. As noted in sections III and IV above, we are establishing a separate emission standard for periods of startup and shutdown for continuous process vents for the nine source categories at issue here, because these periods are characterized by activities, such as the filling of vessels and the inerting of vessels, and these activities generally result in significantly different emissions than normal operations. See *Sierra Club, 551 F.3d at 1027* (recognizing that the CAA does not require EPA to set a single emission standard under CAA section 112(d) that applies during all operating periods).

Some commenters complain that EPA failed to consider emissions data during startup and shutdown, and that EPA should set different standards for these periods. EPA is limited to the emissions information before it, which, of course, includes any information provided by the commenters. In this case, EPA carefully analyzed all of the emissions information before it, including that provided by commenters, and concluded that only continuous vents presented a situation where a separate standard during startup and shutdown was appropriate. Although EPA recognizes that startup and shutdown events associated with a continuous process can impact the quantity of wastewater sent to the wastewater system, these events do not warrant a separate standard for wastewater systems. The final GACT standards for wastewater systems appropriately control HAP emissions, and the commenters have not provided any data or other information that would justify a separate standard for wastewater systems. Contrary to the commenters' assertion, for batch processing, startup and shutdown are considered part of normal operations. Storage tanks, heat exchange systems, and transfer operations also do not undergo startup and shutdown activities.

Consistent with *Sierra Club* v. *EPA,* EPA has established CAA section 112(d) compliant standards in this rule that apply continuously. The standards, as described above, apply at all times. In establishing the standards in this rule, EPA has taken into account startup and shutdown periods and has established different standards for such periods where appropriate. Periods of start-up, normal operations, and shut-down are all predictable and routine aspects of a source's operations. Batch processes start up and shutdown as part of their routine process and continuous process operations undergo startups and shutdowns for a variety of reasons, including changes in product demand or product line, and upgrading of equipment. By contrast, a malfunction is defined as a "sudden, infrequent, and not reasonably preventable failure of air pollution control and monitoring equipment, process equipment or a process to operate in a normal or usual manner * * *" 40 CFR 63.2. EPA has properly accounted for different periods of operation in establishing the standards in this rule. EPA does not view malfunctions as a distinct operating mode and, therefore, any emissions that occur at such times do not need to be factored into development of CAA section 112(d) standards, which, once promulgated, apply at all times. Thus, EPA is not setting separate standards for malfunctions in this rule, as the commenters requested.

Further, even if malfunctions were considered a distinct operating mode, we believe it would be impracticable to take into account malfunctions in setting CAA section 112(d) standards. Because, by definition, malfunctions are sudden and unexpected events, it would be difficult to set a standard that would account for the myriad of different emissions that could occur during malfunctions. In addition, the type, frequency, and duration of the malfunctions may differ significantly between sources. Furthermore, emissions during malfunctions can substantially exceed the level of emissions during start-up, shut-down, and normal operations. Finally, setting an emissions standard that accounts for all different types of malfunctions could allow a source to emit excessive quantities of uncontrolled pollution.

Commenters raised a concern that certain malfunctions necessitate the opening of a safety device to avoid damage to equipment or injury to personnel working at the site. EPA shares the commenters' concerns that plants must be operated safely and that

plant operators should run their facilities in a safe manner.

H. Title V Permitting

As discussed above in section III.F, we are not finalizing the exemption from title V requirements for those sources that became area sources by installing emission controls. We maintain, as explained below in this response to significant comments, that we properly applied the test for determining whether title V is unnecessarily burdensome on the other sources subject to this NESHAP and we are finalizing that exemption in this rulemaking.

Comment: One commenter argued that the Agency's proposal to exempt the nine area source categories from title V requirements is unlawful and arbitrary. The commenter states that section 502(a) of the CAA authorizes EPA to exempt area source categories from title V permitting requirements if the Administrator finds that compliance with such requirements is "impracticable, infeasible or unnecessarily burdensome." 42 U.S.C. § 7661a(a). The commenter notes that EPA did not claim that title V requirements are impracticable or infeasible for any of the source categories it proposes to exempt, but that EPA instead relied entirely on its claim that title V would be "unnecessarily burdensome."

Response: We have reconsidered our proposed exemption for major sources that installed controls to become area sources after 1990. Based on our additional review of the source categories since proposal, we conclude that exemption for these synthetic area sources is not appropriate as discussed above in section III.F. We are finalizing the exemption for synthetic area sources that took operational limits and for natural minor sources.

Section 502(a) of the CAA states, in relevant part, that:

> * * * [t]he Administrator may, in the Administrator's discretion and consistent with the applicable provisions of this chapter, promulgate regulations to exempt one or more source categories (in whole or in part) from the requirements of this subsection if the Administrator finds that compliance with such requirements is impracticable, infeasible, or unnecessarily burdensome on such categories, except that the Administrator may not exempt any major source from such regulations.

See 42 U.S.C. 7661a(a).

The statute plainly vests the Administrator with discretion to determine when it is appropriate to exempt non-major (*i.e.*, area) sources of air pollution from the requirements of title V. The commenter correctly notes that EPA based the proposed exemptions solely on a determination that title V is "unnecessarily burdensome," and did not rely on whether the requirements of title V are "impracticable" or "infeasible", which are alternative bases for exempting area sources from title V.

To the extent the commenter is asserting that EPA must determine that all three criteria in CAA section 502 are met before an area source category can be exempted from title V, the commenter misreads the statute. The statute expressly provides that EPA may exempt an area source category from title V requirements if EPA determines that the requirements are "impracticable, infeasible *or* unnecessarily burdensome." See CAA section 502 (*emphasis added*). If Congress had wanted to require that all three criteria be met before a category could be exempted from title V, it would have stated so by using the word "and," in place of "or."

Comment: One commenter stated that in order to demonstrate that compliance with title V would be "unnecessarily burdensome," EPA must show, among other things, that the "burden" of compliance is *unnecessary*. According to the commenter, by promulgating title V, Congress indicated that it viewed the burden imposed by its requirements as necessary, as a general rule. The commenter maintained that the title V requirements provide many benefits that Congress viewed as necessary. Thus, in the commenter's view, EPA must show why, for any given category, special circumstances make compliance unnecessary. The commenter believed that EPA has not made that showing for any of the categories it proposes to exempt.

Response: EPA does not agree with the commenter's characterization of the demonstration required for determining that title V is unnecessarily burdensome for an area source category. As stated above, the CAA provides the Administrator discretion to exempt an area source category from title V if he determines that compliance with title V requirements is "impracticable, infeasible, or unnecessarily burdensome" on an area source category. See CAA section 502(a). In December 2005, in a national rulemaking, EPA interpreted the term "unnecessarily burdensome" in CAA section 502 and developed a four-factor balancing test for determining whether title V is unnecessarily burdensome for a particular area source category, such that an exemption from title V is appropriate. See 70 FR 75320, December 19, 2005 ("Exemption Rule"). In addition to interpreting the term "unnecessarily burdensome" and developing the four-factor balancing test in the Exemption Rule, EPA applied the test to certain area source categories.

The four factors that EPA identified in the Exemption Rule for determining whether title V is unnecessarily burdensome on a particular area source category include: (1) Whether title V would result in significant improvements to the compliance requirements, including monitoring, recordkeeping, and reporting, that are proposed for an area source category (70 FR 75323); (2) whether title V permitting would impose significant burdens on the area source category, and whether the burdens would be aggravated by any difficulty the sources may have in obtaining assistance from permitting agencies (70 FR 75324); (3) whether the costs of title V permitting for the area source category would be justified, taking into consideration any potential gains in compliance likely to occur for such sources (70 FR 75325); and (4) whether there are implementation and enforcement programs in place that are sufficient to assure compliance with the NESHAP for the area source category, without relying on title V permits (70 FR 75326).[10]

In discussing the above factors in the Exemption Rule, we explained that we considered on "a case-by-case basis the extent to which one or more of the four factors supported title V exemptions for a given source category, and then we assessed whether considered together those factors demonstrated that compliance with title V requirements would be 'unnecessarily burdensome' on the category, consistent with section 502(a) of the Act." See 70 FR 75323. Thus, we concluded that not all of the four factors must weigh in favor of exemption for EPA to determine that title V is unnecessarily burdensome for a particular area source category. Instead, the factors are to be considered in combination and EPA determines whether the factors, taken together,

[10] In the Exemption Rule, in addition to determining whether compliance with title V requirements would be unnecessarily burdensome on an area source category, we considered, consistent with the guidance provided by the legislative history of CAA section 502(a), whether exempting the area source category would adversely affect public health, welfare, or the environment. See 70 FR 75326, December 19, 2005. As shown above, after conducting the four-factor balancing test and determining that title V requirements would be unnecessarily burdensome on the area source categories at issue here, we examined whether the exemption from title V would adversely affect public health, welfare, and the environment, and found that it would not.

support an exemption from title V for a particular source category.

The commenter asserts that "EPA must show * * * that the "burden" of compliance is unnecessary." This is not, however, one of the four factors that we developed in the Exemption Rule in interpreting the term "unnecessarily burdensome" in CAA section 502, but rather a new test that the commenter maintains EPA "must" meet in determining what is "unnecessarily burdensome" under CAA section 502. EPA did not re-open its interpretation of the term "unnecessarily burdensome" in CAA section 502 in the October 6, 2008 proposed rule for the categories at issue in this rule. Rather, we applied the four-factor balancing test articulated in the Exemption Rule to the source categories for which we proposed title V exemptions. Had we sought to re-open our interpretation of the term "unnecessarily burdensome" in CAA section 502 and modify it from what was articulated in the Exemption Rule, we would have stated so in the October 6, 2008, proposed rule and solicited comments on a revised interpretation, which we did not do. Accordingly, we reject the commenter's attempt to create a new test for determining what constitutes "unnecessarily burdensome" under CAA section 502, as that issue falls outside the purview of this rulemaking.[11]

Furthermore, we believe that the commenter's position that "EPA must show * * * that the "burden" of compliance is *unnecessary*" is unreasonable and contrary to Congressional intent concerning the applicability of title V to area sources. Congress intended to treat area sources differently under title V, as it expressly authorized the EPA Administrator to exempt such sources from the requirements of title V at her discretion. There are several instances throughout the CAA where Congress chose to treat major sources differently than non-major sources, as it did in CAA section 502. In addition, it is worth noting that, although the commenter espouses a new interpretation of the term "unnecessarily burdensome" in CAA section 502 and attempts to create a new test for determining whether the requirements of title V are "unnecessarily burdensome" for an area source category, the commenter does not explain why EPA's interpretation of the term "unnecessarily burdensome" is arbitrary, capricious, or otherwise not in accordance with law. We maintain that our interpretation of the term "unnecessarily burdensome" in CAA section 502, as set forth in the Exemption Rule, is reasonable.

Comment: One commenter stated that exempting a source category from title V permitting requirements deprives both the public generally and individual members of the public who would obtain and use permitting information for the benefit of citizen oversight and enforcement that Congress plainly viewed as necessary. According to the commenter, the text and legislative history of the CAA provide that Congress intended ordinary citizens to be able to get emissions and compliance information about air toxics sources and to be able to use that information in enforcement actions and in public policy decisions on a State and local level. The commenter stated that Congress did not think that enforcement by States or other government entities was enough; if it had, Congress would not have enacted the citizen suit provisions, and the legislative history of the CAA would not show that Congress viewed citizens' access to information and ability to enforce CAA requirements as highly important both as an individual right and as a crucial means to ensuring compliance. According to the commenter, if a source does not have a title V permit, it is difficult or impossible—depending on the laws, regulations, and practices of the State in which the source operates—for a member of the public to obtain relevant information about its emissions and compliance status. The commenter stated that, likewise, it is difficult or impossible for citizens to bring enforcement actions. The commenter continued that EPA does not claim—far less demonstrate with substantial evidence, as would be required—that citizens would have the same ability to obtain compliance and emissions information about sources in the categories it proposes to exempt *without* title V permits. The commenter also said that, likewise, EPA does not claim—far less demonstrate with substantial evidence — that citizens would have the same enforcement ability. Thus, according to the commenter, the exemptions EPA proposes plainly eliminate benefits that Congress thought necessary. The commenter claimed that, to justify its exemptions, EPA would have to show that the informational and enforcement benefits that Congress intended title V to confer—benefits which the commenter argues are eliminated by the exemptions—are for some reason unnecessary with respect to the categories it proposes to exempt. The commenter concluded that EPA does not even *acknowledge* these benefits of title V, far less explain why they are unnecessary, and that for this reason alone, EPA's proposed exemptions are unlawful and arbitrary.

Response: Once again, the commenter attempts to create a new test for determining whether the requirements of title V are "unnecessarily burdensome" on an area source category. Specifically, the commenter argues that EPA does not claim or demonstrate with *substantial evidence* that citizens would have the same access to information and the same ability to enforce under these NESHAP, absent title V. The commenter's position represents a significant revision of the fourth factor that EPA developed in the Exemption Rule in interpreting the term "unnecessarily burdensome" in CAA section 502. For all of the reasons explained above, the commenter's attempt to create a new test for EPA to meet in determining whether title V is "unnecessarily burdensome" on an area source category cannot be sustained. This rulemaking did not re-open EPA's interpretation of the term "unnecessarily burdensome" in CAA section 502. In any event, EPA interpretation is reasonable. Furthermore, the commenter's statements do not demonstrate a flaw in EPA's application of the four-factor balancing test to the specific facts of the sources we are exempting, nor do the comments provide a basis for the Agency to reconsider the exemption as we are finalizing it.

EPA reasonably applied the four factors to the facts of the nine source categories at issue in this rule, and the commenter has not identified any flaw in EPA's application of the four-factor test to the nine area source categories at issue here.

Moreover, as explained in the proposal, we considered implementation and enforcement issues in the fourth factor of the four-factor balancing test. Specifically, the fourth factor of EPA's unnecessarily burdensome analysis provides that EPA will consider whether there are implementation and enforcement programs in place that are sufficient to assure compliance with the NESHAP without relying on title V permits. See 70 FR 75326.

In applying the fourth factor here, EPA determined that there are adequate enforcement programs in place to assure compliance with the CAA. As stated in

[11] If the commenter objected to our interpretation of the term "unnecessarily burdensome" in the Exemption Rule, it should have commented on, and challenged, that rule. Any challenge to the Exemption Rule is now time barred by CAA section 307(b). Although we received comments on the title V Exemption Rule during the rulemaking process, no one sought judicial review of that rule.

the proposal, we believe that state-delegated programs are sufficient to assure compliance with the NESHAP and that EPA retains authority to enforce this NESHAP under the CAA. 73 FR 58373. We also indicated that States and EPA often conduct voluntary compliance assistance, outreach, and education programs to assist sources, and that these additional programs will supplement and enhance the success of compliance with this NESHAP. 73 FR 58373. The commenter does not challenge the conclusion that there are adequate State and Federal programs in place to ensure compliance with and enforcement of the NESHAP. Instead, the commenter provides an unsubstantiated assertion that information about compliance by the area sources with these NESHAP will not be as accessible to the public as information provided to a State pursuant to title V. In fact, the commenter does not provide any information that States will treat information submitted under these NESHAP differently than information submitted pursuant to a title V permit.

Even accepting the commenter's assertions that it is more difficult for citizens to enforce the NESHAP absent a title V permit, in evaluating the fourth factor in EPA's balancing test, EPA concluded that there are adequate implementation and enforcement programs in place to enforce the NESHAP. The commenter has provided no information to the contrary or explained how the absence of title V actually impairs the ability of citizens to enforce the provisions of the NESHAP. Furthermore, the fourth factor is one factor that we evaluated in determining if the title V requirements were unnecessarily burdensome. As explained above, we considered that factor together with the other factors and determined that it was appropriate to finalize the proposed exemptions for natural area sources and synthetic area sources that took operational limits in the source categories at issue in this rule, but we are not finalizing the title V exemption for sources that became synthetic area sources through the use of add-on controls for the reasons set forth above in section III.F.

Comment: One commenter explained that title V provides important monitoring benefits, and, according to the commenter, EPA assumes that title V monitoring would not add any monitoring requirements beyond those required by the regulations for each category. The commenter said that, in its proposal, EPA proposed to require "management practices, which are practices that are currently used at most facilities, for most subcategories (73 FR 58372)." The commenter further states that "EPA argues that its proposed standard, including these practices, 'provides monitoring in the form of recordkeeping that will assure compliance with the requirements of the proposed rule.'" Id. The commenter maintains that EPA made conclusory assertions and that the Agency failed to provide any evidence to demonstrate that the proposed monitoring requirements will assure compliance with the NESHAP for the exempt sources. The commenter stated that, for this reason, as well, its claim that title V requirements are "unnecessarily burdensome" is arbitrary and capricious, and its exemption is unlawful and arbitrary and capricious.

Response: As noted in the earlier comment, EPA used the four-factor test to determine if title V requirements were unnecessarily burdensome. In the first factor, EPA considers whether imposition of title V requirements would result in significant improvements to the compliance requirements that are proposed for the area source categories. See 70 FR 75323. It is in the context of this first factor that EPA evaluates the monitoring, recordkeeping, and reporting requirements of the proposed NESHAP to determine the extent to which those requirements are consistent with the requirements of title V. See 70 FR 75323.

The commenter asserts that "EPA argues that its proposed standard, including these practices, 'provides monitoring in the form of recordkeeping that will assure compliance with the requirements of the proposed rule.'" The commenter has taken a phrase from the preamble out of context to imply that EPA has only required monitoring in the form of recordkeeping. In the proposal, we stated:

> The proposed rule requires implementation of certain management practices, which are practices that are currently used at most facilities, for most subcategories, and add on controls and other requirements, in addition to management practices for other subcategories of sources. The proposed rule requires direct monitoring of emissions or control device parameters, both continuous and periodic, recordkeeping that also may serve as monitoring, and deviation and other semi-annual reporting to assure compliance with these requirements.
>
> The monitoring component of the first factor favors title V exemption. For the management practices, this proposed standard provides monitoring in the form of recordkeeping that would assure compliance with the requirements of the proposed rule. Monitoring by means other than recordkeeping for the management practices is not practical or appropriate. Records are required to ensure that the management practices are followed. The proposed rule requires the owner or operator to record the date and results of inspections, as well as any actions taken in response to findings of the inspections. The records are required to be maintained as checklists, logbooks and/or inspection forms. The rule also requires emission limit requirements for some subcategories. Monitoring of control device or recovery device operating parameters using CPMS or periodic monitoring is required to assure compliance with these emission limits.

See 73 FR 58372.

We nowhere state or imply that the only monitoring required for the rule is in the form of recordkeeping. As the above excerpt states, we required continuous and periodic direct monitoring of emission control devices and recovery devices when the rule requires the installation of such controls in addition to the recordkeeping that serves as monitoring for the management practices. The commenter does not provide any evidence that contradicts the conclusion that the proposed monitoring requirements are sufficient to assure compliance with the standards in the rule.

Based on the foregoing, we considered whether title V monitoring requirements would lead to significant improvements in the monitoring requirements in the proposed NESHAP and determined that they would not. We believe that the monitoring, recordkeeping, and reporting requirements in this area source rule can assure compliance for those sources we are exempting.

For the reasons described above and in the proposed rule, the first factor supports an exemption. Assuming, for arguments sake, that the first factor alone cannot support the exemption, the four-factor balancing test requires EPA to examine the factors, in combination, and determine whether the factors, viewed together, weigh in favor of exemption. See 70 FR 75326. As explained above, we determined that the factors, weighed together, support title V exemption for the natural area sources and synthetic area sources that took operational limits in these source categories.

Comment: One commenter believes EPA argued that its own belief that title V is a "significant burden" on area sources further justifies its exemption (73 FR 58372–58373). According to the commenter, regardless of whether EPA regards the burden as "significant," the Agency may not exempt a category from compliance with title V requirements unless compliance is "unnecessarily burdensome." The commenter stated that, in any event, EPA's claims about

the alleged significance of the burden of compliance is entirely conclusory and could be applied equally to any major or area source category. The commenter also stated that the Agency does not show that the compliance burden is especially great for any of the sources it proposes to exempt, and, thus, does not demonstrate that the alleged burden necessitates treating them differently from other categories by exempting them from compliance with title V requirements.

Response: The commenter appears to take issue with the formulation of the second factor of the four-factor balancing test. Specifically, the commenter states that EPA must determine that title V compliance is "unnecessarily burdensome" and not a "significant burden," as expressed in the second factor of the four-factor balancing test.

As we have stated before, at proposal we found the burden placed on these sources in complying with the title V requirements is significant when we applied the four-factor balancing test.[12] We note that the commenter in other parts of its comments on the title V exemptions argues that EPA must demonstrate that every title V requirement is "unnecessary" for a particular source category before an exemption can be granted, but makes no mention of the "burden" of those requirements on area sources, but here the commenter argues that "significant burden" is not appropriate for the second factor. Notwithstanding the commenter's inconsistency, as explained above, the four-factor balancing test was established in the Exemption Rule and we did not re-open EPA's interpretation of the term "unnecessarily burdensome" in this rule. As explained above, we maintain that the Agency's interpretation of the term "unnecessarily burdensome," as set forth in the Exemption Rule and reiterated in the proposal to this rule, is reasonable.

Contrary to the commenter's assertions, we properly analyzed the second factor of the four-factor balancing test. See 70 FR 75320. Under that factor, EPA considers whether title V permitting would impose a significant burden on the area source categories, and whether that burden would be aggravated by any difficulty that the sources may have in obtaining assistance from the permitting agencies. See 70 FR 75324. The commenter appears to assert that the second factor *must* be satisfied for EPA to exempt an area source category from title V, but, as explained above, the four factors are considered in combination. We have concluded that the second factor, in combination with the other factors, supports an exemption for the chemical manufacturing area sources that we are exempting from compliance with title V in this final rule.

Therefore, we disagree with the commenter's assertion that EPA's finding (*i.e.*, that the burden of obtaining a title V permit is significant, does not equate to the required finding that the burden is unnecessary) is misplaced. While EPA could have found that the second factor alone could justify the exemption for the sources we are exempting in this rule, EPA found that the other three factors also support exempting these sources from the title V requirements because the permitting requirements are unnecessarily burdensome for the chemical manufacturing area sources we are exempting.

Comment: According to one commenter, EPA argued that compliance with title V would not yield any gains in compliance with underlying requirements in the relevant NESHAP (73 FR 58373). The commenter stated that EPA's conclusory claim could be made equally with respect to any major or area source category. According to the commenter, the Agency provides no specific reasons to believe—with respect to any of the categories it proposes to exempt—that the additional informational, monitoring, reporting, certification, and enforcement requirements that exist in title V, but not in these NESHAP, would not provide additional compliance benefits. The commenter also stated that the only basis for EPA's claim is, apparently, its beliefs that those additional requirements never confer additional compliance benefits. According to the commenter, by advancing such argument, EPA merely seeks to elevate its own policy judgment over Congress' decisions reflected in the CAA's text and legislative history.

Response: The commenter mischaracterizes the first and third factors of the four-factor balancing test and takes out of context certain statements in the proposed rule concerning the factors used in the balancing test to determine if imposition of title V permit requirements is unnecessarily burdensome for the source categories. The commenter also mischaracterizes the first factor of the four-factor balancing test with regard to determining whether imposition of title V would result in significant improvements in compliance. In addition, the commenter mischaracterizes the analysis in the third factor of the balancing test which instructs EPA to take into account any gains in compliance that would result from the imposition of the title V requirements.

First, EPA nowhere states, nor does it believe, that title V never confers additional compliance benefits as the commenter asserts. In fact, our decision to not exempt synthetic area sources that installed add-on controls was based, in part, on our determination that the additional public participation and oversight attendant to title V permitting was appropriate for those sources. While EPA recognizes that requiring a title V permit offers additional compliance options, the statute provides EPA with the discretion to evaluate whether compliance with title V would be unnecessarily burdensome to specific area sources. For the sources we are exempting, we conclude that requiring title V permits would be unnecessarily burdensome.

Second, the commenter mischaracterizes the first factor by asserting that EPA must demonstrate that title V will provide no additional compliance benefits. The first factor calls for a consideration of "whether title V would result in significant improvements to the compliance requirements, including monitoring, recordkeeping, and reporting, that are proposed for an area source category." Thus, contrary to the commenter's assertion, the inquiry under the first factor is not whether title V will provide any compliance benefit, but rather whether it will provide significant improvements in compliance requirements.

The monitoring, recordkeeping and reporting requirements in the rule are sufficient to assure compliance with the requirements of this rule for the sources we are exempting, consistent with the goal in title V permitting. For example, in the Notification of Compliance Status report, the source must certify that it has implemented management practices, and, if necessary, installed controls and established monitoring parameters. See 40 CFR 63.11501 in the final rule. The source must also submit deviation reports to the permitting agency every 6 months if there has been a deviation in the requirements of the rule. See 40 CFR 63.11501 in the final rule. The requirements in the final rule provide sufficient basis to assure compliance,

[12] As discussed in Section III above, since proposal, we have reconsidered the proposed exemption for synthetic area sources that became area sources by virtue of installing add-on controls and determined that these sources are generally larger and more sophisticated sources and, that for these and other reasons, the burden on these sources would not be significant.

and EPA does not believe that the title V requirements, if applicable to the sources that we are exempting, would offer significant improvements in the compliance of the sources with the rule.

Third, the commenter incorrectly characterizes our statements in the proposed rule concerning our application of the third factor. Under the third factor, EPA evaluates "whether the costs of title V permitting for the area source category would be justified, taking into consideration any potential gains in compliance likely to occur for such sources." Contrary to what the commenter alleges, EPA did not state in the proposed rule that compliance with title V would not yield any gains in compliance with the underlying requirements in the relevant NESHAP, nor does factor three require such a determination.

Instead, consistent with the third factor, we considered whether the costs of title V are justified in light of any potential gains in compliance. In other words, EPA considers the costs of title V permitting requirements, including consideration of any improvement in compliance above what the rule requires. In considering the third factor, we stated, in part, that, "[b]ecause the costs, both economic and non-economic, of compliance with title V are high, and the potential for gains in compliance is low, title V permitting is not justified for this source category. Accordingly, the third factor supports title V exemptions for these area source categories." See 73 FR 58373.

Most importantly, EPA considered all four factors in the balancing test in determining whether title V was unnecessarily burdensome on the area source categories we are exempting from title V in this final rule. As stated above, we have determined that title V is appropriate for synthetic area sources that installed add-on controls and we are not finalizing the exemption for those sources. As to the remaining sources, the commenter's statements do not demonstrate a flaw in EPA's application of the four-factor balancing test to the specific facts of the sources we are exempting, nor do the comments provide sufficient basis for the Agency to reconsider its proposal to exempt the natural area sources and synthetic area sources that took operational limits to maintain HAP below major source levels.

Comment: According to one commenter, EPA argued that alternative State implementation and enforcement programs assure compliance with the underlying NESHAP without relying on title V permits (73 FR 58373). The commenter stated that again, EPA's claim is entirely conclusory and generic. The commenter also stated that "the Agency does not identify any aspect of any of the underlying NESHAP showing that with respect to these specific NESHAP—*unlike all the other major and area source NESHAP it has issued without title V exemptions*—title V compliance is unnecessary" (*emphasis added*). Instead, according to the commenter, EPA merely pointed to existing State requirements and the potential for actions by States and EPA that are generally applicable to all categories (along with some small business and voluntary programs). The commenter said that, absent a showing by EPA that distinguishes the sources it proposes to exempt from other sources, the Agency's argument boils down to the generic and conclusory claim that it generally views title V requirements as unnecessary. The commenter stated that, while this may be EPA's view, it was not Congress' view when Congress enacted title V, and a general view that title V is unnecessary, does not suffice to show that title V compliance is unnecessarily burdensome.

Response: Contrary to the commenters' assertions, EPA does believe that title V is appropriate under certain circumstances. Indeed, we are not finalizing the title V exemption for synthetic area sources that became area sources by virtue of installing add-on controls. However, given the facts associated with the remainder of the sources in the categories, we think that exemption from title V is appropriate for those sources.

In this comment, the commenter again takes issue with the Agency's test for determining whether title V is unnecessarily burdensome, as developed in the Exemption Rule. Our interpretation of the term "unnecessarily burdensome" is not the subject of this rulemaking. In any event, as explained above, we believe the Agency's interpretation of the term "unnecessarily burdensome" is a reasonable one. To the extent the commenter asserts that our application of the fourth factor is flawed, we disagree. The fourth factor involves a determination as to whether there are implementation and enforcement programs in place that are sufficient to assure compliance with the rule without relying on the title V permits. In discussing the fourth factor in the proposal, EPA states that, prior to delegating implementation and enforcement to a State, EPA must ensure that the State has programs in place to enforce the rule. EPA believes that these programs will be sufficient to assure compliance with the rule. EPA also retains authority to enforce this NESHAP anytime under CAA sections 112, 113, and 114. EPA also noted other factors in the proposal that together are sufficient to assure compliance with this area source NESHAP.

The commenter argues that EPA cannot exempt any of the area sources in these categories from title V permitting requirements because "[t]he agency does not identify any aspect of any of the underlying NESHAP showing that with respect to these specific NESHAP—*unlike all the other major and area source NESHAP it has issued without title V exemptions*—title V compliance is unnecessary" (*emphasis added*). As an initial matter, EPA cannot exempt major sources from title V permitting. 42 U.S.C. 502(a). As for area sources, the standard that the commenter proposes—that EPA must show that "title V compliance is unnecessary"—is not consistent with the standard the Agency established in the Exemption Rule and applied in the proposed rule in determining if title V requirements are unnecessarily burdensome.

Furthermore, we disagree that the basis for excluding the chemical manufacturing area sources we are exempting from title V requirements is generally applicable to sources in any source category. As explained in the proposal preamble and above, we balanced the four factors considering the facts and circumstances of the nine source categories at issue in this rule. For example, in assessing whether the costs of requiring the sources to obtain a title V permit was burdensome, we concluded that the high relative costs would not be justified given that there is likely to be little or no potential gain in compliance, particularly for sources that are required to comply only with the management practice requirements contained in the final rule. Almost all of the sources we are exempting from title V are required to comply only with management practices.

Comment: One commenter stated that, as EPA concedes, the legislative history of the CAA shows that Congress did not intend EPA to exempt source categories from compliance with title V unless doing so would not adversely affect public health, welfare, or the environment. Furthermore, the commenter stated that EPA conceded this point. See 73 FR 58373. Nonetheless, according to the commenter, EPA does not make any showing that its exemptions would not have adverse impacts on health, welfare, and the environment. The commenter stated that, instead, EPA offered only the conclusory assertion that "the level

of control would remain the same" whether title V permits are required or not (73 FR 58373). The commenter continued by stating that EPA relied entirely on the conclusory arguments advanced elsewhere in its proposal that compliance with title V would not yield additional compliance with the underlying NESHAP. The commenter stated that those arguments are wrong for the reasons given above, and, therefore, EPA's claims about public health, welfare, and the environment are wrong too. The commenter also stated that Congress enacted title V for a reason: To assure compliance with all applicable requirements and to empower citizens to get information and enforce the CAA. The commenter said that those benefits—of which EPA's proposed rule *deprives* the public—would improve compliance with the underlying standards and, thus, have benefits for public health, welfare, and the environment. According to the commenter, EPA has not demonstrated that these benefits are unnecessary with respect to any specific source category, but again, simply rests on its own apparent belief that they are never necessary. The commenter concluded, for the reasons given above, that the attempt to substitute EPA's judgment for Congress' is unlawful and arbitrary.

Response: Congress gave the Administrator the authority to exempt area sources from compliance with title V if, in his or her discretion, the Administrator "finds that compliance with [title V] is impracticable, infeasible, or unnecessarily burdensome." See CAA section 502(a). EPA has interpreted one of the three justifications for exempting area sources, "unnecessarily burdensome," as requiring consideration of the four factors discussed above. At proposal, EPA applied these four factors to the nine chemical manufacturing area source categories subject to this rule and concluded that requiring title V for these area source categories would be unnecessarily burdensome. We maintain that this conclusion is accurate for the sources we are exempting in this rule.

In addition to determining that title V would be unnecessarily burdensome on the area source categories for which we proposed exemptions, as in the Exemption Rule, EPA also considered, consistent with our interpretation of the legislative history, whether exempting the area source categories would adversely affect public health, welfare, or the environment. As explained in the proposal preamble, we concluded that exempting the area source categories at issue in this rule would not adversely affect public health, welfare, or the environment because the level of control would be the same even if title V applied. We further explained in the proposal preamble that the title V permit program does not generally impose new substantive air quality control requirements on sources, but instead requires that certain procedural measures be followed, particularly with respect to determining compliance with applicable requirements. The commenter has not provided any information to demonstrate that the exemption from title V that we are finalizing will adversely affect public health, welfare, or the environment.

VI. Impacts of the Final Area Source Standards

A. What are the air impacts?

We estimate that the final standard will reduce organic HAP emissions by 207 tpy and metal HAP by 41 tpy from the baseline level, for an overall HAP emission reduction of 248 tpy from the baseline. Table 1 of this preamble summarizes the estimated HAP reductions under the final standards for each type of emission point.

TABLE 1—ESTIMATED NATIONWIDE HAP EMISSION REDUCTIONS

Emission point	HAP emission reduction (tpy)	Urban HAP emission reduction (tpy)
Batch process vents	<43	13
Continuous process vents	<29	9
Metal HAP process vents	41	38
Storage tanks	5	5
Heat exchange systems	79	24
Transfer operations	1	0.2
Wastewater systems	51	16
Total	248	105

B. What are the cost impacts?

The total capital cost of the final standard is estimated at $2.8 million. The total annualized cost of the final standard, including the annualized cost of capital equipment, is estimated at $3.2 million/yr. Additional information on our impact estimates on the sources is available in the docket (See Docket Number EPA–HQ—OAR–2008–0334.)

C. What are the economic impacts?

The final standard is estimated to impact a total of approximately 450 existing source facilities and 27 new sources in the next 3 years. Many of the facilities affected by this final rule are small entities. Our analyses indicate that the final rule will not impose a significant adverse impact on any facilities, large or small. The average cost for each chemical manufacturing industry is projected to be less than 0.06 percent of average sales. In addition, the average costs in each industry are projected to be less than 0.2 percent of average sales for the smallest facilities within each industry (*i.e.*, facilities with 50 to 99 employees).

D. What are the non-air health, environmental, and energy impacts?

The secondary impacts would include energy impacts associated with direct operation of combustion control devices, energy impacts associated with the generation of electricity to operate control devices, and solid waste generated as a result of the metal HAP emissions collected. Organic materials that are recovered from wastewater using gravity separation techniques would also be a solid waste if the material could not be reused in a process or as fuel.

We estimate that an additional 175 megawatt-hr/yr of electricity and 260,000 standard cubic feet per year of natural gas will be needed to operate control devices. We estimate that an additional 1.7 tpy of criteria pollutants will be generated from the combustion of natural gas in combustion control devices and from the combustion of coal to generate electricity. We estimate that controlling metal HAP emissions will generate an additional 580 tpy of solid

waste, including about 41 tpy of HAP metals. An estimated 8 tpy of organic material will be recovered from wastewater using gravity separation techniques.

VII. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), this action is a "significant regulatory action" because it may raise novel legal or policy issues. Accordingly, EPA 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.

B. Paperwork Reduction Act

The information collection requirements in this final rule have been submitted for approval to OMB under the *Paperwork Reduction Act,* 44 U.S.C. 3501, *et seq.* The information collection requirements are not enforceable until OMB approves them.

The recordkeeping and reporting requirements in this final rule are based on the requirements in EPA's NESHAP General Provisions to part 63. These recordkeeping and reporting requirements are mandatory pursuant to section 113 of the CAA (42 U.S.C. 7414). All information submitted to EPA pursuant to the information collection requirements for which a claim of confidentiality is made is safeguarded according to CAA section 114(c) and the Agency's implementing regulations at 40 CFR part 2, subpart B.

This final NESHAP requires chemical manufacturing area sources to submit an initial notification of applicability, Notification of Compliance Status report, performance test results, and semiannual compliance reports. The semiannual compliance reports are only required to be submitted if any deviations from any requirements in the rule occurred during the applicable semiannual reporting period. Area sources must also estimate emissions from batch process vents and metal HAP process vents, determine the TRE for continuous process vents, identify and characterize the PSHAP concentration in wastewater streams, prepare a heat exchange system monitoring plan, conduct design evaluations to determine control efficiency, and conduct inspections for leaks.

Records will be required to demonstrate compliance with the TRE calculation requirements for continuous process vents, batch and metal process vent emissions estimation requirements, inspections and vapor pressure calculations for storage tanks, wastewater HAP concentration requirements, and management practice inspection records for each CMPU.

The annual burden associated with the monitoring, recordkeeping, and reporting requirements for this information collection, averaged over the first 3 years of this ICR, is estimated to total 10,566 labor hours per year at a cost of $803,906. Capital/startup costs for performance tests and monitoring equipment were annualized and estimated at $69,484/yr; operation and maintenance costs for the monitoring equipment were estimated at $28,787/yr. The costs attributable to the final standards are associated with the initial compliance demonstration, monitoring, recordkeeping, and reporting requirements. Burden is defined at 5 CFR 1320.3(b).

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

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 final rule on small entities, small entity is defined as: (1) A small business that meets the Small Business Administration size standards for small businesses found at 13 CFR 121.201 (less than 500, 750, or 1,000 employees depending on the specific NAICS Code under subcategory 325); (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 this final rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. This final rule is estimated to impact a total of approximately 450 chemical manufacturing area sources; more than 150 of these facilities are estimated to be small entities. An economic impacts analysis was performed to compare the control costs associated with producing a product at facilities in the various chemical manufacturing industries to the average value of shipments from such facilities. In all industries, the average costs are projected to be less than 0.07 percent of average sales. For the smallest facilities in each industry (those with 50 to 99 employees), the average costs are all projected to be less than 0.2 percent of average sales. Thus, any price increases or loss of profit would be quite small.

Although this final rule will not have a significant economic impact on a substantial number of small entities, EPA nonetheless has tried to reduce the impact of this final rule on small entities. The standards represent practices and controls that are common throughout the sources engaged in chemical manufacturing, and in many cases only require management practices. The standards require only the recordkeeping and reporting needed to demonstrate and verify compliance.

D. Unfunded Mandates Reform Act

This final rule does not contain a Federal mandate that may result in expenditures of $100 million or more for State, local, and tribal governments, in the aggregate, or the private sector in any one year. The total annual cost of the rule is estimated at $3.2 million/yr. This final rule is not expected to impact State, local, or tribal governments. Thus, this action is not subject to the requirements of sections 202 and 205 of the UMRA.

This final 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. This final rule contains no requirements that apply to such governments, imposes no obligations upon them, and would not result in expenditures by them of $100 million or more in any one year or any disproportionate impacts on them.

E. Executive Order 13132: Federalism

This final rule does not have federalism implications. It will not have substantial direct effects on the States,

on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. This final rule does not impose any requirements on State and local governments. Thus, Executive Order 13132 does not apply to this final rule.

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

This action does not have tribal implications, as specified in Executive Order 13175 (65 FR 67249, November 9, 2000). This action imposes requirements on owners and operators of specified area sources and not tribal governments. 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 Executive Order 13045 (62 FR 19885, April 23, 1997) as applying to those regulatory actions that concern health or safety risks, such that the analysis required under section 5–501 of the Executive Order has the potential to influence the regulation. This action is not subject to Executive Order 13045 because it is based solely on technology performance.

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

This action is not a "significant energy action" as defined in Executive Order 13211 (66 FR 28355, May 22, 2001), because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. Further, we have concluded that this rule is not likely to have any adverse energy impacts.

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 (VCS) in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. VCS are technical standards (*e.g.*, materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by VCS bodies. NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable VCS.

This action involves technical standards. EPA cites the following standards: EPA Methods 5 and 5D in 40 CFR part 60, Appendix A–3 and EPA Method 29 in 40 CFR part 60, Appendix A–8. Therefore, EPA conducted a search to identify potentially applicable VCS. No applicable VCS were identified for EPA Methods 5D and 29. The search identified four VCS as possible alternatives to EPA Method 5. EPA determined that these four standards were impractical alternatives to the EPA test methods. Therefore, EPA does not intend to adopt these standards for this purpose. The reasons for the determinations for the 4 methods are discussed in a memorandum included in the docket for this action.

Under 40 CFR 63.7(f) and 40 CFR 63.8(f) of subpart A of the General Provisions, a source may apply to EPA for permission to use alternative test methods or alternative monitoring requirements in place of any required testing methods, performance specifications, or procedures in the final rule.

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. The final rule 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 nationwide standards will reduce HAP emissions and thus decrease the amount of emissions to which all affected populations are exposed.

K. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801, *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of Congress and to the Comptroller General of the United States. EPA will submit a report containing this final rule and other required information to the United States Senate, the United States House of Representatives, and the Comptroller General of the United States prior to publication of the final 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 final rule will be effective on October 29, 2009.

List of Subjects for 40 CFR Part 63

Environmental protection, Administrative practice and procedures, Air pollution control, Hazardous substances, Intergovernmental relations, Reporting and recordkeeping requirements.

Dated: October 16, 2009.

Lisa P. Jackson,

Administrator.

■ For the reasons stated in the preamble, title 40, chapter I, part 63 of the Code of Federal Regulations is amended as follows:

PART 63—[AMENDED]

■ 1. The authority citation for part 63 continues to read as follows:

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

■ 2. Part 63 is amended by adding subpart VVVVVV to read as follows:

Subpart VVVVVV—National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources

Sec.

Applicability and Compliance Dates

63.11494 What are the applicability requirements and compliance dates?

Standards and Compliance Requirements

63.11495 What are the management practices and other requirements?

63.11496 What are the standards and compliance requirements for process vents?

63.11497 What are the standards and compliance requirements for storage tanks?

63.11498 What are the standards and compliance requirements for wastewater systems?

Applicability and Compliance Dates

§ 63.11494 What are the applicability requirements and compliance dates?

(a) Except as specified in paragraph (c) of this section, you are subject to this subpart if you own or operate a chemical manufacturing process unit (CMPU) that meets the conditions specified in paragraphs (a)(1) through (3) of this section.

(1) The CMPU uses as feedstocks, generates as byproducts, or produces as products any of the hazardous air pollutants (HAP) listed in Table 1 to this subpart (Table 1 HAP).

(2) The CMPU is located at an area source of HAP emissions.

(3) Table 1 HAP are present in feedstocks, or Table 1 HAP are generated or produced in the CMPU and are present in process fluid, at concentrations greater than 0.1 percent for carcinogens, as defined by the Occupational Safety and Health Administration at 29 CFR 1910.1200(d)(4), and greater than 1.0 percent for noncarcinogens. To determine the Table 1 HAP content of feedstocks, you may rely on formulation data provided by the manufacturer or supplier, such as the Material Safety Data Sheet (MSDS) for the material. If the concentration in an MSDS is presented as a range, use the upper bound of the range.

(b) A CMPU includes all process vessels, equipment, and activities necessary to operate a chemical manufacturing process that produces a material or a family of materials described by North American Industry Classification System (NAICS) code 325. A CMPU consists of one or more unit operations and any associated recovery devices. A CMPU also includes each storage tank, transfer operation, surge control vessel, and bottoms receiver associated with the production of such NAICS code 325 materials.

(c) This subpart does not apply to the operations specified in paragraphs (c)(1) through (6) of this section.

(1) Affected sources under the following chemical manufacturing area source categories listed pursuant to Clean Air Act (CAA) section 112(c)(3) and 112(k)(3)(B)(ii) that are subject to area source standards under this part:

(i) Manufacture of Paint and Allied Products, subject to subpart CCCCCCC of this part.

(ii) Mercury Emissions from Mercury Cell Chlor-Alkali Plants, subject to subpart IIIII of this part.

(iii) Polyvinyl Chloride and Copolymers Production, subject to subpart DDDDDD of this part.

(iv) Acrylic and Modacrylic Fibers Production, subject to subpart LLLLLL of this part.

(v) Carbon Black Production, subject to subpart MMMMMM of this part.

(vi) Chemical Manufacturing Area Sources: Chromium Compounds, subject to subpart NNNNNN of this part.

(2) Production of the following chemical manufacturing materials described in NAICS code 325:

(i) Manufacture of radioactive elements or isotopes, radium chloride, radium luminous compounds, strontium, uranium.

(ii) Manufacture of photographic film, paper, and plate where the material is coated with or contains chemicals. This subpart does apply to the manufacture of photographic chemicals.

(iii) Fabricating operations (such as spinning or compressing a solid polymer into its end use); compounding operations (in which blending, melting, and resolidification of a solid polymer product occurs for the purpose of incorporating additives, colorants, or stabilizers); and extrusion and drawing operations (converting an already produced solid polymer into a different shape by melting or mixing the polymer and then forcing it or pulling it through an orifice to create an extruded product). An operation is subject if it involves processing with Table 1 HAP solvent or if an intended purpose of the operation is to remove residual Table 1 HAP monomer.

(iv) Manufacture of chemicals classified in NAICS code 325222, 325314, 325413, or 325998.

(3) Research and development facilities, as defined in CAA section 112(c)(7).

(4) Quality assurance/quality control laboratories.

(5) Ancillary activities, as defined in § 63.11502(b).

(6) Metal HAP in structures or existing as articles as defined in 40 CFR 372.3.

(d) This subpart applies to each new or existing affected source. The affected source is the facility-wide collection of CMPUs and each heat exchange system and wastewater system associated with a CMPU that meets the criteria specified in paragraphs (a) and (b) of this section. A CMPU using only Table 1 organic HAP is required to control only total CAA section 112(b) organic HAP. A CMPU using only Table 1 metal HAP is required to control only total CAA section 112(b) metal HAP.

(1) An affected source is an existing source if you commenced construction or reconstruction of the affected source before October 6, 2008.

(2) An affected source is a new source if you commenced construction or reconstruction of the affected source on or after October 6, 2008.

(e) Any source that was a major source and installed a control device on a CMPU after November 15, 1990, and, as a result, became an area source under 40 CFR part 63 is required to obtain a permit under 40 CFR part 70 or 40 CFR part 71. Otherwise, you are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not otherwise required by law to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a). Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart.

(f) If you own or operate an existing affected source, you must achieve compliance with the applicable provisions in this subpart no later than October 29, 2012.

(g) If you start up a new affected source on or before October 29, 2009, you must achieve compliance with the

applicable provisions of this subpart no later than October 29, 2009.

(h) If you start up a new affected source after October 29, 2009, you must achieve compliance with the provisions in this subpart upon startup of your affected source.

Standards and Compliance Requirements

§ 63.11495 What are the management practices and other requirements?

(a) *Management practices.* If you have a CMPU subject to this subpart, you must comply with paragraphs (a)(1) through (5) of this section.

(1) Each process vessel in organic HAP service or metal HAP service must be equipped with a cover or lid that must be in place at all times when the vessel contains HAP, except for material addition and sampling.

(2) You must use any of the methods listed in paragraphs (a)(2)(i) through (iv) of this section to control total organic HAP emissions from transfer of liquids containing Table 1 organic HAP to tank trucks or railcars. You are not required to comply with this paragraph (a)(2) if you have notified the Administrator in your initial notification that a material is reactive or resinous, and you will not be able to comply with any of the methods in paragraphs (a)(2)(i) through (iv) of this section for the transfer of such material.

(i) Use submerged loading or bottom loading.

(ii) Route emissions to a fuel gas system or process in accordance with § 63.982(d) of subpart SS.

(iii) Vapor balance back to the storage tank or another storage tank connected by a common header.

(iv) Vent through a closed-vent system to a control device.

(3) You must conduct inspections of process vessels and equipment for each CMPU in organic HAP service or metal HAP service at least quarterly to demonstrate compliance with these requirements and to determine that the process vessels and equipment are sound and free of leaks. For these inspections, detection methods incorporating sight, sound, or smell are acceptable. The inspection must include direct and proximal (thorough) inspection of all areas of potential leak within the CMPU. Indications of a leak identified using such method constitutes a leak unless you demonstrate that the indications of a leak are due to a condition other than loss of HAP. Alternatively, Method 21 of 40 CFR part 60, appendix A–7, with a leak definition of 500 parts per million by volume (ppmv), may be used for detection of leaks or to determine if the indications of a leak are due to a condition other than loss of HAP. If indications of a leak are determined not to be HAP in one quarterly monitoring period, you must still perform the inspection and demonstration in the next quarterly monitoring period. Inspections must be conducted while the subject CMPU is operating. No inspection is required in a calendar quarter during which the subject CMPU does not operate for the entire calendar quarter and is not in organic HAP service or metal HAP service. If the CMPU operates at all during a calendar quarter, an inspection is required.

(4) You must repair any leak within 15 calendar days after detection of the leak, or document the reason for any delay of repair. For the purposes of this paragraph (a)(4), a leak will be considered "repaired" if a condition specified in paragraph (a)(4)(i), (ii), or (iii) of this section is met.

(i) The visual, audible, olfactory, or other indications of a leak to the atmosphere have been eliminated, or

(ii) No bubbles are observed at potential leak sites during a leak check using soap solution, or

(iii) The system will hold a test pressure.

(5) You must keep records of the dates and results of each inspection event, the dates of equipment repairs, and, if applicable, the reasons for any delay in repair.

(b) *Small heat exchange systems.* For each heat exchange system subject to this subpart with a cooling water flow rate less than 8,000 gallons per minute (gal/min) and not meeting one or more of the conditions in § 63.104(a), you must comply with paragraphs (b)(1) through (3) of this section, or as an alternative, you may comply with any one of the requirements in Item 1.a or 1.b of Table 8 to this subpart.

(1) You must develop and operate in accordance with a heat exchange system inspection plan. The plan must describe the inspections to be performed that will provide evidence of hydrocarbons in the cooling water. Among other things, inspections may include checks for visible floating hydrocarbon on the water, hydrocarbon odor, discolored water, and/or chemical addition rates. You must conduct inspections at least once per quarter, even if the previous inspection determined that the indications of a leak did not constitute a leak as defined by § 63.104(b)(6).

(2) You must perform repairs to eliminate the leak and any indications of a leak or demonstrate that the HAP concentration in the cooling water does not constitute a leak, as defined by § 63.104(b)(6), within 45 calendar days after indications of the leak are identified, or you must document the reason for any delay of repair in your next semiannual compliance report.

(3) You must keep records of the dates and results of each inspection, documentation of any demonstrations that indications of a leak do not constitute a leak, the dates of leak repairs, and, if applicable, the reasons for any delay in repair.

(c) Startup, shutdown, and malfunction (SSM) provisions in subparts that are referenced in paragraphs (a) and (b) of this section do not apply.

§ 63.11496 What are the standards and compliance requirements for process vents?

(a) *Organic HAP Emissions from Batch Process Vents.* You must comply with the requirements in paragraphs (a)(1) through (4) of this section for organic HAP emissions from your batch process vents for each CMPU using Table 1 organic HAP. If uncontrolled organic HAP emissions from all batch process vents from a CMPU subject to this subpart are equal to or greater than 10,000 pounds per year (lb/yr), you must also comply with the emission limits and other requirements in Table 2 to this subpart.

(1) You must determine the sum of actual organic HAP emissions from all of your batch process vents within a CMPU subject to this subpart using process knowledge, engineering assessment, or test data. Emissions for a standard batch in a process may be used to represent actual emissions from each batch in that process. You must maintain records of the calculations. Calculations of annual emissions are not required if you meet the emission standards for batch process vents in Table 2 to this subpart.

(2) As an alternative to calculating actual emissions for each affected CMPU at your facility, you may elect to estimate emissions for each CMPU based on the emissions for the worst-case CMPU. The worst-case CMPU means the CMPU at the affected source with the highest organic HAP emissions per batch. The worst-case emissions per batch are used with the number of batches run for other affected CMPU. Process knowledge, engineering assessment, or test data may be used to identify the worst-case process. You must keep records of the information and procedures used to identify the worst-case process.

(3) If your current estimate is that emissions from batch process vents from a CMPU are less than 10,000 pounds per

year (lb/yr), then you must keep a record of the number of batches of each process operated per month. Also, you must reevaluate your total emissions from batch process vents prior to making any process changes that affect emission calculations in paragraphs (a)(1) and (2) of this section. If projected emissions increase to 10,000 lb/yr or more, you must be in compliance options for batch process vents in Table 2 to this subpart upon initiating operation under the new operating conditions. You must maintain records documenting the results of all updated emissions calculations.

(4) As an alternative to determining the HAP emissions, you may elect to demonstrate that the amount of organic HAP used in the process is less than 10,000 lb/yr. You must keep monthly records of the organic HAP usage.

(b) *Organic HAP Emissions from Continuous Process Vents.* You must comply with the requirements in paragraphs (b)(1) through (3) of this section for organic HAP emissions from your continuous process vents for each CMPU subject to this subpart using Table 1 organic HAP. If the total resource-effectiveness (TRE) index value for a continuous process vent is less than or equal to 1.0, you must also comply with the emission limits and other requirements in Table 3 to this subpart.

(1) You must determine the TRE index value according to the procedures in § 63.115(d), except as specified in paragraphs (b)(1)(i) through (iii) of this section.

(i) You are not required to calculate the TRE index value if you control emissions in accordance with Table 3 to this subpart.

(ii) Sections 63.115(d)(1)(i) and (ii) are not applicable for the purposes of this paragraph (b)(1)(ii).

(iii) You may assume the TRE for a vent stream is > 1.0 if the amount of organic HAP emitted in the vent stream is less than 0.1 pound per hour.

(2) If the current TRE index value is greater than 1, you must recalculate the TRE index value before you make any process or operational change that affects parameters in the calculation. If the recalculated TRE is less than or equal to 1.0, then you must comply with one of the compliance options for continuous process vents in Table 3 to this subpart before operating under the new operating conditions. You must maintain records of all TRE calculations.

(3) If a recovery device as defined in § 63.11502 is used to maintain the TRE index value at a level greater than 1.0 and less than or equal to 4.0, you must comply with § 63.982(e) and the requirements specified therein.

(c) *Combined Streams.* If you combine organic HAP emissions from batch process vents and continuous process vents, you must comply with the more stringent standard in Table 2 or Table 3 to this subpart that applies to any portion of the combined stream, or you must comply with Table 2 for the batch process vents and Table 3 for the continuous process vents. The TRE index value for continuous process vents and the annual emissions from batch process vents shall be determined for the individual streams before they are combined, and prior to any control, in order to determine the most stringent applicable requirements.

(d) *Combustion of Halogenated Streams.* If you use a combustion device to comply with the emission limits for organic HAP from a halogenated batch process vent or a halogenated continuous process vent, you must use a halogen reduction device to meet the emission limit in either paragraph (d)(1) or (d)(2) of this section and in accordance with § 63.994 and the requirements referenced therein.

(1) Reduce overall emissions of hydrogen halide and halogen HAP after the combustion device by greater than or equal to 95 percent, to less than or equal to 0.45 kilograms per hour (kg/hr), or to a concentration less than or equal to 20 parts per million by volume (ppmv).

(2) Reduce the halogen atom mass emission rate before the combustion device to less than or equal to 0.45 kg/hr or to a concentration less than or equal to 20 ppmv.

(e) *Alternative Standard for Organic HAP.* Exceptions to the requirements for the alternative standard requirements specified in Tables 2 and 3 to this subpart and § 63.2505 are specified in paragraphs (e)(1) through (5) of this section.

(1) When § 63.2505 of subpart FFFF refers to Tables 1 and 2 to subpart FFFF and §§ 63.2455 and 63.2460, it means Tables 2 and 3 to this subpart and § 63.11496(a) and (b).

(2) Sections 63.2505(a)(2) and (b)(9) do not apply.

(3) When § 63.2505(b) references § 63.2445 it means § 63.11494(f) through (h).

(4) The requirements for hydrogen halide and halogen HAP apply only to hydrogen halide and halogen HAP generated in a combustion device that is used to comply with the alternative standard.

(5) When § 63.1258(b)(5)(ii)(B)(*2*) refers to a "notification of process change" report, it means the semi-annual compliance report required by § 63.11501(d) for the purposes of this subpart.

(f) *Emissions from Metal HAP Process Vents.* You must comply with the requirements in paragraphs (f)(1) and (2) of this section for metal HAP emissions from each CMPU using Table 1 metal HAP. If the collective uncontrolled metal HAP emissions from all metal HAP process vents from a CMPU are equal to or greater than 400 lb/yr, then you must also comply with the emission limits and other requirements in Table 4 to this subpart and in paragraph (f)(3), (4), or (5) of this section.

(1) You must determine the sum of metal HAP emissions from all metal HAP process vents within a CMPU subject to this subpart, except you are not required to determine the annual emissions if you control the metal HAP process vents within a CMPU in accordance with Table 4 to this subpart or if you determine your total metal HAP usage in the process unit is less than 400 lb/yr. To determine the mass emission rate you may use process knowledge, engineering assessment, or test data. You must keep records of the emissions calculations.

(2) If your current estimate is that total uncontrolled metal HAP emissions from a CMPU subject to this subpart are less than 400 lb/yr, then you must keep records of either the number of batches operated per month (batch vents) or the process operating hours (continuous vents). Also, you must reevaluate your total emissions before you make any process or operational change that affects emissions of metal HAP. If projected emissions increase to 400 lb/yr or more, then you must be in compliance with one of the options for metal HAP process vents in Table 4 to this subpart upon initiating operation under the new operating conditions. You must keep records of all recalculated emissions determinations.

(3) If you have an existing source subject to the HAP metals emission limits specified in Table 4 to this subpart, you must comply with the initial compliance and monitoring requirements in paragraphs (f)(3)(i) through (iii) of this section. You must keep records of monitoring results to demonstrate continuous compliance.

(i) You must prepare a monitoring plan containing the information in paragraphs (f)(3)(i)(A) through (E) of this section. The plan must be maintained on-site and be available on request. You must operate and maintain the control device according to a site-specific monitoring plan at all times.

(A) A description of the device;

(B) Results of a performance test or engineering assessment conducted in accordance with paragraph (f)(3)(ii) of this section verifying the performance of the device for reducing HAP metals or particulate matter (PM) to the levels required by this subpart;

(C) Operation and maintenance plan for the control device (including a preventative maintenance schedule consistent with the manufacturer's instructions for routine and long-term maintenance) and continuous monitoring system.

(D) A list of operating parameters that will be monitored to maintain continuous compliance with the applicable emissions limits; and

(E) Operating parameter limits based on either monitoring data collected during the performance test or established in the engineering assessment.

(ii) You must conduct a performance test or an engineering assessment for each CMPU subject to a HAP metals emissions limit in Table 4 to this subpart and report the results in your Notification of Compliance Status (NOCS) report. If you own or operate an existing affected source, you are not required to conduct a performance test if a prior performance test was conducted within the 5 years prior to the effective date using the same methods specified in paragraph (f)(3)(iii) of this section and either no process changes have been made since the test, or if you can demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process changes. For each performance test, sampling must be conducted at both the inlet and outlet of the control device, and the test must be conducted under representative process operating conditions.

(iii) If you elect to conduct a performance test, it must be conducted according to requirements in § 63.11410(j)(1). As an alternative to conducting a performance test using Method 5 or 5D to determine the concentration of PM, you may use Method 29 in 40 CFR part 60, appendix A–8 to determine the concentration of HAP metals. You have demonstrated initial compliance if the overall reduction of either HAP metals or total PM is equal to or greater than 95 percent.

(4) If you have a new source using a baghouse as a control device, you must install, operate, and maintain a bag leak detection system on all baghouses used to comply with the HAP metals emissions limit in Table 4 to this subpart. You must comply with the testing, monitoring, and recordkeeping requirements in § 63.11410(g), (i), and (j)(1), except you are not required to submit the monitoring plan required by § 63.11410(g)(2) for approval.

(5) If you have a new source using a control device other than a baghouse to comply with the HAP metals emission limits in Table 4 to this subpart, you must comply with the initial compliance and monitoring requirements in paragraphs (f)(3)(i) through (iii) of this section.

(g) *Exceptions and Alternatives to 40 CFR Part 63, Subpart SS.* If you are complying with the emission limits and other requirements for continuous process vents in Table 3 to this subpart, the provisions in paragraphs (g)(1) through (7) and (9) of this section apply in addition to the provisions in 40 CFR part 63, subpart SS. If you are complying with the emission limits and other requirements for batch process vents in Table 2 to this subpart, the provisions in paragraphs (g)(1) through (8) of this section apply in addition to the provisions in subpart SS.

(1) *Requirements for Performance Tests.* The requirements specified in §§ 63.2450(g)(1) through (4) apply instead of or in addition to the requirements specified in 40 CFR part 63, subpart SS.

(2) *Design Evaluation.* To determine initial compliance with a percent reduction emission limit, you may elect to conduct a design evaluation as specified in § 63.1257(a)(1) instead of a performance test as specified in subpart SS of this part 63. You must establish the value(s) and basis for the operating limits as part of the design evaluation. For continuous process vents, the design evaluation must be conducted at maximum representative operating conditions for the process, unless the Administrator specifies or approves alternate operating conditions. For batch process vents, the design evaluation must be conducted under worst-case conditions, as specified in § 63.2460(c)(2).

(3) *Outlet Concentration Correction for Combustion Devices.* When § 63.997(e)(2)(iii)(C) requires you to correct the measured concentration at the outlet of a combustion device to 3 percent oxygen if you add supplemental combustion air, the requirements in either paragraph (g)(3)(i) or (g)(3)(ii) of this section apply for the purposes of this subpart.

(i) You must correct the concentration in the gas stream at the outlet of the combustion device to 3 percent oxygen if you add supplemental gases, as defined in § 63.2550, to the vent stream, or;

(ii) You must correct the measured concentration for supplemental gases using Equation 1 of § 63.2460; you may use process knowledge and representative operating data to determine the fraction of the total flow due to supplemental gas.

(4) *Continuous Parameter Monitoring.* The provisions in § 63.2450(k)(1) through (6) apply in addition to the requirements for continuous parameter monitoring systems (CPMS) in subpart SS of this part 63, except as specified in paragraphs (g)(4)(i) and (ii) of this section.

(i) You may measure pH at least once per day for any halogen scrubber within a CMPU subject to this rule.

(ii) The requirements in § 63.2450(k)(6) to request approval of a procedure to monitor operating parameters does not apply for the purposes of this subpart. You must provide the required information in your NOCS report required by § 63.11501(b).

(5) *Startup, Shutdown, Malfunction (SSM).* Section 63.998(b)(2)(iii),(b)(6)(i)(A), and (d)(3) do not apply for the purposes of this subpart.

(6) *Excused Excursions.* Excused excursions, as defined in subpart SS of this part 63, are not allowed.

(7) *Energetics and Organic Peroxides.* If an emission stream contains energetics or organic peroxides that, for safety reasons, cannot meet an applicable emission limit specified in this subpart, then you must submit an application to the Administrator explaining why an undue safety hazard would be created if the air emission controls were installed, and you must describe the procedures that you will implement to minimize HAP emissions from these vent streams in lieu of the emission limitations in this section.

(8) *Additional Requirements for Batch Process Vents.* The provisions specified in § 63.2460(c) apply in addition to the provisions in subpart SS of this part 63, except as specified in paragraphs (g)(8)(i) through (iii) of this section.

(i) References to emission limits in Table 2 to subpart FFFF mean the emission limits in Table 2 to this subpart.

(ii) References to MCPU mean CMPU for purposes of this subpart.

(iii) Section 63.2460(c)(8) does not apply for the purposes of this subpart.

(9) *Parameter Monitoring Averaging Periods.* Daily averages required in § 63.998(b)(3) apply at all times except during startup and shutdown. Separate averages shall be determined for each period of startup and period of shutdown.

(h) *Surge Control Vessels and Bottoms Receivers.* For each surge control vessel and bottoms receiver that meets the applicability criteria for storage tanks specified in Table 5 to this subpart, you must meet the emission limits and control requirements specified in Table 5 to this subpart.

(i) *Startup, shutdown, and malfunction (SSM).* References to SSM provisions in subparts that are referenced in paragraphs (a) through (h) of this section or Tables 2 through 5 to this subpart do not apply.

§ 63.11497 What are the standards and compliance requirements for storage tanks?

(a) You must comply with the emission limits and other requirements in Table 5 to this subpart and in paragraph (b) of this section for organic HAP emissions from each of your storage tanks that meet the applicability criteria in Table 5 to this subpart.

(b) *Planned Routine Maintenance for a Control Device.* Operate in accordance with paragraphs (b)(1) through (3) of this section for periods of planned routine maintenance of a control device for storage tanks.

(1) Add no material to the storage tank during periods of planned routine maintenance.

(2) Limit periods of planned routine maintenance for each control device (or series of control devices) to no more than 240 hours per year (hr/yr), or submit an application to the Administrator requesting an extension of this time limit to a total of 360 hr/yr. The application must explain why the extension is needed and it must be submitted at least 60 days before the 240-hour limit will be exceeded.

(3) Keep records of the day and time at which planned routine maintenance periods begin and end, and keep a record of the type of maintenance performed.

(c) References to SSM provisions in subparts that are referenced in paragraphs (a) or (b) of this section or Table 5 to this subpart do not apply.

§ 63.11498 What are the standards and compliance requirements for wastewater systems?

(a) You must comply with the requirements in paragraph (a)(1) and (2) of this section and in Table 6, Item 1 to this subpart for all wastewater streams from a CMPU subject to this subpart. If the partially soluble HAP concentration in a wastewater stream is equal to or greater than 10,000 parts per million by weight (ppmw) and the wastewater stream contains a separate organic phase, then you must also comply with Table 6, Item 2 to this subpart for that wastewater stream. Partially soluble HAP are listed in Table 7 to this subpart.

(1) Except as specified in paragraph (a)(2) of this section, you must determine the total concentration of partially soluble HAP in each wastewater stream using process knowledge, engineering assessment, or test data. Also, you must reevaluate the concentration of partially soluble HAP if you make any process or operational change that affects the concentration of partially soluble HAP in a wastewater stream.

(2) You are not required to determine the partially soluble concentration in wastewater that is hard piped to a combustion unit or hazardous waste treatment unit, and you are not required to determine the partially soluble HAP concentration in wastewater that is hard piped to a storage tank from which the wastewater is collected and shipped offsite for treatment in a combustion unit or hazardous waste treatment unit.

(3) Separated organic material that is recycled to a process is no longer wastewater and no longer subject to the wastewater requirements after it has been recycled.

(b) The requirements in Item 2 of Table 6 to this subpart do not apply during periods of startup or shutdown. References to SSM provisions in subparts that are referenced in paragraph (a) of this section or Table 6 to this subpart do not apply.

§ 63.11499 What are the standards and compliance requirements for heat exchange systems?

(a) If the cooling water flow rate in your heat exchange system is equal to or greater than 8,000 gal/min and is not meeting one or more of the conditions in § 63.104(a), then you must comply with one of the requirements specified in Table 8 to this subpart.

(b) For equipment that meets Current Good Manufacturing Practice (CGMP) requirements of 21 CFR part 211, you may use the physical integrity of the reactor as the surrogate indicator of heat exchanger system leaks when complying with Item 1.a in Table 8 to this subpart.

(c) Any reference to SSM provisions in other subparts that are referenced in paragraphs (a) and (b) of this section or Table 8 to this subpart do not apply.

§ 63.11500 What compliance options do I have if part of my plant is subject to both this subpart and another Federal standard?

For any CMPU, heat exchange system, or wastewater system subject to the provisions of both this subpart and another rule, you may elect to comply only with the more stringent provisions as specified in paragraphs (a) through (d) of this section. You must consider all provisions of the rules, including monitoring, recordkeeping, and reporting. You must identify the subject CMPU, heat exchange system, and/or wastewater system, and the provisions with which you will comply in your NOCS report required by § 63.11501(b). You also must demonstrate in your NOCS report that each provision with which you will comply is at least as stringent as the otherwise applicable requirement in this subpart VVVVVV. You are responsible for making accurate determinations concerning the more stringent standards and noncompliance with this rule is not excused if it is later determined that your determination was in error and, as a result, you are violating this subpart. Compliance with this rule is your responsibility and the NOCS report does not alter or affect that responsibility.

(a) *Compliance with Other Subparts of this Part 63.* If any part of a CMPU that is subject to the provisions of this subpart is also subject to the provisions of another subpart of 40 CFR part 63, then compliance with any of the requirements in the other subpart of this part 63 that are at least as stringent as the corresponding requirements in this subpart VVVVVV constitutes compliance with this subpart VVVVVV.

(b) *Compliance with Subparts of 40 CFR Part 60.* If any part of a CMPU that is subject to the provisions of this subpart is also subject to the provisions of subpart VV, DDD, III, NNN, RRR, or YYY in 40 CFR part 60, then compliance with any of the requirements in 40 CFR part 60, subpart VV, DDD, III, NNN, RRR, or YYY that are at least as stringent as the corresponding requirements in this subpart VVVVVV constitutes compliance with this subpart VVVVVV.

(c) *Compliance with Subparts of 40 CFR Part 61.* If any part of a CMPU that is subject to the provisions of this subpart is also subject to the provisions of subpart V, Y, BB, or FF of 40 CFR part 61, then compliance with any of the requirements in 40 CFR part 61, subpart V, Y, BB, or FF that are at least as stringent as the corresponding requirements in this subpart VVVVVV constitutes compliance with this subpart VVVVVV.

(d) *Compliance with 40 CFR Parts 260 through 272.* If any part of a CMPU that is subject to the provisions of this subpart is also subject to the provisions of 40 CFR parts 260 through 272, then compliance with any of the requirements in 40 CFR part 260

through 272 rule that are at least as stringent as the corresponding requirements in this subpart VVVVVV constitutes compliance with this subpart VVVVVV.

§ 63.11501 What are the notification, recordkeeping, and reporting requirements?

(a) *General Provisions.* You must meet the requirements of the General Provisions in 40 CFR part 63, subpart A, as shown in Table 9 to this subpart. The General Provisions in other parts do not apply except when a requirement in an overlapping standard, which you determined is at least as stringent as subpart VVVVVV and with which you have opted to comply, requires compliance with general provisions in another part.

(b) *Notification of Compliance Status (NOCS).* Your NOCS required by § 63.9(h) must include the following additional information as applicable:

(1) This certification of compliance, signed by a responsible official:

(i) "This facility complies with the management practices in § 63.11495."

(ii) "This facility complies with the requirements in § 63.11496 for HAP emissions from process vents."

(iii) "This facility complies with the requirements in § 63.11496 and § 63.11497 for surge control vessels, bottoms receivers, and storage tanks."

(iv) "This facility complies with the requirements in § 63.11498 to treat wastewater streams."

(v) "This facility complies with the requirements in § 63.11499 for heat exchange systems."

(2) If you comply with the alternative standard as specified in Table 2 to this subpart or Table 3 to this subpart, include the information specified in § 63.1258(b)(5), as applicable.

(3) If you establish an operating limit for a parameter that will not be monitored continuously in accordance with §§ 63.11496(g)(4) and 63.2450(k)(6), provide the information as specified in §§ 63.11496(g)(4) and 63.2450(k)(6).

(4) A list of all transferred liquids that are reactive or resinous materials, as defined in § 63.11502(b).

(5) If you comply with provisions in an overlapping rule in accordance with § 63.11500, identify the affected CMPU, heat exchange system, and/or wastewater system; provide a list of the specific provisions with which you will comply; and demonstrate that the provisions with which you will comply are at least as stringent as the otherwise applicable requirements, including monitoring, recordkeeping, and reporting requirements, in this subpart VVVVVV.

(c) *Recordkeeping.* You must maintain files of all information required by this subpart for at least 5 years following the date of each occurrence according to the requirements in § 63.10(b)(1). If you are subject, you must comply with the recordkeeping requirements of § 63.10(b)(2) and the applicable requirements specified in paragraphs (c)(1) through (7) of this section.

(1) For each CMPU subject to this subpart you must keep the records specified in paragraphs (c)(1)(i) through (vi) of this section, as applicable.

(i) Records of management practice inspections, repairs, and reasons for any delay of repair, as specified in § 63.11495(a)(5).

(ii) Records of small heat exchange system inspections, demonstrations of indications of leaks that do not constitute leaks, repairs, and reasons for any delay in repair as specified in § 63.11495(b).

(iii) If batch process vent emissions are less than 10,000 lb/yr for a CMPU, records of batch process vent emission calculations, as specified in § 63.11496(a)(1), the number of batches operated each month, as specified in § 63.11496(a)(3), and any updated emissions calculations, as specified in § 63.11496(a)(3). Alternatively, keep records of the worst-case processes or organic HAP usage, as specified in § 63.11496(a)(2) and (4), respectively.

(iv) Records of all TRE calculations for continuous process vents as specified in § 63.11496(b)(2).

(v) Records of metal HAP emission calculations as specified in § 63.11496(f)(1) and (2). If total uncontrolled metal HAP process vent emissions from a CMPU subject to this subpart are estimated to be less than 400 lb/yr, also keep records of either the number of batches per month or operating hours, as specified in § 63.11496(f)(2).

(vi) Records identifying wastewater streams and the type of treatment they receive, as specified in Table 6 to this subpart.

(2) For batch process vents subject to Table 2 to this subpart and continuous process vents subject to Table 3 to this subpart, you must keep records specified in paragraphs (c)(2)(i) or (ii) of this section, as applicable.

(i) If you route emissions to a control device other than a flare, keep records of performance tests, if applicable, as specified in § 63.998(a)(2)(ii) and (4), keep records of the monitoring system and the monitored parameters, as specified in § 63.998(b) and (c), and keep records of the closed-vent system, as specified in § 63.998(d)(1). If you use a recovery device to maintain the TRE above 1.0 for a continuous process vent, keep records of monitoring parameters during the TRE index value determination, as specified in § 63.998(a)(3).

(ii) If you route emissions to a flare, keep records of the flare compliance assessment, as specified in § 63.998(a)(1)(i), keep records of the pilot flame monitoring, as specified in § 63.998(a)(1)(ii) and (iii), and keep records of the closed-vent system, as specified in § 63.998(d)(1).

(3) For metal HAP process vents subject to Table 4 to this subpart, you must keep records specified in paragraphs (c)(3)(i) or (ii) of this section, as applicable.

(i) For a new source using a control device other than a baghouse and for any existing source, maintain a monitoring plan, as specified in § 63.11496(f)(3)(i), and keep records of monitoring results, as specified in § 63.11496(f)(3).

(ii) For a new source using a baghouse to control metal HAP emissions, keep a site-specific monitoring plan, as specified in §§ 63.11496(f)(4) and 63.11410(g), and keep records of bag leak detection systems, as specified in §§ 63.11496(f)(4) and 63.11410(g)(4).

(4) For each storage tank subject to Table 5 to this subpart, you must keep records specified in paragraphs (c)(4)(i) through (vi) of this section, as applicable.

(i) Keep records of the vessel dimension, capacity, and liquid stored, as specified in § 63.1065(a).

(ii) Keep records of each inspection of an internal floating roof, as specified in § 63.1065(b)(1).

(iii) Keep records of each seal gap measurement for external floating roofs, as specified in § 63.1065(b)(2), and keep records of inspections of external floating roofs, as specified in § 63.1065(b)(1).

(iv) If you vent emissions to a control device other than a flare, keep records of the operating plan and measured parameter values, as specified in §§ 63.985(c) and 63.998(d)(2).

(v) If you vent emissions to a flare, keep records of all periods of operation during which the flare pilot flame is absent, as specified in §§ 63.987(c) and 63.998(a)(1), and keep records of closed-vent systems, as specified in § 63.998(d)(1).

(vi) For periods of planned routine maintenance of a control device, keep records of the day and time at which each maintenance period begins and ends, and keep records of the type of maintenance performed, as specified in § 63.11497(b)(3).

(5) For each wastewater stream subject to Item 2 in Table 6 to this subpart, keep records of the wastewater stream identification and the disposition of the organic phase(s), as specified in Item 2 to Table 6 to this subpart.

(6) For each large heat exchange system subject to Table 8 to this subpart, you must keep records of detected leaks; the date the leak was detected; if demonstrated not to be a leak, the basis for that determination; the date of efforts to repair the leak; and the date the leak is repaired, as specified in Table 8 to this subpart.

(7) You must keep a record of all transferred liquids that are reactive or resinous materials, as defined in § 63.11502(b), and not included in the NOCS.

(d) *Semiannual Compliance Reports.* You must submit semiannual compliance reports that contain the information specified in paragraphs (d)(1) through (7) of this section, as applicable. Reports are required only for semiannual periods during which you experienced any of the events described in paragraphs (d)(1) through (7) of this section.

(1) *Deviations.* You must clearly identify any deviation from the requirements of this subpart.

(2) *Delay of Repair for a Large Heat Exchange System.* You must include the information specified in § 63.104(f)(2) each time you invoke the delay of repair provisions for a heat exchange system with a cooling water flow rate equal to or greater than 8,000 gal/min.

(3) *Delay of Leak Repair.* You must provide the following information for each delay of leak repair beyond 15 days for any process equipment, storage tank, surge control vessel, bottoms receiver, and each delay of leak repair beyond 45 days for any heat exchange system with a cooling water flow rate less than 8,000 gal/min: information on the date the leak was identified, the reason for the delay in repair, and the date the leak was repaired.

(4) *Process Change.* You must report each process change that affects a compliance determination and submit a new certification of compliance with the applicable requirements in accordance with the procedures specified in paragraph (b) of this section.

(5) *Data for the Alternative Standard.* If you comply with the alternative standard, as specified in Table 2 to this subpart or Table 3 to this subpart, report the information required in § 63.1258(b)(5).

(6) *Overlapping Rule Requirements.* Report any changes in the overlapping provisions with which you comply.

(7) *Reactive and Resinous Materials.* Report any transfer of liquids that are reactive or resinous materials, as defined in § 63.11502(b), and not included in the NOCS.

Other Requirements and Information

§ 63.11502 What definitions apply to this subpart?

(a) The following terms used in this subpart have the meaning given them in the CAA, § 63.2, subpart SS (§ 63.981), subpart WW (§ 63.1061), 40 CFR 60.111b, subpart F (§ 63.101), subpart G (§ 63.111), subpart FFFF (§ 63.2550), as specified after each term:

Administrator (§ 63.2)
Article (40 CFR 372.3)
Boiler (§ 63.111)
Bottoms receiver (§ 63.2550)
CAA (§ 63.2)
Closed-vent system (§ 63.981)
Combustion device (§ 63.111)
Commenced (§ 63.2)
Compliance date (§ 63.2)
Container (§ 63.111)
Continuous monitoring system (§ 63.2)
Distillation unit (§ 63.111)
Emission standard (§ 63.2)
EPA (§ 63.2)
Family of materials (§ 63.2550)
Fill or filling (§ 63.111)
Floating roof (§ 63.1061)
Fuel gas system (§ 63.981)
Halogen atoms (§ 63.2550)
Halogenated vent stream (§ 63.2550)
Halogens and hydrogen halides (§ 63.2550)
Hazardous air pollutant (§ 63.2)
Heat exchange system (§ 63.101)
Incinerator (§ 63.111)
Maintenance wastewater (§ 63.2550)
Major source (§ 63.2)
Maximum true vapor pressure (§ 63.111)
Oil-water separator or organic-water separator (§ 63.111)
Operating permit (§ 63.101)
Owner or operator (§ 63.2)
Performance test (§ 63.2)
Permitting authority (§ 63.2)
Process condenser (§ 63.2550)
Process heater (§ 63.111)
Process tank (§ 63.2550)
Process wastewater (§ 63.101)
Reactor (§ 63.111)
Responsible official (§ 63.2)
State (§ 63.2)
Supplemental gases (§ 63.2550)
Surge control vessel (§ 63.2550)
Test method (§ 63.2)
Unit operation (§ 63.101)

(b) All other terms used in this subpart shall have the meaning given them in this section. If a term is defined in the CAA, § 63.2, subpart SS (§ 63.981), subpart WW (§ 63.1061), 40 CFR 60.111b, subpart F (§ 63.101), subpart G (§ 63.111), or subpart FFFF (§ 63.2550), and in this section, it shall have the meaning given in this section for purposes of this subpart.

Ancillary activities means boilers, incinerators, and process heaters not used to comply with the emission standards in §§ 63.11495 through 63.11500, chillers and other refrigeration systems, and other equipment and activities that are not directly involved (*i.e.*, they operate within a closed system and materials are not combined with process fluids) in the processing of raw materials or the manufacturing of a product or intermediates used in the production of the product.

Batch process vent means a vent from a CMPU or vents from multiple CMPUs within a process that are manifolded together into a common header, through which a HAP-containing gas stream is, or has the potential to be, released to the atmosphere. Batch process vents include vents with intermittent flow from continuous operations that are not combined with any stream that originated as a continuous gas stream from the same continuous process. Examples of batch process vents include, but are not limited to, vents on condensers used for product recovery, reactors, filters, centrifuges, and process tanks. The following are not batch process vents for the purposes of this subpart:

(1) Continuous process vents;

(2) Bottoms receivers;

(3) Surge control vessels;

(4) Gaseous streams routed to a fuel gas system(s);

(5) A gas stream routed to other processes for reaction or other use in another process (*i.e.*, for chemical value as a product, isolated intermediate, byproduct, or coproduct, or for heat value).

(6) Vents on storage tanks or wastewater systems;

(7) Drums, pails, and totes; and

(8) Emission streams from emission episodes that are undiluted and uncontrolled containing less than 50 ppmv HAP are not part of any batch process vent. The HAP concentration may be determined using any of the following: process knowledge, an engineering assessment, or test data.

Byproduct means a chemical (liquid, gas, or solid) that is produced coincidentally during the production of the product.

Chemical manufacturing process means all equipment which collectively functions to produce a product or isolated intermediate. A process includes, but is not limited to any, all, or a combination of reaction, recovery, separation, purification, or other

activity, operation, manufacture, or treatment which are used to produce a product or isolated intermediate. A process is also defined by the following:

(1) Routine cleaning operations conducted as part of batch operations are considered part of the process;

(2) Each nondedicated solvent recovery operation is considered a single process;

(3) Each nondedicated formulation operation is considered a single process;

(4) Quality assurance/quality control laboratories are not considered part of any process;

(5) Ancillary activities are not considered a process or part of any process; and

(6) The end of a process that produces a solid material is either up to and including the dryer or extruder, or for a polymer production process without a dryer or extruder, it is up to and including the die plate or solid-state reactor, except in two cases. If the dryer, extruder, die plate, or solid-state reactor is followed by an operation that is designed and operated to remove HAP solvent or residual monomer from the solid, then the solvent removal operation is the last step in the process. If the dried solid is diluted or mixed with a HAP-based solvent, then the solvent removal operation is the last step in the process.

Continuous process vent means a "process vent" as defined in § 63.101 in subpart F of this part, except:

(1) The reference in § 63.107(e) to a chemical manufacturing process unit that meets the criteria of § 63.100(b) means a CMPU that meets the criteria of § 63.11494(a) and (b);

(2) The reference in § 63.107(h)(2) to subpart H means § 63.11495(a) for the purposes of this subpart;

(3) The reference in § 63.107(h)(4) to § 63.113 means Tables 2 and 3 to this subpart;

(4) The reference in § 63.107(h)(7) to § 63.119 means Table 5 to this subpart, and the reference to § 63.126 does not apply for the purposes of this subpart;

(5) The second sentence in the definition of "process vent" in § 63.101 does not apply for the purposes of this subpart;

(6) The references to an "air oxidation reactor, distillation unit, or reactor" in § 63.107 means any continuous operation for the purposes of this subpart;

(7) Section § 63.107(h)(8) does not apply for the purposes of this subpart; and

(8) A separate determination is required for the emissions from each CMPU, even if emission streams from two or more CMPU are combined prior to discharge to the atmosphere or to a control device.

Co-Product means a chemical that is produced during the production of another chemical, both for their intended production.

Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source fails to meet any requirement or obligation established by this subpart, including, but not limited to any emissions limitation or management practice; or fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit.

Equipment means each pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, connector, and instrumentation system in or associated with a CMPU.

Feedstock means any raw material, reactant, solvent, additive, or other material introduced to a CMPU.

In metal HAP service means that a process vessel or piece of equipment either contains or contacts a feedstock, byproduct, or product that contains metal HAP.

In organic HAP service means that a process vessel or piece of equipment either contains or contacts a feedstock, byproduct, or product that contains an organic HAP.

Metal HAP means the compounds containing metals listed as HAP in section 112(b) of the CAA.

Metal HAP process vent means the point of discharge to the atmosphere (or inlet to a control device, if any) of a metal HAP-containing gas stream from any CMPU at an affected source.

Organic HAP means any organic HAP listed in section 112(b) of the CAA. For the purposes of requirements in this subpart VVVVVV, hydrazine is to be considered an organic HAP.

Process vessel means each vessel, except hand-held containers, used in the processing of raw materials to chemical products. Examples include, but are not limited to reactors, distillation units, centrifuges, mixing vessels, and process tanks.

Product means a compound or chemical which is manufactured as the intended product of the CMPU. Products include co-products. By-products, isolated intermediates, impurities, wastes, and trace contaminants are not considered products.

Reactive material means energetics, organic peroxides, and unstable chemicals such as chemicals that react violently with water and chemicals that vigorously polymerize, decompose, or become self-reactive under conditions of pressure or temperature.

Recovery device means an individual unit of equipment capable of and normally used for the purpose of recovering organic chemicals or metal-containing chemicals for fuel value (*i.e.*, net positive heating value), use, reuse, or for sale for fuel value, use, or reuse. Examples of equipment that may be recovery devices include absorbers, carbon adsorbers, condensers, oil-water separators or organic-water separators, or organic removal devices such as decanters, strippers, or thin-film evaporation units.

Resinous material means a viscous, high-boiling point material resembling pitch or tar, such as plastic resin, that sticks to or hardens in the fill pipe under normal transfer conditions.

Shutdown, for a unit operation with a continuous process vent, means the cessation of the unit operation for any purpose. Shutdown begins with the initiation of steps as described in a written standard operating procedures (SOP) or shutdown plan to cease normal/stable operation (*e.g.*, reducing or immediately stopping feed).

Startup, for a unit operation with a continuous process vent, means the setting in operation of the unit for any purpose. The period of startup ends upon completion of the transient, non-equilibrium step at the time operating conditions reach steady state for operating parameters such as temperature, pressure, composition, feed rate, and production rate. Periods of startup described by SOP manuals at the affected source may be used to determine the period of startup.

Storage tank means a tank or other vessel that is used to store liquids that contain organic HAP and that are part of a CMPU subject to this subpart VVVVVV. The following are not considered storage tanks for the purposes of this subpart:

(1) Vessels permanently attached to motor vehicles such as trucks, railcars, barges, or ships;

(2) Pressure vessels designed to operate in excess of 204.9 kilopascals (kPa) and without emissions to the atmosphere;

(3) Process tanks;

(4) Tanks storing organic liquids containing HAP only as impurities;

(5) Surge control vessels;

(6) Bottoms receivers; and

(7) Wastewater storage tanks.

Transfer operations means all product loading into tank trucks and rail cars of liquid containing organic HAP from a transfer rack. Transfer operations do not

include the loading to other types of containers such as cans, drums, and totes.

Transfer rack means the system used to load organic liquids into tank trucks and railcars at a single geographic site. It includes all loading arms, pumps, meters, shutoff valves, relief valves, and other piping and equipment necessary for the transfer operation. Transfer equipment that are physically separate (*i.e.*, do not share common piping, valves, and other equipment) are considered to be separate transfer racks.

Wastewater means water that is discarded from a CMPU or control device and that contains at least 5 ppmw of any HAP listed in Table 9 to 40 CFR part 63, subpart G and has an annual average flow rate of 0.02 liters per minute. Wastewater means both process wastewater and maintenance wastewater that is discarded from a CMPU or control device. The following are not considered wastewater for the purposes of this subpart:

(1) Stormwater from segregated sewers;

(2) Water from fire-fighting and deluge systems, including testing of such systems;

(3) Spills;

(4) Water from safety showers;

(5) Samples of a size not greater than reasonably necessary for the method of analysis that is used;

(6) Equipment leaks;

(7) Wastewater drips from procedures such as disconnecting hoses after cleaning lines; and

(8) Noncontact cooling water.

Wastewater stream means a single point discharge of wastewater from a CMPU or control device.

Wastewater treatment means chemical, biological, and mechanical procedures applied to wastewater to remove or reduce HAP or other chemical constituents.

§ 63.11503 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by the U.S. EPA or a delegated authority such as a State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or tribal agency pursuant to 40 CFR part 63, subpart E, then that Agency has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out if this subpart is delegated to a State, local, or tribal agency within your State.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the approval authorities contained in paragraphs (b)(1) through (4) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the State, local, or tribal agency.

(1) Approval of an alternative non-opacity emissions standard under § 63.6(g).

(2) Approval of a major change to a test method. A "major change to test method" is defined in § 63.90.

(3) Approval of a major change to monitoring under § 63.8(f). A "major change to monitoring" is defined in § 63.90.

(4) Approval of a major change to recordkeeping/reporting under § 63.10(f). A "major change to recordkeeping/reporting" is defined in § 63.90.

Tables to Subpart VVVVVV of Part 63

As required in § 63.11494(a), chemical manufacturing operations that process, use, or produce the HAP shown in the following table are subject to subpart VVVVVV.

TABLE 1 TO SUBPART VVVVVV OF PART 63—HAZARDOUS AIR POLLUTANTS USED TO DETERMINE APPLICABILITY OF CHEMICAL MANUFACTURING OPERATIONS

Type of HAP	Chemical name	CAS No.
1. Organic compounds	a. 1,3-butadiene	106990
	b. 1,3-dichloropropene	542756
	c. Acetaldehyde	75070
	d. Chloroform	67663
	e. Ethylene dichloride	107062
	f. Hexachlorobenzene	118741
	g. Methylene chloride	75092
	h. Quinoline	91225
2. Metal compounds	a. Arsenic compounds	.....
	b. Cadmium compounds	.....
	c. Chromium compounds	.....
	d. Lead compounds	.....
	e. Manganese compounds	.....
	f. Nickel compounds	.....
3. Others	a. Hydrazine	302012

As required in § 63.11496, you must comply with the requirements for batch process vents as shown in the following table.

TABLE 2 TO SUBPART VVVVVV OF PART 63—EMISSION LIMITS AND COMPLIANCE REQUIREMENTS FOR BATCH PROCESS VENTS

For * * *	You must * * *	Except * * *
1. Batch process vents in a CMPU at an existing source for which the total organic HAP emissions are equal to or greater than 10,000 lb/yr.	a. Reduce collective uncontrolled total organic HAP emissions from the sum of all batch process vents by ≥85 percent by weight or to ≤20 ppmv by routing emissions from a sufficient number of the batch process vents through a closed vent system to any combination of control devices (except a flare) in accordance with the requirements of §63.982(c) and the requirements referenced therein; or	i. Compliance may be based on either total organic HAP or total organic carbon (TOC); and ii. As specified in §63.11496(g).
	b. Route emissions from batch process vents containing at least 85 percent of the uncontrolled total organic HAP through a closed-vent system to a flare (except that a flare may not be used to control halogenated vent streams) in accordance with the requirements of §63.982(b) and the requirements referenced therein; or	i. Not applicable.
	c. Comply with the alternative standard specified in §63.2505 and the requirements referenced therein; or	i. As specified in §63.11496(e) of this subpart.
	d. Comply with combinations of the requirements in Items a., b., and c. of this Table for different groups of batch process vents.	i. The information specified above for Items a., b., and c., as applicable.
2. Batch process vents in a CMPU at a new source for which the total organic HAP emissions are equal to or greater than 10,000 lb/yr.	a. Comply with any of the emission limits in Items 1.a through 1.d of this Table, except 90 percent reduction applies instead of 85 percent reduction in Item 1.a, and 90 percent of the emissions must be routed to a flare instead of 85 percent in Item 1.b.	i. The information specified above for Items 1.a., 1.b., 1.c., and 1.d, as applicable.
3. Halogenated batch process vent stream at a new or existing source that is controlled through combustion.	a. Comply with the requirements for halogen scrubbers in §63.11496(d).	

As required in §63.11496, you must comply with the requirements for continuous process vents as shown in the following table.

TABLE 3 TO SUBPART VVVVVV OF PART 63—EMISSION LIMITS AND COMPLIANCE REQUIREMENTS FOR CONTINUOUS PROCESS VENTS

For * * *	You must * * *	Except * * *
1. Each continuous process vent with a TRE ≤1.0.	a. Reduce emissions of total organic HAP by ≥95 percent by weight (≥85 percent by weight for periods of startup or shutdown) or to ≤20 ppmv by routing emissions through a closed vent system to any combination of control devices (except a flare) in accordance with the requirements of §63.982(c)(2) and the requirements referenced therein; or	i. Compliance may be based on either total organic HAP or TOC; and ii. As specified in §63.11496(g).
	b. Reduce emissions of total organic by HAP by routing all emissions through a closed-vent system to a flare (except that a flare may not be used to control halogenated vent streams) in accordance with the requirements of §63.982(b) and the requirements referenced therein; or	i. Not applicable.
	c. Comply with the alternative standard specified in §63.2505 and the requirements referenced therein.	i. As specified in §63.11496(e).
2. Halogenated vent stream that is controlled through combustion.	a. Comply with the requirements for halogen scrubbers in §63.11496(d).	

As required in §63.11496(f), you must comply with the requirements for metal HAP process vents as shown in the following table.

TABLE 4 TO SUBPART VVVVVV OF PART 63—EMISSION LIMITS AND COMPLIANCE REQUIREMENTS FOR METAL HAP PROCESS VENTS

For * * *	You must * * *	Except * * *
Each CMPU with total metal HAP emissions ≥400 lb/yr.	Reduce collective uncontrolled emissions of total metal HAP emissions by ≥95 percent by weight by routing emissions from a sufficient number of the metal process vents through a closed-vent system to any combination of control devices, according to the requirements of §63.11496(f)(3), (4), or (5).	Not applicable.

As required in §63.11497, you must comply with the requirements for storage tanks as shown in the following table.

TABLE 5 TO SUBPART VVVVVV OF PART 63—EMISSION LIMITS AND COMPLIANCE REQUIREMENTS FOR STORAGE TANKS

For each * * *	You must * * *	Except * * *
1. Storage tank with a design capacity ≥40,000 gallons, storing liquid that contains organic HAP listed in Table 1 to this subpart, and for which the maximum true vapor pressure (MTVP) of total organic HAP at the storage temperature is ≥5.2 kPa and <76.6 kPa.	a. Comply with the requirements of subpart WW of this part;	i. All required seals must be installed by the compliance date in §63.11494.
	b. Reduce total organic HAP emissions by ≥95 percent by weight by operating and maintaining a closed-vent system and control device (other than a flare) in accordance with §63.982(c)(1); or	i. Compliance may be based on either total organic HAP or TOC; ii. Comply with the management practice inspection requirements in §63.11495 for the closed-vent system; iii. When the term storage vessel is used in subpart SS of this part, the term storage tank, surge control vessel, or bottoms receiver, as defined in §63.11502 of this subpart, applies; and iv. The requirements do not apply during periods of planned routine maintenance of the control device, as specified in §63.11497(b).
	c. Reduce total HAP emissions by operating and maintaining a closed-vent system and a flare in accordance with §63.982(b); or	i. The requirements do not apply during periods of planned routine maintenance of the flare, as specified in §63.11497(b); and ii. When the term storage vessel is used in subpart SS of this part, it means storage tank, surge control vessel, or bottoms receiver, as defined in §63.11502 of this subpart.
	d. Vapor balance in accordance with §63.2470(e); or	i. Not applicable.
	e. Route emissions to a fuel gas system or process in accordance with the requirements in §63.982(d) and the requirements referenced therein.	i. When the term storage vessel is used in subpart SS of this part, it means storage tank, surge control vessel, or bottoms receiver, as defined in §63.11502.
2. Storage tank with a design capacity ≥20,000 gallons and <40,000 gallons, storing liquid that contains organic HAP listed in Table 1 to this subpart, and for which the MTVP of total organic HAP at the storage temperature is ≥27.6 kPa and <76.6 kPa.	a. Comply with one of the options in Item 1 of this table.	i. The information specified above for Items 1.a., 1.b., 1.c., 1.d, and 1.e, as applicable.
3. Storage tank with a design capacity ≥20,000 gallons, storing liquid that contains organic HAP listed in Table 1 to this subpart, and for which the MTVP of total organic HAP at the storage temperature is ≥76.6 kPa.	a. Comply with option b, c, d, or e in Item 1 of this table.	i. The information specified above for Items 1.b., 1.c., 1.d, and 1.e, as applicable.
4. Storage tank described by Item 1, 2, or 3 in this table and emitting a halogenated vent stream that is controlled with a combustion device.	a. Reduce emissions of hydrogen halide and halogen HAP by ≥95 percent by weight, or to ≤0.45 kg/hr, or to ≤20 ppmv by using a halogen reduction device after the combustion device according to the requirements in §63.11496(d); or	

TABLE 5 TO SUBPART VVVVVV OF PART 63—EMISSION LIMITS AND COMPLIANCE REQUIREMENTS FOR STORAGE TANKS—Continued

For each * * *	You must * * *	Except * * *
	b. Reduce the halogen atom mass emission rate to ≤0.45 kg/hr or to ≤20 ppmv by using a halogen reduction device before the combustion device according to the requirements in § 63.11496(d).	

As required in § 63.11498, you must comply with the requirements for wastewater systems as shown in the following table.

TABLE 6 TO SUBPART VVVVVV OF PART 63—EMISSION LIMITS AND COMPLIANCE REQUIREMENTS FOR WASTEWATER SYSTEMS

For each * * *	You must * * *	And you must * * *
1. Wastewater stream	a. Discharge to onsite or offsite treatment	i. Maintain records identifying each wastewater stream and documenting the type of treatment that it receives. Multiple wastewater streams with similar characteristics and from the same type of activity in a CMPU may be grouped together for record-keeping purposes.
2. Wastewater stream containing partially soluble HAP at a concentration ≥10,000 ppmw and separate organic and water phases.	a. Use a decanter, steam stripper, thin film evaporator, or distillation unit to separate the water phase from the organic phase(s); or	i. For the water phase, comply with the requirements in Item 1 of this table, and ii. For the organic phase(s), recycle to a process, use as fuel, or dispose as hazardous waste either onsite or offsite, and iii. Keep records of the wastewater streams subject to this requirement and the disposition of the organic phase(s).
	b. Hard pipe the entire wastewater stream to onsite treatment as a hazardous waste, or hard pipe the entire wastewater stream to a point of transfer for offsite treatment as a hazardous waste.	i. Keep records of the wastewater streams subject to this requirement and the disposition of the wastewater streams.

As required in § 63.11498(a), you must comply with emission limits for wastewater streams that contain the partially soluble HAP listed in the following table.

TABLE 7 TO SUBPART VVVVVV OF PART 63—PARTIALLY SOLUBLE HAP

Partially soluble HAP name	CAS No.
1. 1,1,1-Trichloroethane (methyl chloroform)	71556
2. 1,1,2,2-Tetrachloroethane	79345
3. 1,1,2-Trichloroethane	79005
4. 1,1-Dichloroethylene (vinylidene chloride)	75354
5. 1,2-Dibromoethane	106934
6. 1,2-Dichloroethane (ethylene dichloride)	107062
7. 1,2-Dichloropropane	78875
8. 1,3-Dichloropropene	542756
9. 2,4,5-Trichlorophenol	95954
10. 1,4-Dichlorobenzene	106467
11. 2-Nitropropane	79469
12. 4-Methyl-2-pentanone (MIBK)	108101
13. Acetaldehyde	75070
14. Acrolein	107028
15. Acrylonitrile	107131
16. Allyl chloride	107051
17. Benzene	71432

TABLE 7 TO SUBPART VVVVVV OF PART 63—PARTIALLY SOLUBLE HAP—Continued

Partially soluble HAP name	CAS No.
18. Benzyl chloride	100447
19. Biphenyl	92524
20. Bromoform (tribromomethane)	75252
21. Bromomethane	74839
22. Butadiene	106990
23. Carbon disulfide	75150
24. Chlorobenzene	108907
25. Chloroethane (ethyl chloride)	75003
26. Chloroform	67663
27. Chloromethane	74873
28. Chloroprene	126998
29. Cumene	98828
30. Dichloroethyl ether	111444
31. Dinitrophenol	51285
32. Epichlorohydrin	106898
33. Ethyl acrylate	140885
34. Ethylbenzene	100414
35. Ethylene oxide	75218
36. Ethylidene dichloride	75343
37. Hexachlorobenzene	118741
38. Hexachlorobutadiene	87683
39. Hexachloroethane	67721
40. Methyl methacrylate	80626
41. Methyl-t-butyl ether	1634044
42. Methylene chloride	75092

TABLE 7 TO SUBPART VVVVVV OF PART 63—PARTIALLY SOLUBLE HAP—Continued

Partially soluble HAP name	CAS No.
43. N-hexane	110543
44. N,N-dimethylaniline	121697
45. Naphthalene	91203
46. Phosgene	75445
47. Propionaldehyde	123386
48. Propylene oxide	75569
49. Styrene	100425
50. Tetrachloroethylene (perchloroethylene)	127184
51. Tetrachloromethane (carbon tetrachloride)	56235
52. Toluene	108883
53. Trichlorobenzene (1,2,4-)	120821
54. Trichloroethylene	79016
55. Trimethylpentane	540841
56. Vinyl acetate	108054
57. Vinyl chloride	75014
58. Xylene (m)	108383
59. Xylene (o)	95476
60. Xylene (p)	106423

As required in § 63.11499, you must comply with the requirements for heat exchange systems as shown in the following table.

TABLE 8 TO SUBPART VVVVVV OF PART 63—EMISSION LIMITS AND COMPLIANCE REQUIREMENTS FOR HEAT EXCHANGE SYSTEMS

For * * *	You must * * *	Except * * *
1. Each heat exchange system with a cooling water flow rate ≥8,000 gal/min and not meeting one or more of the conditions in §63.104(a).	a. Comply with the monitoring requirements in §63.104(c), the leak repair requirements in §63.104(d) and (e), and the recordkeeping and reporting requirements in §63.104(f); or	i. The reference to monthly monitoring for the first 6 months in §63.104(c)(1)(iii) does not apply. Monitoring shall be no less frequent than quarterly; ii. The reference in §63.104(f)(1) to record retention requirements in §63.103(c)(1) does not apply. Records must be retained as specified in §§63.10(b)(1) and 63.11501(c); and iii. The reference in §63.104(f)(2) to "the next semi-annual periodic report required by §63.152(c)" means the next semi-annual compliance report required by §63.11501(f).
	b. Comply with the heat exchange system requirements in §63.104(b) and the requirements referenced therein.	i. Not applicable.

As required in §63.11501(a), you must comply with the requirements of the NESHAP General Provisions (40 CFR part 63, subpart A) as shown in the following table.

TABLE 9 TO SUBPART VVVVVV OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART VVVVVV

Citation	Subject	Applies to Subpart VVVVVV?	Explanation
63.1(a)(1), (a)(2), (a)(3), (a)(4), (a)(6), (a)(10)–(a)(12) (b)(1), (b)(3), (c)(1), (c)(2), (c)(5), (e).	Applicability	Yes.	
63.1(a)(5), (a)(7)-(a)(9), (b)(2), (c)(3), (c)(4), (d).	Reserved	No.	
63.2	Definitions	Yes.	
63.3	Units and Abbreviations	Yes.	
63.4	Prohibited Activities and Circumvention	Yes.	
63.5	Preconstruction Review and Notification Requirements.	Yes.	
63.6(a), (b)(1)–(b)(5), (b)(7), (c)(1), (c)(2), (c)(5), (e)(1)(iii), (g), (i), (j).	Compliance with Standards and Maintenance Requirements.	Yes.	
63.6(b)(6), (c)(3), (c)(4), (d), (h)(3), (h)(5)(iv).	Reserved	No.	
63.6 (e)(1)(i) and (ii), (e)(3), and (f)(1)	SSM Requirements	No.	
63.6(h)(1)–(h)(4), (h)(5)(i)–(h)(5)(iii), (h)(6)–(h)(9).		No	Subpart VVVVVV does not include opacity or visible emissions (VE) standards or require a continuous opacity monitoring system (COMS).
63.7(a)(1), (a)(3), (a)(4), (c), (e)(4), and (f)–(h).	Performance Testing Requirements	Yes.	
63.7(a)(2), (b), (d), (e)(1)–(3)	Performance Testing Schedule, Notification of Performance Test, Performance Testing Facilities, and Conduct of Performance Tests.	Yes/No	Requirements apply if conducting test for metal HAP control; requirements in §§63.997(c)(1), (d), (e), and 63.999(a)(1) apply, as referenced in §63.11496(g), if conducting test for organic HAP or hydrogen halide and halogen HAP control device.
63.8(a)(1), (a)(4), (b), (c)(1)–(c)(3), (f)(1)–(5).	Monitoring Requirements	Yes	References to SSM in §63.8(c) do not apply.
63.8(a)(2)	Monitoring Requirements	No.	
63.8(a)(3)	Reserved	No.	
63.8(c)(4)		No	Continuous parameter monitoring system (CPMS) requirements in 40 CFR part 63, subparts SS and FFFF are referenced from §63.11496.
63.8(c)(5)		No	Subpart VVVVVV does not require COMS.

TABLE 9 TO SUBPART VVVVVV OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART VVVVVV—Continued

Citation	Subject	Applies to Subpart VVVVVV?	Explanation
63.8(c)(6)–(c)(8), (d), (e), (f)(6)		Yes	Requirements apply only if you use a continuous emission monitoring system (CEMS) to demonstrate compliance with the alternative standard in §63.11496(e). References to SSM in §63.8(d) do not apply.
63.8(g)(1)–(g)(4)		Yes	Data reduction requirements apply only if you use CEMS to demonstrate compliance with alternative standard in §63.11496(e). COMS requirements do not apply. Requirement in §63.8(g)(2) does not apply because data reduction for CEMS are specified in 40 CFR part 63, subpart FFFF.
63.8(g)(5)		No	Data reduction requirements for CEMS are specified in 40 CFR part 63, subpart FFFF, as referenced from §63.11496. CPMS requirements are specified in 40 CFR part 63, subparts SS and FFFF, as referenced from §63.11496.
63.9(a), (b)(1), (b)(2), (b)(4), (b)(5), (c), (d), (e), (i).	Notification Requirements	Yes.	
63.9(b)(3), (h)(4)	Reserved	No.	
63.9(f)		No	Subpart VVVVVV does not contain opacity or VE limits.
63.9(g)		Yes	Additional notification requirement applies only if you use CEMS to demonstrate compliance with alternative standard in §63.11496(e).
63.9(h)(1)–(h)(3), (h)(5)–(h)(6)		Yes	Except subpart VVVVVV does not contain opacity or VE limits.
63.9(j)	Change in Information Already Provided.	No	Notification of process changes that affect a compliance determination are required in §63.11501(d)(4).
63.10(a)	Recordkeeping Requirements	Yes.	
63.10(b)(1)		Yes.	
63.10(b)(2)(i)–(b)(2)(v)		Yes	Any references to SSM do not apply.
63.10(b)(2)(vi), (x), (xi), (xiii)		Yes	Apply only if you use CEMS to demonstrate compliance with alternative standard in §63.11496(e).
63.10(b)(2)(vii)–(b)(2)(ix), (b)(2)(xii), (b)(2)(xiv).		Yes.	
63.10(b)(3)		Yes.	
63.10(c)(1), (c)(5)–(c)(6), (c)(13)–(c)(14)		Yes	Apply only if you use CEMS to demonstrate compliance with alternative standard in §63.11496(e).
63.10(c)(7)–(c)(8), (c)(10)–(c)(12), (c)(15)		Yes	Any reference to SSM does not apply.
63.10(c)(2)–(c)(4), (c)(9)	Reserved	No.	
63.10(d)(1), (d)(2), (d)(4), (e)(1), (e)(2), (f).	Reporting Requirements	Yes.	
63.10(d)(3)		No	Subpart VVVVVV does not include opacity or VE limits.
63.10(d)(5)		No.	
63.10(e)(1)–(e)(2)		Yes	Apply only if you use CEMS to demonstrate compliance with alternative standard in §63.11496(e).
63.10(e)(3)		Yes.	
63.10(e)(4)		No	Subpart VVVVVV does not include opacity or VE limits.
63.11	Control Device Requirements	Yes.	
63.12	State Authorities and Delegations	Yes.	
63.13	Addresses	Yes.	
63.14	Incorporations by Reference	Yes.	
63.15	Availability of Information and Confidentiality.	Yes.	
63.16	Performance Track Provisions	Yes.	

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March 3, 2010

Part II

Environmental Protection Agency

40 CFR Part 63
National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines; Final Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[EPA–HQ–OAR–2008–0708, FRL–9115–7]

RIN 2060–AP36

National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: EPA is promulgating national emission standards for hazardous air pollutants for existing stationary compression ignition reciprocating internal combustion engines that either are located at area sources of hazardous air pollutant emissions or that have a site rating of less than or equal to 500 brake horsepower and are located at major sources of hazardous air pollutant emissions. In addition, EPA is promulgating national emission standards for hazardous air pollutants for existing non-emergency stationary compression ignition engines greater than 500 brake horsepower that are located at major sources of hazardous air pollutant emissions. Finally, EPA is revising the provisions related to startup, shutdown, and malfunction for the engines that were regulated previously by these national emission standards for hazardous air pollutants.

DATES: This final rule is effective on May 3, 2010.

ADDRESSES: EPA has established a docket for this action under Docket ID No. EPA–HQ–OAR–2008–0708. EPA also relies on materials in Docket ID Nos. EPA–HQ–OAR–2002–0059, EPA–HQ–OAR–2005–0029, and EPA–HQ–OAR–2005–0030 and incorporates those dockets into the record for the final rule. 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 the EPA Headquarters Library, Room Number 3334, EPA West Building, 1301 Constitution Ave., NW., Washington, DC. The EPA/DC Public Reading Room hours of operation will be 8:30 a.m. to 4:30 p.m. Eastern Standard Time (EST), Monday through Friday. The telephone number for the Public Reading Room is (202) 566–1744, and the telephone number for the Air and Radiation Docket and Information Center is (202) 566–1742.

FOR FURTHER INFORMATION CONTACT: Ms. Melanie King, Energy Strategies Group, Sector Policies and Programs Division (D243–01), Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number (919) 541–2469; facsimile number (919) 541–5450; e-mail address *king.melanie@epa.gov.*

SUPPLEMENTARY INFORMATION:

Background Information Document. On March 5, 2009 (71 FR 9698), EPA proposed national emission standards for hazardous air pollutants (NESHAP) for existing stationary reciprocating internal combustion engines (RICE) that either are located at area sources of hazardous air pollutants (HAP) emissions or that have a site rating of less than or equal to 500 brake horsepower (HP) and are located at major sources of HAP emissions. In addition, EPA proposed national emission standards for HAP for existing stationary compression ignition (CI) engines greater than 500 brake HP that are located at major sources. A summary of the public comments on the proposal and EPA's responses to the comments, as well as the Regulatory Impact Analysis Report, are available in Docket ID No. EPA–HQ–OAR–2008–0708.

Organization of This Document. The following outline is provided to aid in locating information in the preamble.

I. General Information

A. Does this action apply to me?

Regulated Entities. Categories and entities potentially regulated by this action include:

Category	NAICS [1]	Examples of regulated entities
Any industry using a stationary internal combustion engine as defined in this final rule.	2211	Electric power generation, transmission, or distribution.
	622110	Medical and surgical hospitals.
	48621	Natural gas transmission.
	211111	Crude petroleum and natural gas production.
	211112	Natural gas liquids producers.

Category	NAICS [1]	Examples of regulated entities
	92811	National security.

[1] North American Industry Classification System.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. To determine whether your engine is regulated by this action, you should examine the applicability criteria of this final rule. If you have any questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

B. Where can I get a copy of this document?

In addition to being available in the docket, an electronic copy of this final action will also be available on the Worldwide Web (WWW) through the Technology Transfer Network (TTN). Following signature, a copy of this final action will be posted on the TTN's policy and guidance page for newly proposed or promulgated rules at the following address: *http://www.epa.gov/ttn/oarpg/*. The TTN provides information and technology exchange in various areas of air pollution control.

C. Judicial Review

Under section 307(b)(1) of the Clean Air Act (CAA), 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 May 3, 2010. Under section 307(d)(7)(B) of the CAA, 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. Moreover, under section 307(b)(2) of the CAA, 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.

Section 307(d)(7)(B) of the CAA further provides that "[o]nly an objection to a rule or procedure which was raised with reasonable specificity during the period for public comment (including any public hearing) may 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 the rule." Any person seeking to make such a demonstration to us should submit a Petition for Reconsideration to the Office of the Administrator, U.S. EPA, Room 3000, Ariel Rios Building, 1200 Pennsylvania Ave., NW., Washington, DC 20460, with a copy to both the person(s) 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), U.S. EPA, 1200 Pennsylvania Ave., NW., Washington, DC 20460.

D. Why is EPA not promulgating a final decision for spark ignition engines?

In the notice of proposed rulemaking for this rule, published on March 5, 2009, EPA proposed the NESHAP for all existing stationary RICE located at area sources of HAP emissions and existing stationary RICE that had a site rating of less than or equal to 500 brake HP and located at major sources of HAP emissions. Also, EPA proposed NESHAP for existing stationary CI engines greater than 500 brake HP located at major sources.

During the comment period following the proposal, EPA received a number of comments stating that EPA had insufficient emissions data for existing spark ignition (SI) engines. Because commenters believed that EPA had inadequate emissions data for SI engines, they suggested that EPA should consider seeking an extension of its February 10, 2010 consent decree deadline to allow additional time for the collection of emissions data for SI engines. Several commenters indicated that they would work with EPA to gather the necessary test data to obtain adequate and sufficient emissions tests for SI engines. Among other things, the commenters noted that developing the final requirements for SI engines later in 2010 would provide sufficient time for industry to develop test programs, conduct testing of engines, assemble test results, and submit the complete results to EPA for review. Other commenters requested that EPA seek a one year extension of its consent decree deadline for SI engines, which would mean a final rule for these engines by February 10, 2011.

In consideration of the comments, EPA sought and obtained a six month extension of its February 10, 2010 deadline for SI engines. EPA maintains that this period is sufficient for the commenters to provide additional test data for the SI engines. Thus, pursuant to the revised consent decree between EPA and Sierra Club, EPA will finalize requirements for existing stationary SI engines that are less than or equal to 500 HP and located at major sources of HAP emissions and existing stationary SI engines that are located at area sources of HAP emissions by August 10, 2010. For these reasons, this final rule does not contain standards for existing stationary SI engines that are less than or equal to 500 HP and located at major sources of HAP emissions and existing stationary SI engines that are located at area sources of HAP emissions.

Consistent with the original consent decree, EPA is finalizing regulations for existing stationary CI engines that are less than or equal to 500 HP and located at major sources and existing stationary CI engines that are located at area sources in this final rule. EPA is also promulgating requirements for existing stationary non-emergency CI engines that are greater than 500 HP and located at major sources.

EPA plans to continue to work with affected stakeholders over the next several months in order to obtain more complete emissions data for existing stationary SI engines. The emissions data collected will be analyzed and if EPA's review indicates that the submitted data meets acceptance criteria, EPA will include the data in developing final standards. EPA will promulgate regulations for existing stationary SI engines by August 10, 2010.

II. Background

This action promulgates NESHAP for existing stationary CI RICE with a site rating of less than or equal to 500 HP located at major sources, existing non-emergency CI engines with a site rating greater than 500 HP at major sources, and existing stationary CI RICE of any power rating located at area sources. EPA is finalizing these standards to meet its statutory obligation to address HAP emissions from these sources under sections 112(d), 112(c)(3) and 112(k) of the CAA. The final NESHAP for stationary RICE will be promulgated

under 40 CFR part 63, subpart ZZZZ, which already contains standards applicable to new stationary RICE and some existing stationary RICE.

EPA promulgated NESHAP for existing, new, and reconstructed stationary RICE greater than 500 HP located at major sources on June 15, 2004 (69 FR 33474). EPA promulgated NESHAP for new and reconstructed stationary RICE that are located at area sources of HAP emissions and for new and reconstructed stationary RICE that have a site rating of less than or equal to 500 HP that are located at major sources of HAP emissions on January 18, 2008 (73 FR 3568). At that time, EPA did not promulgate final requirements for existing stationary RICE that are located at area sources of HAP emissions or for existing stationary RICE that have a site rating of less than or equal to 500 HP that are located at major sources of HAP emissions. Although EPA proposed standards for these sources, EPA did not finalize these standards due to comments received indicating that the proposed Maximum Achievable Control Technology (MACT) determinations for existing sources were inappropriate because of a decision by the U.S. Court of Appeals for the District of Columbia Circuit on March 13, 2007, which vacated EPA's MACT standards for the Brick and Structural Clay Products Manufacturing source category (40 CFR part 63, subpart JJJJJ). *Sierra Club* v. *EPA*, 479 F.3d 875 (DC Cir. 2007). Among other things, the DC Circuit found that EPA's no emission reduction MACT determination in the challenged rule was unlawful. Because EPA had used a MACT floor methodology in the proposed stationary RICE rule similar to the methodology used in the Brick MACT, EPA decided to re-evaluate the MACT floors for existing major sources that have a site rating of less than or equal to 500 brake HP consistent with the Court's decision in the Brick MACT case. Also, EPA has re-evaluated the standards for existing area sources in light of the comments received on the proposed rule.

In addition, stakeholders have encouraged the Agency to review whether there are further ways to reduce emissions of pollutants from existing stationary diesel engines. In its comments on EPA's 2005 proposed rule for new stationary diesel engines (70 FR 39870), the Environmental Defense Fund (EDF) suggested several possible avenues for the regulation of existing stationary diesel engines, including use of diesel oxidation catalysts or catalyzed diesel particulate filters (CDPF), as well as the use of ultra low sulfur diesel (ULSD) fuel. EDF suggested that such controls can provide significant pollution reductions at reasonable cost. EPA issued an advance notice of proposed rulemaking (ANPRM) in January 2008, where it solicited comment on several issues concerning options to regulate emissions of pollutants from existing stationary diesel engines, generally, and specifically from larger, older stationary diesel engines. EPA solicited comment and collected information to aid decision-making related to the reduction of HAP emissions from existing stationary diesel engines and specifically from larger, older engines under CAA section 112 authorities. The Agency sought comment on the larger, older non-emergency CI engines because available data indicate that those engines emit the majority of particulate matter (PM) and toxic emissions from non-emergency stationary CI engines as a whole. A summary of comments and responses that were received on the ANPRM is included in docket EPA–HQ–OAR–2007–0995. EPA proposed and is finalizing emissions reductions from existing non-emergency stationary diesel engines at major sources that have a site rating greater than 500 HP.

This action also revises the provisions of the existing NESHAP as it applies to periods of startup, shutdown, and malfunction. This revision affects all stationary engines regulated in this NESHAP, including stationary engines that were regulated by the 2004 and 2008 NESHAP. The revision of these provisions is a result of a Court decision that invalidated regulations related to startup, shutdown and malfunction in the General Provisions of Part 63 (*Sierra Club* v. *EPA*, 551 F.3d 1019 (DC Cir. 2008)).

III. Summary of the Final Rule

A. What is the source category regulated by the final rule?

This final rule addresses emissions from existing stationary CI engines less than or equal to 500 HP located at major sources and all existing stationary CI engines located at area sources. This final rule also addresses emissions from existing stationary non-emergency CI engines greater than 500 HP at major sources. A major source of HAP emissions is generally a stationary source that emits or has the potential to emit any single HAP at a rate of 10 tons (9.07 megagrams) or more per year or any combination of HAP at a rate of 25 tons (22.68 megagrams) or more per year. An area source of HAP emissions is a source that is not a major source.

This action revises the regulations at 40 CFR part 63, subpart ZZZZ, currently applicable to new and reconstructed stationary RICE and to existing stationary RICE greater than 500 HP located at major sources. Through this action, we are adding to subpart ZZZZ requirements for: Existing CI stationary RICE less than or equal to 500 HP located at major sources and existing CI stationary RICE located at area sources.

1. Stationary CI RICE ≤500 HP at Major Sources

This action revises 40 CFR part 63, subpart ZZZZ, to address HAP emissions from existing stationary CI RICE less than or equal to 500 HP located at major sources. For stationary engines less than or equal to 500 HP at major sources, EPA must determine what is the appropriate MACT for those engines under sections 112(d)(2) and (d)(3) of the CAA.

EPA has divided stationary CI RICE into emergency and non-emergency engines in order to capture the unique differences between these types of engines.

2. Stationary CI RICE at Area Sources

This action revises 40 CFR part 63, subpart ZZZZ, in order to address HAP emissions from existing stationary RICE located at area sources. Section 112(d) of the CAA requires EPA to establish NESHAP for both major and area sources of HAP that are listed for regulation under CAA section 112(c). As noted above, an area source is a stationary source that is not a major source.

Section 112(k)(3)(B) of the CAA calls for EPA to identify at least 30 HAP that, as a result of emissions of area sources, pose the greatest threat to public health in the largest number of urban areas. EPA implemented this provision in 1999 in the Integrated Urban Air Toxics Strategy (64 FR 38715, July 19, 1999). Specifically, in the Strategy, EPA identified 30 HAP that pose the greatest potential health threat in urban areas, and these HAP are referred to as the "30 urban HAP." Section 112(c)(3) of the CAA requires EPA to list sufficient categories or subcategories of area sources to ensure that area sources representing 90 percent of the emissions of the 30 urban HAP are subject to regulation. EPA implemented these requirements through the Integrated Urban Air Toxics Strategy (64 FR 38715, July 19, 1999). The area source stationary engine source category was one of the listed categories. A primary goal of the Strategy is to achieve a 75 percent reduction in cancer incidence attributable to HAP emitted from stationary sources.

Under CAA section 112(d)(5), EPA may elect to promulgate standards or requirements for area sources "which provide for the use of generally available control technologies or management practices by such sources to reduce emissions of hazardous air pollutants." Additional information on generally available control technologies (GACT) and management practices is found in the Senate report on the legislation (Senate report Number 101–228, December 20, 1989), which describes GACT as:

> * * * methods, practices and techniques which are commercially available and appropriate for application by the sources in the category considering economic impacts and the technical capabilities of the firms to operate and maintain the emissions control systems.

Consistent with the legislative history, EPA can consider costs and economic impacts in determining GACT, which is particularly important when developing regulations for source categories, like this one, that have many small businesses.

Determining what constitutes GACT involves considering the control technologies and management practices that are generally available to the area sources in the source category. EPA also considers the standards applicable to major sources in the same industrial sector to determine if the control technologies and management practices are transferable and generally available to area sources. In appropriate circumstances, EPA may also consider technologies and practices at area and major sources in similar categories to determine whether such technologies and practices could be considered generally available for the area source category at issue. Finally, as EPA has already noted, in determining GACT for a particular area source category, EPA considers the costs and economic impacts of available control technologies and management practices on that category.

The urban HAP that must be regulated at stationary RICE to achieve the CAA section 112(c)(3) requirement to regulate categories accounting for 90 percent of the urban HAP are: 7 polycyclic aromatic hydrocarbons (PAH), formaldehyde, acetaldehyde, arsenic, benzene, beryllium compounds, and cadmium compounds. As explained below, EPA chose to select formaldehyde to serve as a surrogate for HAP emissions. Formaldehyde is the hazardous air pollutant present in the highest concentration from stationary engines. In addition, emissions data show that formaldehyde emission levels are related to other HAP emission levels. EPA has previously demonstrated that carbon monoxide (CO) is an appropriate surrogate for formaldehyde and is consequently finalizing emission standards in terms of CO for existing stationary CI RICE at area sources.

Consistent with existing stationary CI RICE at major sources, EPA has also divided the existing stationary CI RICE at area sources into emergency and non-emergency engines in order to properly take into account the differences between these engines.

3. Stationary CI RICE > 500 HP at Major Sources

In addition, EPA is finalizing emission standards for non-emergency stationary CI engines greater than 500 HP at major sources.

B. What are the pollutants regulated by the final rule?

The final rule regulates emissions of HAP. Available emissions data show that several HAP, which are formed during the combustion process or which are contained within the fuel burned, are emitted from stationary engines. The HAP which have been measured in emission tests conducted on diesel fired stationary RICE include: 1, 3-butadiene, acetaldehyde, acrolein, benzene, ethylbenzene, formaldehyde, n-hexane, naphthalene, PAH, polycyclic organic matter, styrene, toluene, and xylene. Metallic HAP from diesel fired stationary RICE that have been measured include: Cadmium, chromium, lead, manganese, mercury, nickel, and selenium.

EPA described the health effects of these HAP and other HAP emitted from the operation of stationary RICE in the preamble to 40 CFR part 63, subpart ZZZZ, published on June 15, 2004 (69 FR 33474). More detail on the health effects of these HAP and other HAP emitted from the operation of stationary RICE can be found in the Regulatory Impact Analysis (RIA) for the final rule. These HAP emissions are known to cause, or contribute significantly to air pollution, which may reasonably be anticipated to endanger public health or welfare.

The final rule will limit emissions of HAP through emissions standards for CO for existing stationary CI RICE. Carbon monoxide has been shown to be an appropriate surrogate for HAP emissions from CI engines. For the NESHAP promulgated in 2004, EPA found that there is a relationship between CO emissions reductions and HAP emissions reductions from CI stationary engines. Therefore, because testing for CO emissions has many advantages over testing for HAP emissions, CO emissions were chosen as a surrogate for HAP emissions reductions for CI stationary engines.

For the standards being finalized in this action, EPA believes that previous decisions regarding the appropriateness of using CO in concentration (parts per million (ppm)) levels as has been done for stationary sources before as surrogates for HAP are still valid.[1] Consequently, EPA is finalizing emission standards for CO for stationary CI engines in order to regulate HAP emissions. In addition, EPA is promulgating separate provisions relevant to emissions of metallic HAP from existing diesel engines, as discussed in section III.C. of this preamble.

In addition to reducing HAP and CO, the final rule will result in the reduction of PM emissions from existing stationary diesel engines. The aftertreatment technologies expected to be used to reduce HAP and CO emissions also reduce emissions of PM from diesel engines. Also, the final rule requires the use of ULSD for diesel-fueled stationary non-emergency CI engines greater than 300 HP with a displacement of less than 30 liters per cylinder. This will result in lower emissions of sulfur oxides (SO_X) and sulfate particulate from these engines by reducing the sulfur content in the fuel.

C. What are the final requirements?

1. Existing Stationary RICE at Major Sources.

The numerical emission standards that are being finalized in this action for stationary non-emergency CI RICE located at major sources are shown in Table 1 of this preamble. The numerical emission standards are in units of ppm by volume, dry basis (ppmvd) or percent reduction.

[1] In contrast, mobile source emission standards for diesel engines (both nonroad and on-highway) are promulgated on a mass/bhp-hr basis rather than concentration.

TABLE 1—NUMERICAL EMISSION STANDARDS FOR EXISTING STATIONARY CI RICE LOCATED AT MAJOR SOURCES

Subcategory	Except during periods of startup
Non-Emergency CI 100≤HP≤300	230 ppmvd CO at 15% O_2.
Non-Emergency CI 300<HP≤500	49 ppmvd CO at 15% O_2 or 70% CO reduction.
Non-Emergency CI >500 HP	23 ppmvd CO at 15% O_2 or 70% CO reduction.

In addition, certain existing stationary RICE located at major sources are subject to fuel requirements. Owners and operators of existing stationary non-emergency CI engines greater than 300 HP with a displacement of less than 30 liters per cylinder located at major sources that use diesel fuel must use only diesel fuel meeting the requirements of 40 CFR 80.510(b). This section requires that diesel fuel have a maximum sulfur content of 15 ppm and either a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent. These fuel requirements are being finalized in order to reduce the potential formation of sulfate compounds that are emitted when high sulfur diesel fuel is used in combination with oxidation catalysts and to assist in the efficient operation of the oxidation catalysts.

EPA is finalizing work practice standards for existing stationary emergency CI RICE less than or equal to 500 HP located at major sources and existing stationary non-emergency CI RICE less than 100 HP located at major sources. Existing stationary emergency CI RICE less than or equal to 500 HP located at major sources are subject to the following work practices:

- Change oil and filter every 500 hours of operation or annually, whichever comes first, except that sources can extend the period for changing the oil if the oil is part of an oil analysis program as discussed below and none of the condemning limits are exceeded;
- Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and
- Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

Existing stationary non-emergency CI RICE less than 100 HP located at major sources are subject to the following work practices:

- Change oil and filter every 1,000 hours of operation or annually, whichever comes first, except that sources can extend the period for changing the oil if the oil is part of an oil analysis program as discussed below and none of the condemning limits are exceeded;
- Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and
- Inspect all hoses and belts every 500 hours or annually, whichever comes first, and replace as necessary.

Sources also have the option to use an oil change analysis program to extend the oil change frequencies specified above. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The analysis must be conducted at the same frequencies specified for changing the engine oil. If the condemning limits provided below are not exceeded, the engine owner or operator is not required to change the oil. If any of the condemning limits are exceeded, the engine owner or operator must change the oil before continuing to use the engine. The condemning limits are as follows:

- Total Base Number is less than 30 percent of the Total Base Number of the oil when new; or
- Viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or
- Percent water content (by volume) is greater than 0.5.

Pursuant to the provisions of 40 CFR 63.6(g), sources can also request that the Administrator approve alternative work practices.

EPA is also including in the final rule additional capture and collection requirements to reduce metallic HAP emissions. Owners and operators of existing stationary non-emergency CI engines greater than 300 HP located at major sources must do one of the following if the engine is not already equipped with a closed crankcase ventilation system: (1) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or (2) install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates, and metals.

2. Existing Stationary RICE at Area Sources

The numerical emission standards that are being finalized in this action for stationary CI RICE located at area sources are shown in Table 2 of this preamble. Existing stationary emergency engines at area sources located at residential, commercial, or institutional facilities are not part of the source category and therefore are not subject to any requirements under this final rule.

Although existing stationary non-emergency CI RICE greater than 300 HP that are located at area sources in Alaska that are not accessible by the Federal Aid Highway System (FAHS) do not have to meet the CO emission standards specified in Table 2 of this preamble, they must meet the management practices discussed in this section for non-emergency CI RICE less than or equal to 300 HP.

TABLE 2—NUMERICAL EMISSION STANDARDS FOR EXISTING STATIONARY RICE LOCATED AT AREA SOURCES

Subcategory	Except during periods of startup
Non-Emergency CI 300<HP≤500	49 ppmvd CO at 15% O_2 or 70% CO reduction.
Non-Emergency CI>500 HP	23 ppmvd CO at 15% O_2 or 70% CO reduction.

Also, owners and operators of existing stationary non-emergency CI engines greater than 300 HP with a displacement of less than 30 liters per cylinder located at area sources that use diesel fuel must use only diesel fuel meeting the requirements of 40 CFR 80.510(b). This section requires that diesel fuel have a maximum sulfur content of 15 ppm and either a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.

EPA is finalizing management practices for existing stationary emergency CI RICE located at area sources and existing stationary non-emergency CI RICE less than or equal to 300 HP located at area sources. Existing stationary emergency CI RICE located at area sources are subject to the following management practices:

- Change oil and filter every 500 hours of operation or annually, whichever comes first, except that sources can extend the period for changing the oil if the oil is part of an oil analysis program as discussed below and the condemning limits are not exceeded;
- Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and
- Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

Existing stationary non-emergency CI RICE less than or equal to 300 HP located at area sources are subject to the following management practices:

- Change oil and filter every 1,000 hours of operation or annually, whichever comes first, except that sources can extend the period for changing the oil if the oil is part of an oil analysis program as discussed below and the condemning limits are not exceeded;
- Inspect air cleaner every 1000 hours of operation or annually, whichever comes first; and
- Inspect all hoses and belts every 500 hours or annually, whichever comes first, and replace as necessary.

As discussed above for major sources, these sources may utilize an oil analysis program in order to extend the specified oil change requirement specified above. Also, sources have the option to work with State permitting authorities pursuant to EPA's regulations at 40 CFR subpart E ("Approval of State Programs and Delegation of Federal Authorities") for approval of alternative management practices. Subpart E implements section 112(l) of the CAA, which authorizes EPA to approve alternative State/local/Tribal HAP standards or programs when such requirements are demonstrated to be no less stringent than EPA promulgated standards.

Finally, in order to reduce metallic HAP emissions, existing stationary non-emergency CI engines greater than 300 HP located at area sources must do one of the following if the engine is not already equipped with a closed crankcase ventilation system: (1) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or (2) install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates, and metals.

3. Startup Requirements

The following stationary engines are subject to specific operational standards during engine startup:

- Existing CI RICE less than or equal to 500 HP located at major sources,
- Existing non-emergency CI RICE greater than 500 HP located at major sources,
- Existing CI RICE located at area sources,
- New or reconstructed non-emergency two-stroke lean burn (2SLB) >500 HP located at a major source of HAP emissions,
- New or reconstructed non-emergency four-stroke lean burn (4SLB) >=250 HP located at a major source of HAP emissions,
- Existing non-emergency four-stroke rich burn (4SRB) >500 HP located at a major source of HAP emissions,
- New or reconstructed non-emergency 4SRB >500 HP located at a major source of HAP emissions, and
- New or reconstructed non-emergency CI >500 HP located at a major source of HAP emissions.

Engine startup is defined as the time from initial start until applied load and engine and associated equipment reaches steady state or normal operation. For stationary engines with catalytic controls, engine startup means the time from initial start until applied load and engine and associated equipment reaches steady state, or normal operation, including the catalyst. Owners and operators must minimize the engine's time spent at idle and minimize the engine's startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the engine must meet the otherwise applicable emission standards. These requirements will limit the HAP emissions during periods of engine startup. Pursuant to the provisions of 40 CFR 63.6(g), engines at major sources may petition the Administrator for an alternative work practice. An owner or operator of an engine at an area source can work with its State permitting authority pursuant to EPA's regulations at 40 CFR subpart E for approval of an alternative management practice. *See* 40 CFR Subpart E (setting forth requirements for, among other things, equivalency by permit, rule substitution).

D. What are the operating limitations?

In addition to the standards discussed above, EPA is finalizing operating limitations for stationary non-emergency CI RICE that are greater than 500 HP. Owners and operators of engines that are equipped with oxidation catalyst must maintain the catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water from the pressure drop across the catalyst that was measured during the initial performance test. Owners and operators of these engines must also maintain the temperature of the stationary RICE exhaust so that the catalyst inlet temperature is between 450 and 1350 degrees Fahrenheit (°F). Owners and operators may petition for a different temperature range; the petition must demonstrate why it is operationally necessary and appropriate to operate below the temperature range specified in the rule (*see* 40 CFR 63.8(f)). Owners and operators of engines that are not using oxidation catalyst must comply with any operating limitations approved by the Administrator.

Owners and operators of existing stationary non-emergency CI engines greater than 300 HP meeting the requirement to use open or closed crankcases must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements.

E. What are the requirements for demonstrating compliance?

The following sections describe the requirements for demonstrating compliance under the final rule.

1. Existing Stationary CI RICE at Major Sources

Owners and operators of existing stationary non-emergency CI RICE located at major sources that are less than 100 HP and stationary emergency CI RICE located at major sources must operate and maintain their stationary RICE and aftertreatment control device (if any) according to the manufacturer's emission-related written instructions or develop their own maintenance plan. Owners and operators of existing stationary non-emergency CI RICE located at major sources that are less than 100 HP and existing stationary emergency CI RICE located at major sources do not have to conduct any

performance testing because they are not subject to numerical emission standards.

Owners and operators of existing stationary non-emergency CI RICE located at major sources that are greater than or equal to 100 HP and less than or equal to 500 HP must conduct an initial performance test to demonstrate that they are achieving the required emission standards.

Owners and operators of existing stationary non-emergency CI RICE greater than 500 HP located at major sources must conduct an initial performance test and must test every 8,760 hours of operation or 3 years, whichever comes first, to demonstrate that they are achieving the required emission standards.

Owners and operators of stationary non-emergency CI RICE that are greater than 500 HP and are located at a major source must continuously monitor and record the catalyst inlet temperature if an oxidation catalyst is being used on the engine. The pressure drop across the catalyst must also be measured monthly. If an oxidation catalyst is not being used on the engine, the owner or operator must continuously monitor and record the operating parameters (if any) approved by the Administrator.

On October 9, 2008 (73 FR 59956), EPA proposed performance specification requirements for continuous parametric monitoring systems (CPMS). Currently there are no performance specifications for the CPMS that are required for continuously monitoring the catalyst inlet temperature. The timetable for finalizing the proposed performance specification requirements is uncertain; therefore, EPA plans to finalize performance specification requirements in 40 CFR part 63, subpart ZZZZ for the CPMS systems used for continuous catalyst inlet temperature monitoring when the final requirements are promulgated for existing SI engines in August 2010.

2. Existing Stationary RICE at Area Sources

Owners and operators of existing stationary RICE located at area sources that are subject to management practices, as shown in Table 2 of this preamble, must develop a maintenance plan that specifies how the management practices will be met. Owners and operators of existing stationary RICE that are subject to management practices do not have to conduct any performance testing.

Owners and operators of existing stationary non-emergency CI RICE greater than 300 HP that are located at area sources must conduct an initial performance test to demonstrate that they are achieving the required emission standards.

Owners and operators of existing stationary non-emergency CI RICE that are greater than 500 HP and located at area sources and are not limited use stationary RICE must conduct an initial performance test and must test every 8,760 hours of operation or 3 years, whichever comes first, to demonstrate that they are achieving the required emission standards. Owners and operators of existing stationary non-emergency CI RICE that are greater than 500 HP and located at area sources and are limited use stationary RICE must conduct an initial performance test and must test every 8,760 hours of operation or 5 years, whichever comes first, to demonstrate that they are achieving the required emission standards.

Owners and operators of existing stationary non-emergency CI RICE that are greater than 500 HP and are located at an area source must continuously monitor and record the catalyst inlet temperature if an oxidation catalyst is being used on the engine. The pressure drop across the catalyst must also be measured monthly. If an oxidation catalyst is not being used on the engine, the owner or operator must continuously monitor and record the operating parameters (if any) approved by the Administrator.

F. What are the reporting and recordkeeping requirements?

The following sections describe the reporting and recordkeeping requirements that are required under the final rule.

Owners and operators of existing stationary emergency RICE that do not meet the requirements for non-emergency engines are required to keep records of their hours of operation. Owners and operators of existing stationary emergency RICE must install a non-resettable hour meter on their engines to record the hours of operation of the engine. Emergency stationary RICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by the Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units are limited to 100 hours per year. There is no time limit on the use of emergency stationary engines in emergency situations; however, the owner or operator is required to record the length of operation and the reason the engine was in operation during that time. Records must be maintained documenting why the engine was operating to ensure the 100 hours per year limit for maintenance and testing operation is not exceeded. In addition, owners and operators are allowed to operate their stationary emergency RICE for non-emergency purposes for 50 hours per year, but those 50 hours are counted towards the total 100 hours provided for operation other than for true emergencies. The 50 hours per year for non-emergency purposes cannot be used to generate income for a facility, for example, to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. However, owners and operators may operate the emergency engine for a maximum of 15 hours per year as part of a demand response program if the regional transmission organization or equivalent balancing authority and transmission operator has determined there are emergency conditions that could lead to a potential electrical blackout, for example unusually low frequency, equipment overload, capacity or energy deficiency, or unacceptable voltage level. The engine may not be operated for more than 30 minutes prior to the time when the emergency condition is expected to occur, and the engine operation must be terminated immediately after the facility is notified that the emergency condition is no longer imminent. The 15 hours per year of demand response operation are counted as part of the 50 hours of operation per year provided for non-emergency situations. Owners and operators must keep records showing how they were notified of the emergency condition and by whom, and the time that the engine was operated as part of demand response.

Owners and operators of existing stationary CI RICE located at area sources that are subject to management practices as shown in Table 2 of this preamble are required to keep records that show that management practices that are required are being met. These records must include, at a minimum: Oil and filter change dates and corresponding hour on the hour meter; inspection and replacement dates for air cleaners, hoses, and belts; and records of other emission-related repairs and maintenance performed.

Owners and operators of existing non-emergency stationary CI RICE greater than 300 HP must keep records of the manufacturer's recommended maintenance procedures for the closed crankcase ventilation system or open crankcase filtration system and records of the maintenance performed on the system.

In terms of reporting requirements, owners and operators of existing stationary RICE, except stationary RICE that are less than 100 HP, existing emergency stationary RICE, and existing stationary RICE that are not subject to numerical emission standards, must submit all of the applicable notifications as listed in the NESHAP General Provisions (40 CFR part 63, subpart A), including an initial notification, notification of performance test, and a notification of compliance for each stationary RICE which must comply with the specified emission limitations.

IV. Summary of Significant Changes Since Proposal

Most of the rationale used to develop the proposed rule remains the same for the final rule. Therefore, the rationale previously provided in the preamble to the proposed rule is not repeated in the final rule, and the rationale sections of the rule, as proposed, should be referred to. Major changes that have been made to the rule since proposal are discussed in this section with rationale following in the Summary of Responses to Major Comments section.

A. Applicability

EPA proposed to regulate HAP emissions from existing stationary engines less than or equal to 500 HP located at major sources and all existing stationary engines located at area sources. EPA also proposed NESHAP for existing stationary non-emergency CI engines greater than 500 HP that are located at major sources.

In the final rule, EPA is only regulating HAP emissions from existing stationary CI engines. EPA will address HAP emissions from existing stationary SI engines in a separate rulemaking later this year.

Another change from the proposal is that the final rule is not applicable to existing stationary emergency engines at area sources that are located at residential, commercial, or institutional facilities. These engines are not subject to any requirements under the final rule because they are not part of the regulated source category. EPA has found that existing stationary emergency engines located at residential, commercial, and institutional facilities that are area sources were not included in the original Urban Air Toxics Strategy inventory and were not included in the listing of urban area sources. More information on this issue can be found in the memorandum entitled, "Analysis of the Types of Engines Used to Estimate the CAA Section 112(k) Area Source Inventory for Stationary Reciprocating Internal Combustion Engines," available from the rulemaking docket.

B. Final Emission Standards

1. Existing Stationary CI Engines <100 HP Located at Major Sources

For the proposed rule, EPA required existing stationary engines less than 50 HP that are located at major sources to meet a formaldehyde emission standard. EPA is not finalizing a formaldehyde emission standard for stationary CI engines less than 50 HP, but is instead requiring compliance with a work practice. In addition, in light of several comments asserting that the level at which we subcategorized small engines at major sources was inappropriate, EPA is finalizing a work practice standard for engines less than 100 HP.

In the proposed rule, existing stationary CI engines less than 100 HP located at major sources were required to meet a 40 ppmvd CO at 15 percent oxygen (O_2) standard. In the final rule, all existing stationary CI engines less than 100 HP located at major sources must meet work practices. These work practices are described in section III.C. of this preamble. EPA believes that work practices are appropriate and justified for this group of stationary engines because the application of measurement methodology is not practicable due to technological and economic limitations. Further information on EPA's decision can be found in section V.B. below and in the memorandum entitled, "MACT Floor Determination for Existing Stationary Non-Emergency CI RICE Less Than 100 HP and Existing Stationary Emergency CI RICE Located at Major Sources and GACT for Existing Stationary CI RICE Located at Area Sources," which is available from the rulemaking docket.

2. Existing Stationary Non-Emergency CI Engines 100≤HP≤300

EPA is finalizing a CO emission standard for existing stationary non-emergency CI engines greater than or equal to 100 HP and less than or equal to 300 HP located at major sources of 230 ppmvd CO at 15 percent O_2 standard. EPA revised the proposed CO standard for this group of engines based on additional information and data received after the proposal, which led to a reevaluation of the MACT floor for these stationary engines. A discussion of the final MACT floor determination can be found in the memo entitled "MACT Floor and MACT Determination for Existing Stationary Non-Emergency CI RICE Greater Than or Equal to 100 HP Located at Major Sources," which is available from the rulemaking docket. All existing stationary CI engines less than or equal to 300 HP located at area sources, both emergency and non-emergency, are subject to management practice standards under the final rule, as was proposed.

3. Existing Stationary Non-Emergency CI Engines >300 HP

EPA proposed that existing stationary non-emergency CI engines greater than 300 HP meet a 4 ppmvd CO at 15 percent O_2 standard or a 90 percent CO reduction standard. Numerous commenters indicated that EPA's dataset was insufficient and urged EPA to gather more data to obtain a more complete representation of emissions from existing stationary CI engines. Commenters also questioned the emission standard setting approach that EPA used at proposal and claimed that the proposed standards did not take into account emissions variability and may not be achievable. For the final rule EPA has obtained additional test data for existing stationary CI engines and has included this additional data in the MACT floor analysis. EPA is also using an approach that better considers emissions variability, as discussed in V.B. below.

In the final rule, EPA is providing owners and operators the option of meeting either a CO concentration or a CO percent reduction standard. Owners and operators of existing stationary non-emergency CI engines greater than 300 HP and less than or equal to 500 HP located at major and area sources must either reduce CO emissions by at least 70 percent or limit the concentration of CO in the engine exhaust to 49 ppmvd, at 15 percent O_2. Owners and operators of existing stationary non-emergency CI engines greater than 500 HP located at major and area sources must either reduce CO emissions by at least 70 percent or limit the concentration of CO in the engine exhaust to 23 ppmvd, at 15 percent O_2. EPA's review of the data indicate that it is appropriate to base the MACT standard on a reduction level of 70 percent, which takes into account the variability of the emission reduction efficiency of aftertreatment under various operational conditions.

4. Existing Stationary Emergency CI Engines 100≤HP≤500 Located at Major Sources

For existing stationary emergency engines located at major sources, we proposed that these engines be subject to a 40 ppmvd CO at 15 percent O_2 standard. In the final rule, existing stationary emergency CI engines greater than or equal to 100 HP and less than

or equal to 500 HP and located at major sources must meet work practices. These work practices are described in section III.C. of this preamble. EPA believes that work practices are appropriate and justified for this group of stationary engines because the application of measurement methodology is not practicable due to technological and economic limitations. Further information on EPA's decision can be found in the memorandum entitled "MACT Floor Determination for Existing Stationary Non-Emergency CI RICE Less Than 100 HP and Existing Stationary Emergency CI RICE Located at Major Sources and GACT for Existing Stationary CI RICE Located at Area Sources," which is available from the rulemaking docket.

5. Existing Stationary Emergency CI Engines >500 HP Located at Area Sources

For existing stationary emergency engines located at area sources, EPA reevaluated the information available for emergency engines and considered extensive input received from industry and other groups who asserted that the proposed standards were not GACT for emergency engines at area sources. In the final rule, as discussed below in section V.B., all existing stationary emergency CI engines located at area sources must meet management practice standards.

C. Management Practices

EPA proposed management practices for several subcategories of engines located at area sources. EPA explained that the proposed management practices would be expected to ensure that emission control systems are working properly and would help minimize HAP emissions from the engines. EPA proposed specific maintenance practices and asked for comments on the need and appropriateness for those procedures. Based on feedback received during the public comment period, which included information submitted in comment letters and additional information EPA received following the close of the comment period from different industry groups, EPA is finalizing management practices for existing stationary non-emergency CI engines less than or equal to 300 HP located at area sources and all existing emergency stationary CI engines located at area sources.

Existing stationary non-emergency CI engines less than or equal to 300 HP located at area sources are required to change the oil and filter every 1,000 hours of operation or annually, whichever comes first, inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. Existing emergency stationary CI engines located at area sources are required under the final rule to change the oil and filter every 500 hours of operation or annually, whichever comes first, inspect air cleaner every 1000 hours of operation or annually, whichever comes first, and inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. EPA is adding an option for sources to use an oil change analysis program to extend the oil change frequencies specified above. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. If the condemning limits provided below are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil before continuing to use the engine. The condemning limits are as follows:

- Total Base Number is less than 30 percent of the Total Base Number of the oil when new; or
- Viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or
- Percent water content (by volume) is greater than 0.5.

Owners and operators of all engines subject to management practices also have the option to work with State permitting authorities pursuant to EPA's regulations at 40 CFR subpart E for alternative maintenance practices to be used instead of the specific maintenance practices promulgated in this rule. The maintenance practices must be at least as stringent as those specified in the final rule.

The final rule specifies that in situations where an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work or management practice requirements on the schedule required in the final rule, or if performing the work or management practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the maintenance activity can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The maintenance should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the work practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable.

D. Startup, Shutdown and Malfunction

EPA proposed formaldehyde and CO emission standards for existing stationary engines at major sources to apply during periods of startup and malfunction. EPA also proposed certain standards for existing stationary engines at area sources that would apply during startup and malfunction. Based on various comments and concerns with the proposed emission standards for periods of startup, EPA has determined that it is not feasible to finalize numerical emission standards that would apply during startup because the application of measurement methodology to this operation is not practicable due to technological and economic limitations, as discussed in detail in section V.D.

As a result, EPA is promulgating operational standards during startup that specify that owners and operators must limit the engine startup time to no more than 30 minutes and must minimize the engine's time spent at idle during startup. Based on information reviewed by EPA, engine startup typically requires no more than 30 minutes. We received comments indicating that there are conditions where it may take more than 30 minutes to startup the engine, for example for cold starts or where the ambient conditions are very cold. However, commenters did not provide enough specificity in their comments, nor did commenters provide data, to determine whether any scenarios were appropriate to allow a longer startup period. Owners and operators of engines at major sources have the option to petition the Administrator pursuant to 40 CFR 63.6(g) for alternative work practices. Any petition must be based on specific factual information indicating the reason the alternative work practice is necessary for that engine and is no less stringent than startup requirements in the rule. An owner or operator of an engine at an area source can work with its State permitting authority pursuant to EPA's regulations at 40 CFR subpart E for approval of an alternative management practice, based on specific factual information indicating the reason that an alternative management practice is necessary for that engine. Such alternative management practice must be demonstrated to be no less

stringent than EPA promulgated standards.

As discussed further below, in section V.D., EPA is not setting separate standards for malfunctions in this rule. Therefore, the standards that apply during normal operation also apply during malfunction. EPA believes that any emissions occurring during a malfunction would be of such a short duration compared to the emissions averaged during overall testing time (three one-hour runs) that the engine would still be able to comply with the emission standard. In addition, EPA does not view malfunction as a distinct operating mode and, therefore, any emissions that occur at such times do not need to be taken into account in setting CAA section 112(d) standards. Further, as is explained in more detail in Section V.D. below, even if malfunctions were considered a distinct operating mode, we believe it would be impracticable to take into account malfunctions in setting CAA section 112(d) standards.

E. Other

EPA is including an additional requirement in the final rule that will reduce metallic HAP emissions. Owners and operators of existing stationary non-emergency CI engines greater than 300 HP must do one of the following if the engine is not already equipped with a closed crankcase ventilation system: (1) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or (2) install an open crankcase filtration emission control system that reduces the crankcase emissions by filtering the exhaust stream to remove oil mist, particulates, and metals. Owners and operators must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements.

EPA is including special provisions in the final rule for existing stationary non-emergency CI RICE greater than 300 HP located at area sources in Alaska not accessible by the FAHS. Owners and operators of these engines do not have to meet the CO emission standards specified in Table 2 of this preamble, but must instead meet the management practices that are described for stationary non-emergency CI RICE less than or equal to 300 HP in section III.C. of this preamble.

The final rule specifies that stationary CI engines that are used to startup combustion turbines should meet the same requirements as stationary emergency CI engines.

V. Summary of Responses to Major Comments

A more detailed summary of comments and EPA's responses can be found in the document entitled "Response to Public Comments on Proposed National Emission Standards for Hazardous Air Pollutants for Existing Stationary Reciprocating Internal Combustion Engines Located at Area Sources of Hazardous Air Pollutant Emissions or Have a Site Rating Less Than or Equal to 500 Brake HP Located at Major Sources of Hazardous Air Pollutant Emissions," which is available from the rulemaking docket (*see* **ADDRESSES** section).

A. Applicability

Comment: Numerous commenters expressed concern over EPA's decision to not distinguish between rural and urban engines at area sources in the proposed rule. Several commenters requested that EPA reevaluate its congressional authority to regulate area HAP sources in rural areas. The commenters believed that the proposal is inconsistent with 42 U.S.C. 7412(n)(4)(B) [CAA section 112(n)(4)(B)]. Commenters requested clarification of EPA's rationale to regulate low levels of emissions from engines at oil and gas production facilities outside metropolitan areas, contending that EPA has applied this rule more broadly than the Congressional intent of the CAA, and requested that EPA reevaluate this issue of whether EPA can regulate rural area sources in light of the 42 U.S.C. 7412(n)(4)(B) language.

Commenters stated that EPA has based this rulemaking for area sources on sections of the CAA and its Urban Air Toxics Strategy that are intended to remove threats to public health in urban areas. The commenters do not believe that the remote RICE at area sources in the oil and gas industry threaten public health in urban areas. Several commenters noted that the NESHAP for glycol gas dehydrators (40 CFR part 63, subpart HH) takes into account the location of area sources and does not apply the specific requirements of the rule to rural area sources. The commenters believe that the same approach should be used for the RICE rule, *i.e.,* engines that are not located in or near populated areas should be exempt or subject to an alternative set of requirements so as not to force expensive requirements on remote engines that have no impact on public health.

One commenter on behalf of the agricultural industry expressed that the operational area of these engines has not been studied to evaluate the environmental benefit obtained in congested areas as compared to open agricultural locations. This commenter opined that there should be some measure of variable compliance provided in relation to the area of operation of these engines.

Response: EPA is finalizing its proposal to regulate existing stationary CI engines located at area sources on a nationwide basis. EPA has not made a final determination with regard to existing SI engines at area sources, and will do so in the later rule finalizing regulations for SI engines. EPA believes that the CAA provides the Agency with the authority to regulate area sources nationwide. Section 112(k)(1) of the CAA states that "It is the purpose of this subsection to achieve a substantial reduction in emissions of hazardous air pollutants from area sources and an equivalent reduction in the public health risks associated with such sources including a reduction of not less than 75 per centum in the incidence of cancer attributable to emissions from such sources." Consistent with this expressed purpose of section 112(k) of the CAA to reduce both emissions and risks, CAA section 112(k)(3)(i) requires that EPA list not less than 30 HAP that, as a result of emissions from area sources, present the greatest threat to public health in the largest number of urban areas. Sections 112(c)(3) and (k)(3)(ii) of the CAA require that EPA list area source categories that represent not less than 90 percent of the area source emissions of each of the listed HAP. Section 112(c) of the CAA requires that EPA issue standards for listed categories under CAA section 112(d). These relevant statutory provisions authorize EPA to regulate listed area source engines and not just engines located in urban areas. EPA believes that sections 112(c) and 112(k) of the CAA do not prohibit issuing area source rules of national applicability. EPA also disagrees with the statement that the proposal was inconsistent with section 112(n)(4)(B) of the CAA. The term "associated equipment" was defined for the purposes of subpart ZZZZ in the first RICE MACT rule not to include stationary RICE. EPA has not revisited that issue in this rule and the commenters have not provided sufficient reason to revisit that issue.

EPA does not believe that existing stationary CI engines are more prevalent

in rural areas than in urban areas. Indeed, EPA estimates that only 17 percent of stationary CI area source engines subject to the rule are located in rural areas, using the definitions used in the Urban Air Toxics Strategy. Given the requirement to regulate all engines in the source category in urban areas, we do not believe requiring regulation on a national basis is inappropriate.

The majority of stationary CI engines are used for emergency purposes. EPA has estimated that 80 percent of stationary CI engines are emergency engines and EPA has taken steps in the final rule to reduce the burden on owners and operators of these engines. All emergency CI engines located at area sources of HAP emissions are subject only to management practices under the final rule. EPA has also determined that existing emergency engines located at residential, institutional, and commercial facilities that are area sources of HAP emissions were not included in the original Urban Air Toxics Strategy inventory and therefore are not included in the source category listing. In the final rule, EPA has specified that those engines are not subject to subpart ZZZZ. In addition, existing non-emergency CI engines less than or equal to 300 HP that are located at area sources of HAP emissions are also only subject to management practices. EPA believes that requiring management practices instead of specific emission limitations and/or control efficiency requirements on the majority of existing stationary CI engines at area sources alleviates concerns regarding costly and burdensome requirements for rural sources.

For existing stationary non-emergency CI engines greater than 300 HP, EPA determined that GACT was the use of oxidation catalyst control. The commenters did not provide a reason that GACT would be different for non-emergency stationary CI engines located in rural areas. In determining GACT, EPA can consider factors such as availability and feasibility of control technologies and management practices, as well as costs and economic impacts. These factors are not different for existing stationary non-emergency CI engines in urban versus rural areas. For example, the availability of oxidation catalysts would be the same for urban and rural engines, and if an engine was in a rural location, that would not preclude an owner from being able to install aftertreatment controls. For the final rule, EPA estimated the capital cost of retrofitting an existing stationary non-emergency CI engine to around $7,000 for a 300 HP engine. Annual costs of operating and maintaining the control device are estimated to be approximately $2,000 per year for the same engine. These costs would not be prohibitive for any engines and either rural or urban areas and are expected to be the same no matter the location. Furthermore, the controls that are expected to be used on non-emergency engines above 300 HP will have the co-benefit of PM reductions. PM emissions can travel tens or hundreds of miles from their source, so emissions from diesel engines in rural areas can impact urban populations. There is also no reason to distinguish between the rural and urban area source engines that are subject to management practices. There is nothing limiting owners and operators of existing stationary CI engines located in rural areas from following the management practices specified in the final rule.

In response to requests that agricultural stationary engines should be treated differently from other engines and should be allowed special provisions, EPA is of the understanding that the majority of stationary engines used for agricultural purposes are below 300 HP. Several commenters representing agricultural interests have made the statement to EPA that most of their engines are below 300 HP. As previously discussed in this response, EPA is finalizing management practices for area source engines less than or equal to 300 HP. Therefore, it is not expected that many stationary agricultural engines will be required to put on controls. Agricultural engines less than or equal to 300 HP at rural and urban area sources would be required to follow the management practices specified in the final rule. Management practices will ensure that emissions are reduced and engines are properly operated.

Consistent with the proposal and for the reasons discussed, EPA is finalizing national requirements for existing stationary CI engines without a distinction between urban and non-urban areas.

Comment: Five commenters expressed that EPA's proposal would have a significant impact to the State of Alaska, especially with respect to power generation in their rural communities. They explained that Alaska has unique regional circumstances whereby regulating diesel engine emissions in rural Alaska in the same manner as other engines nationwide could have unintended negative consequences. The commenters were concerned about the extension of section 112(k) of the CAA requirements to rural sources, expressing that the purpose of CAA section 112(k) is to address urban issues. The commenters opined that the scale of HAP emissions in rural areas of Alaska is different and should be addressed in a way that is appropriate to the rural conditions that exist there. The commenters expressed that, historically, EPA has recognized the unique aspects of rural Alaska's diesel distribution system and diesel engine use and has allowed Alaska some flexibility (*e.g.*, under the CI NSPS). The commenters requested that EPA assess and consider rural Alaska's situation and allow for flexibility to address the challenges associated with the proposed rule.

Response: EPA agrees with the commenters that stationary CI area source engines located in remote areas of Alaska have special challenges that should be taken into consideration. As the commenters noted, over 180 rural communities in Alaska that are not accessible by the Federal Aid Highway System rely on stationary diesel engines and fuel for electricity. They are scattered over long distances in remote areas and are not connected to population centers by road or power grid. They are located in the most severe arctic environments in the United States. Transportation of diesel fuel to these areas is dependent on weather and communities typically pay some of the highest prices for fuel in the United States. Stationary engines located in rural areas of Alaska have different fuel storage and use logistics and higher operating and compliance costs. Many of these communities are accessible only by plane. In light of the comments, we believe it is appropriate to treat engines located at area sources in areas of Alaska that are not accessible by the Federal Aid Highway System as a separate subcategory. We re-evaluated GACT for the subcategory of stationary engines located at area sources of HAP that are in an area of Alaska that is not accessible by the Federal Aid Highway System. For these engines, we determined that GACT is the same management practices as those required for non-emergency CI RICE less than or equal to 300 HP located at area sources. For more discussion of this issue, refer to the memo entitled "MACT Floor Determination for Existing Stationary Non-Emergency CI RICE Less Than 100 HP and Existing Stationary Emergency CI RICE Located at Major Sources and GACT for Existing Stationary CI RICE Located at Area Sources."

B. Final Emission Requirements

Comment: Several commenters expressed opposition to EPA's proposal to have emission standards apply to

small engines at major sources. Three commenters said that EPA should not finalize emission limits for engines less than 100 HP. One commenter argued that stationary engines that are less than 100 HP should be exempted from numerical HAP emission standards. In the commenter's opinion, it is not cost effective to install add-on controls on small engines or to purchase a new engine. According to the commenter, the majority of engines in this size range are operated for intermittent household or other infrequent use and emissions are naturally limited, the commenter said, and low emissions do not justify the costs associated with requiring a numerical HAP limit. One commenter does not believe that measurement is economically practicable for a small unit as the cost of testing will likely exceed the value of the engine itself. The commenter urged EPA to exclude small sources from the category.

Response: EPA has reanalyzed its proposed standards based on the information and data presented and EPA concludes that it is not feasible within the context of this rulemaking to prescribe emission limitations for existing stationary CI engines smaller than 100 HP located at major sources, because the measurement of emissions from these engines is not practicable due to technological and economic limitations. In order to measure the emissions from these engines on a ppmvd at 15 percent O_2 basis, the following test methods are required: EPA Method 1 or 1A for selection of sampling ports; EPA Method 3, 3A, or 3B for determining the O_2 concentration; EPA Method 4 for measuring the moisture content, and EPA Method 10 or ASTM D6522–00 (2005) for measuring the CO concentration. These test methods require the sample point to be a certain distance between the engine and the exhaust. Because engines below 100 HP often have exhaust pipes with very small diameters and lengths, stack testing using these methods could require a modification or extension of the exhaust pipe to accomplish the test. The cost to do the testing ranges from approximately $1,000–$5,000 depending on the method used. Generally, 100 HP engines cost around $5,000–$7,000 dollars and 50 HP engines cost approximately $4,000–$5,000, so the cost of performance testing could approach the cost of the engine itself. Given the cost of the testing itself, the physical adjustments necessary to accomplish the test, and the particular circumstances pertaining to stationary engines below 100 HP, we believe that the application of measurement methodology to this class of engines is not practicable due to technological and economic limitations. Therefore, EPA is promulgating work practice standards for these engines. Additional detail regarding this analysis can be found in the memorandum entitled "MACT Floor Determination for Existing Stationary Non-Emergency CI RICE Less Than 100 HP and Existing Stationary Emergency CI RICE Located at Major Sources and GACT for Existing Stationary CI RICE Located at Area Sources."

Comment: One commenter stated that the use of CO as a surrogate for HAP emissions from stationary diesel engines is flawed and does not meet the DC Courts three part test for reasonableness. According to the commenter, the DC Court surrogate three part test requires EPA to demonstrate each of the following: (1) HAP from the source must be "invariantly present" in the surrogate; (2) control technology that reduces the surrogate must "indiscriminately capture" HAP from the source; and (3) control of the surrogate is the only means to control HAP from the source. The commenter pointed out that EPA admitted that CO may not be an adequate surrogate for metallic HAP emissions in the current proposal. The commenter argued that oxidation catalyst is only capable of 30 percent reduction of PM, thus allowing 70 percent of the PM, including metallic and semi-volatile HAP to be emitted to the atmosphere. In addition, the commenter pointed out that technologies that control CO are not the only means by which a source can achieve reductions in HAP emitted from stationary diesel engines. The commenter believes that based on the DC Court's three tests, final standards are not appropriate, and recommended that EPA adopt standards based on PM rather than CO reductions.

Response: EPA believes that CO emissions are an appropriate surrogate for HAP emissions for stationary CI engines. EPA has demonstrated the relationship between CO emissions and HAP emissions in previous rulemakings for stationary engines. EPA does not have any data to support a relationship between PM emissions and HAP emissions for stationary CI engines, nor did the commenter provide any data to support such a relationship for this source category. It is clear that there are methods for reducing PM emissions, like reducing sulfur from fuel, that may not lead to a reduction in HAP. In addition, it is not clear that reductions in PM would reduce emissions of all HAP emitted from stationary engines, particularly emissions of formaldehyde, acetaldehyde, *etc.,* that represent the vast majority of the HAP emissions from this source category. Therefore, for this particular source category, use of PM as a surrogate for HAP is not appropriate. The commenter also did not provide any data from testing of stationary CI engines to show that CO is not a good surrogate for metallic HAP. CO is also a better surrogate for HAP emitted from stationary CI engines than PM because PM is more difficult and expensive to measure than CO for this source category. For semi-volatile HAP, the testing conducted by EPA at Colorado State University showed that an oxidation catalyst reduced PAH emissions by greater than 90 percent for most of the PAH that were tested, and that CO level reductions correlated with level reductions in such HAP.

In addition, as discussed above, EPA is taking an additional action pursuant to its authority under section 112(d)(2)(B) and (C) for further control of metallic HAP. EPA determined that the most effective and achievable method for of controlling metallic HAP emissions from existing stationary CI engines is through the use of crankcase emission control systems. Combustion gases and oil mist that are vented from the engine crankcase are a substantial source of any metallic HAP emissions from stationary CI engines. EPA is promulgating a further standard under section 112(d)(2)(B) and (C) that requires stationary non-emergency diesel engines greater than 300 HP to install either an open or closed crankcase filtration emission control system if the engine is not already equipped with one. The open crankcase filtration emission control system reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates, and metals. In the case of the closed system, crankcase emissions are collected and filtered and those that remain in a gaseous state are routed to the intake manifold for burning. We believe this requirement will reduce metallic HAP from the stationary engine emissions.

Comment: Multiple commenters were concerned with how EPA set the MACT floor for the proposed rule. Several commenters said that EPA has not considered variability in setting the MACT floor for the proposed rule. A commenter cited the recent Brick MACT ruling which indicated that "floors may legitimately account for variability [in the best performing sources that are the MACT floor basis] because "each [source] must meet the [specified] standard every day and under all operating conditions." The commenters

stated EPA's data set is not sufficient in covering variability. One commenter noted that the Courts have been critical of EPA's process for setting minimum allowable emission limits. The commenter stated that EPA set the emission limits by averaging the best 12 percent of all performance tests for each subcategory, but did not consider operational variations of the units. The commenter recommended that EPA set emission limits at the emissions level that is actually achieved under the worst reasonably foreseeable circumstances for the best performing 12 percent as allowed by the Courts in the Cement Kiln MACT and Brick Kiln MACT decisions.

Multiple commenters suggested that EPA should consider a scenario under which lower temperatures and reduced catalyst efficiencies may occur due to reduced engine speed or load, resulting in lower temperatures and consider an alternative work practice under section 112(h) of the CAA for the situation. Two commenters noted that the emission standards in the proposed rule apply at all times, but that there is no data or information in the rulemaking docket that supports the proposed limits at low loads or at operating conditions other than high load. The commenters expressed that EPA should provide data and analysis that supports requiring emission limits to be met at all times. Also, for compliance at all times, the commenter asked what averaging times apply.

Response: EPA agrees that emissions variability should be better analyzed and has included a revised approach to variability in the MACT floor analysis. The final emission standards are based on test data collected from stationary engines produced by different engine manufacturers, operating at various loads and other conditions, and located in various types of service and locations. The engines range in size from 160 HP to 3,570 HP. The data includes engines operating at loads from 25–100 percent. To the extent commenters believed further data would have beneficial to EPA, EPA must make its determinations based on the information available to it. EPA asked for further data, and EPA did receive further data following the proposal, which led to changes in the final regulations. For engines operating at reduced speed or loads resulting in a reduced exhaust temperature, EPA believes that numerical emission requirements are still appropriate and there is no justification to only require work practice standards during these situations. We do not believe that the provisions of section 112(h) of the CAA are met (except as discussed elsewhere with regard to periods of start-up, emergency engines, and engines below 100 HP) because testing is not economically and technologically impractical and the emissions can be readily routed through a conveyance for purposes of emission testing. EPA believes that the final emission standards will be achievable at all times covered by the standards and will reflect the numerous engine models and operating scenarios that can be expected from stationary engines.

Regarding the comment asking about the averaging times that apply, EPA has clarified in the final rule that the emission standards are based on the average of three one-hour runs.

Comment: Several commenters expressed concern with the proposed limits for emergency engines at both area and major sources. Numerous commenters stated that EPA should adopt management practices for emergency engines at area sources and not require emission limits from these engines. Commenters stated that emergency engines need special consideration, due to minimal operation, and the commenters said that EPA should apply section 112(h) of the CAA for emergency engines at major sources because of this limited operation. Several commenters recommended that emergency engines be subject to only work practice standards that limit the number of hours allowed for operation during non-emergency events.

Several commenters recommended that EPA require management practices rather than a numerical emission limit for emergency diesel generators greater than 500 HP at area sources. The commenters suggested that such management practices could replace the existing proposed emission standard requirements for emergency CI engines greater than 500 HP. The commenters stated that the proposed rule and related docket indicates that CI emergency diesel engines can achieve a 40 ppmvd CO emission standard for both normal operations and startup or malfunction periods without add-on technology, which the commenters did not believe was correct. The commenters said the proposed rulemaking does not provide any basis for the proposed standards for emergency engines of this size range, and the GACT determination has not been properly established for these engines. In particular, according to the commenters, subsection 1 of section IV.B. of the proposed rule, which is cited in subsection 2 as the basis for the area source standards for large CI engines, does not appear to include any discussion of emission controls for emergency CI engines greater than 500 HP. In the absence of such justification, the commenters state that the MACT floor for these large engines is no controls. The commenter acknowledged that such a no control argument may not be acceptable under the MACT because of the Brick MACT court case, but the commenters stated that there is no such limitation in making GACT determinations. The commenter was concerned that establishing an emission standard for large emergency CI engines would establish requirements for the installation of add-on controls for some, if not most of the sources in that category. EPA needs to conduct a regulatory analysis and assessment of the costs of these controls. The commenter gave an example of the impact of an emission limit and the impact of installing controls on one of his units. The commenter concluded that because of the unit's limited operation, an oxidation catalyst control will have limited, if any, control effectiveness in actual use.

The commenters said that despite EPA's claims that the agency is not requiring performance tests of emergency engines, major sources with existing emergency engines appear to have an implicit testing requirement to demonstrate that they comply with concentration limits. Such testing could significantly increase the time the typical emergency engine would be used in year and impose additional environmental impact and costs. The commenters said EPA needs to resolve the conflict between the preamble and the regulatory language and replace the emission limits for emergency engines with work practices. The commenters raised similar concerns about the apparent requirement for performance testing of emergency RICE due to ambiguous rule language and said it should be clarified to explicitly state that such testing is not required. The commenter said the rule would require not only initial performance testing, but testing every 3 years. Because engine operation for performance testing would likely exceed typical operation for operational testing and maintenance, these testing requirements would result in increased operation of the engine with a corresponding significant increase in operating costs and emissions of other pollutants such as NO_X. The commenters said emergency engines are used only during emergencies, other than short (less than one-half hour) weekly tests to assure the engines will perform. According to the commenter, performance tests (initial or

every 3 years) consisting of three 1-hour runs typically cost about $10,000 each and are not justified for limited use engines, the tests alone would add substantially to the fuel use of these engines are result in additional and unnecessary emissions and work practice standards under section 112(h) are more appropriate due to "technological and economic limitations."

Response: EPA reviewed the information submitted by the commenters and determined that it would be appropriate to require management practices for all emergency stationary CI engines at area sources. Because these engines are typically used only a few number of hours per year, the costs of emission control and the costs of emission testing are not warranted when compared to the emission reductions that would be achieved. The proposed numeric emission levels are not GACT for emergency engines at area sources. Such engines rarely if ever use the type of emission controls that might have been necessary for many engines to meet the numeric standard, and such engines are rarely if ever subjected to emissions testing. Therefore, EPA determined that GACT for all stationary emergency engines at area sources is the use of management practices.

EPA also analyzed the types of engines that were included in the area source category listing for stationary RICE. As a result of this analysis, EPA determined that emissions from existing stationary emergency engines located at residential, commercial, and institutional facilities that are area sources of HAP were not included in the 1990 baseline emissions inventory that was used as the basis for the listing of source categories needed to ensure that 90 percent of area source emissions are regulated. Existing stationary emergency engines located at residential, commercial, and institutional facilities that are area sources are therefore not subject to this regulation.

For stationary emergency engines at major sources, EPA determined that it is not feasible to prescribe or enforce an emission standard because the application of measurement methodology to this class of engines is impracticable due to technological and economic limitations. A more detailed discussion of this determination can be found in the memorandum entitled "MACT Floor Determination for Existing Stationary Non-Emergency CI RICE Less Than 100 HP and Existing Stationary Emergency CI RICE Located at Major Sources and GACT for Existing Stationary CI RICE Located at Area Sources." EPA determined that it is impracticable to test stationary CI emergency engines using the test procedures specified in subpart ZZZZ because using these procedures would increase the required number of hours of operation of the engine beyond the routinely scheduled reliability testing and maintenance operation, thereby increasing emissions. While emergency engines have periods of operation for scheduled maintenance and reliability testing, those periods are usually several hours shorter than the number of hours that would be required to run the necessary emissions tests under subpart ZZZZ. CARB conducted a survey of stationary emergency diesel engines in 2002 [2] to determine the average number of hours that stationary emergency diesel engines operate. The average hours of operation for maintenance and testing were 22 hours per year, which is less than two hours per month. For the engines that CARB surveyed, 86 percent operated less than 30 hours/year for testing and maintenance. Thirty percent operated less than 10 hours/year. National Fire Protection Association (NFPA) codes require that stationary diesel engines that are used for emergency purposes are run 30 minutes per week (27 hours per year) for maintenance and testing purposes. It is impracticable to test emergency stationary engines as a result of emergency operation because emergencies are unplanned events and implementation of the test procedures specified in subpart ZZZZ require advance planning before tests are conducted. In an emergency, the owner/operator does not have the advance planning time necessary to implement subpart ZZZZ. It is also impracticable to test stationary CI emergency engines at major sources because of the large population of these engines. EPA estimates that there are over 200,000 existing stationary CI engines from 100–500 HP at major sources that are subject to this rulemaking. There are only approximately 300–400 testing firms and these stationary engines are not the only sources that are required to be tested, so if testing were required for these engines, it would take many years to test all of these engines. The cost for testing all of these engines would also be approximately $200 million, which would be unreasonable.

EPA expects that these changes from the proposed rule address the concerns expressed by the commenters about the requirements for stationary emergency CI engines. Regarding the comments pertaining to performance testing for emergency engines, EPA did not intend for the rule to require performance testing for emergency engines. The final rule does not contain any performance testing requirements for emergency engines.

Comment: One commenter recommended that the standard require CDPF or a combination of oxidation catalysts and CDPF for new or existing non-emergency diesel RICE. The commenter stated that EPA's proposal calls for oxidation catalysts on non-emergency CI engines, which EPA reports will result in a 90 percent reduction in CO and 30 percent reduction in PM, whereas CDPF would result in greater reductions in PM (90 percent reductions or greater).

Another commenter reported that it had conducted risk assessment evaluations for diesel particulate emissions from non-emergency diesel engines and found that the diesel particulate emissions from non-emergency diesel engines and found that the diesel particulate emissions often create a significant cancer risk even when there is a 30 percent PM reduction. The commenter recommended that EPA base standards on CDPF or a combination of oxidation catalyst and CDPF, for existing and new non-emergency diesel engines.

Response: The standards that EPA proposed and that EPA is finalizing do not require a particular control technology. For the proposed rule, EPA's beyond-the-floor analysis resulted in standards that were based on the use of oxidation catalyst control for stationary non-emergency diesel engines above 300 HP; EPA has made the same determination for the beyond-the-floor standards in the final rule. EPA determined that the MACT standards should be based on oxidation catalyst rather than CDPF because we do not have any data that shows that CDPFs get greater reductions of HAP than oxidation catalysts on stationary engines, and CDPFs are approximately four times as costly as oxidation catalysts.[3] EPA also has concerns regarding the technical feasibility of CDPFs for existing stationary diesel engines. Many existing diesel engines are not electronically controlled, and PM emissions from older engines are often too high for efficient operation of

[2] *California Air Resources Board Staff Report:* Initial Statement of Reasons for Proposed Rulemaking. Airborne Toxic Control Measure for Stationary Compression Ignition Engines. Stationary Source Division, Emissions Assessment Branch. September 2003.

[3] *California Air Resources Board Staff Report:* Initial Statement of Reasons for Proposed Rulemaking. Airborne Toxic Control Measure for Stationary Compression Ignition Engines. Stationary Source Division, Emissions Assessment Branch. September 2003.

a CDPF. Further, engine exhaust temperatures are often not high enough for regeneration of the CDPF filter substrate. EPA notes that owners and operators are free to choose whichever control technology, which could be oxidation catalyst or CDPF, as long as they meet the final standards. EPA is not addressing new diesel engines in this rulemaking.

Comment: A few commenters were concerned about requirements that might apply to engines that startup turbines. Four commenters suggested that RICE used to startup combustion turbines be exempt from the proposed rule, or deemed to fall under the "emergency" definition in 40 CFR § 63.6675. One commenter explained that turbine RICE only run for a few minutes to get the unit started and the total fuel consumption is not significant. One commenter was concerned that the short run-time during each operation may not be long enough to get the filter up to its design temperature for achievement of its removal efficiency (and note that EPA discusses it in the preamble) or that a filter may require additional run time for regeneration. The commenter further noted that the additional run-time required by the 3 year testing requirement could outstrip the run-time needed to support these combustion turbine peaking unit starting devices just for compliance with the RICE rule. The commenter noted that increased consumption of fuel for rule compliance would be wasting the natural resource and adding emissions for no measurable reduction being gained by the rule. Two commenters noted that every major power plant in the United States is required to have black start capability, which typically involves a small combustion turbine equipped with a diesel engine used for startup of the turbine. According to the commenter, the diesel starting engine, rated less than 500 HP, generally operates less than 10 minutes per combustion turbine start. The commenter indicated that the majority of black start units only operate during emergencies or unusually high demand days, and that a review of the commenter's company's operating data determined that seven black start units in the system averaged 32 starts per year (which equates to less than 6 hours of operation per year, although some limited additional operation may occur as a result of routine maintenance and readiness testing).

Response: In the final rule EPA has required that stationary engines used to startup combustion turbines meet work practice standards. EPA finds that the short time of operation for these engines (10–15 minutes per start) makes application of measurement methodology for these engines using the required procedures, which require continuous hours of operation, impracticable. Requiring numerical emission standards for these engines would actually require substantially longer operation than would occur normally in use, leading to greater emissions and greater costs. EPA also agrees with the commenters that it would not be appropriate to set emission limits that are based on the use of aftertreatment control for the subcategory of stationary CI engines that are used to startup combustion turbines. Oxidation catalyst control would not be effective for these engines due to their short time of operation (10–15 minutes per start).

C. Management Practices

Comment: Several commenters did not agree with the specific management practices that EPA has proposed in the rule for area sources or recommended different maintenance practices. According to the commenters, the maintenance frequency in the proposed rule exceeds current practices or is not supported in the proposed rule. Several commenters agreed that management practices are appropriate for the proper operation of the engines and is a reasonable means to reduce HAP emissions, however, did not agree with the specific maintenance practices proposed by EPA. Numerous commenters recommended that EPA allow owners/operators to follow engine manufacturers' recommended practices or the owners/operators own site-specific maintenance plan.

One commenter pointed out that operators have a direct interest in maintaining engine oil, hoses, and belts, so the engine runs reliably, but the appropriate frequency for these maintenance practices are specific to engine design and are not "one size fits all." Ten commenters recommended that EPA revise fixed maintenance (one-size-fits-all) requirements to maintenance plans. The commenters stated that, while fixed maintenance intervals work well for new mass produced engines similar to those in automobiles, they are inappropriate for the wide variety of existing engines used in the oil and gas, agriculture, and power generation industries across the nation. The commenters pointed out that EPA allows the use of operator-defined maintenance plans that are "consistent with good air pollution control practice for minimizing emissions" to be used in other portions of this same rule, and asserted that EPA should allow the use of operator-defined maintenance plans to greatly reduce cost and allow operators to optimize maintenance for each type of engine.

One of these commenters added that current industry engine maintenance programs are driven by tried-and-true practices and since these practices effectively keep the engines running, they allow the products of the members of the commenter's organization to go to market. The commenter stated that additional, burdensome, frequent, and time-consuming maintenance requirements will cause the members of the commenter's organization to more-frequently shut down engines and thus shut down production.

Two commenters said that if EPA keeps the management practices as proposed, the frequencies associated with conducting engine maintenance should be revised to be commensurate with today's practices. The commenter believes the maintenance practices, as proposed, are significantly burdensome and lack basis. According to the commenters, EPA should replace the maintenance hour intervals with company recommended performance-based maintenance practices to be documented in an operator-defined maintenance plan consistent with requirements in 40 CFR part 60, subpart JJJJ.

One commenter stated that most of the engine manufacturers for the engines in the oil and gas industry recommend oil changes on a monthly schedule. The commenter also indicated that it is common practice to periodically sample and test the engine oil to see if the oil properties are sufficient to extend this time period between oil changes. According to the commenter, this testing has shown in many cases that the oil change interval can be extended without any detrimental effects on the engine, which allows industry to maximize efficiencies, minimize oil usage, reduce waste, and streamline operations with no negative impacts to the engine or emissions.

One commenter expressed that inspection of hoses and belts has no impact on HAP emissions. The commenter expressed that, generally, it agreed that performing maintenance on engines will help to reduce HAP emissions, but that while inspecting belts and hoses is an important part of general engine maintenance (and most sources likely conduct regular inspections of their engines), such inspections have no effect on emissions and should be removed from the proposed rule.

Response: EPA proposed to require specific management practices for certain engines, primarily for smaller existing stationary engines at area sources where EPA thought that add-on controls were not GACT. EPA indicated at proposal that the management practices specified in the proposal reflected GACT and that such practices would provide a reasonable level of control, while at the same time ensuring that the burden on particularly small businesses and individual owners and operators would be minimized. EPA asked for comment on the proposed management practices and received comments on the proposal from industry.

EPA agrees with the commenters that it is difficult to adopt a set of management practices that are appropriate for all types of stationary engines. Regardless, EPA must promulgate emission standards pursuant to section 112(d)(5) for all engines at area sources covered by the final rule. EPA still believes that a management practice approach reflects GACT for emergency engines and smaller engines at area sources. These management practices represent what is generally available among such engines to reduce HAP, and the practices will ensure that emissions are minimized and engines are properly operated. EPA does not agree with the commenters that it would be appropriate to simply specify that owners and operators follow the manufacturer's recommended maintenance practices for the engine. EPA cannot delegate to manufacturers the final decision regarding the proper management practices required by section 112(d). To address the comments that there may be special and unique operating situations where the management practices in the rule may not be appropriate, for example engines using a synthetic lubricant, EPA notes that owners/operators may work with State permitting authorities pursuant to 40 CFR subpart E ("Approval of State Programs and Delegation of Federal Authorities") for approval of alternative management practices for their engines. Subpart E implements section 112(l) of the CAA, which authorizes EPA to approve alternative State/local/Tribal HAP standards or programs when such requirements are demonstrated to be no less stringent than EPA promulgated standards.

The management practices EPA proposed for stationary engines greater than 50 HP included changing the oil and filter every 500 hours, replacing the spark plugs every 1,000 hours, and inspecting all hoses and belts every 500 hours and replacing as necessary. For engines less than 50 HP, EPA proposed to require that these engines change the oil and filter every 200 hours, replace spark plugs every 500 hours, and inspect all hoses and belts every 500 hours and replace as necessary.

EPA agrees that there is a wide range of recommended maintenance procedures, but EPA must promulgate specific requirements pursuant to section 112(d) for this source category. Based on the different suggested maintenance recommendations EPA has reviewed, maintenance requirements appear to vary depending on whether the engine is used for standby, intermittent, or continuous operation. Maintenance is also dependent on the engine application, design, and model. Taking into consideration the information received from commenters on the proposed maintenance practices for oil and filter changes and carefully reviewing engine manufacturer recommended maintenance procedures, EPA has determined that for stationary non-emergency engines below 300 HP, GACT will require the oil and filter to be changed every 1,000 hours of operation or annually, whichever comes first, which reflects the management practices that are generally available. For stationary emergency engines, the final rule requires the oil and filter to be changed every 500 hours of operation or annually, whichever comes first. EPA notes that in the final rule it has clarified that spark plug changes are not required for stationary diesel engines since diesel engines do not use spark plugs. EPA also determined that it would be appropriate to include the option to use an oil analysis program in the final rule.

EPA does not agree with the comments that inspecting belts and hoses has no impact on emissions. Ensuring that the engine is properly operated and maintained will help minimize the HAP emissions from the engine. Properly maintained belts and hoses allow the engine to operate at maximum efficiency. Hoses are generally used to move coolant through the engine to prevent the engine from overheating. Overheating of the engine can cause a malfunction in the combustion process, and may also burn the engine oil in the combustion chamber. Both of these conditions may increase pollutant emissions from the engine. Belts are commonly used for electrical generation and engine timing, and if worn or broken can cause damage to the engine and increase emissions. Therefore, EPA has required management practices that reflect GACT and that, in EPA's view, will ensure the proper operation and maintenance of the engine.

D. Startup, Shutdown and Malfunction

Comment: Several commenters expressed serious concern over the proposed emission standards for periods of startup, shutdown, and malfunction (SSM). The commenters state that the U.S. Court of Appeals for the District Columbia Circuit vacated the SSM exemption in 40 CFR part 63, subpart A on December 19, 2008, and the decision requires the Agency to implement standards that apply at all times, including during SSM periods. Numerous commenters thought the quick response to the December 2008 Court decision on the SSM issue is premature and recommended that EPA wait for a final decision before incorporate elements from this case. Numerous commenters are of the opinion that EPA has not provided a technical basis for its establishment of SSM limits and that any SSM limits should be replaced with work practice standards and disagreed with the decision to include limits for SSM periods. In addition, several commenters said that emissions during SSM events cannot be measured and therefore cannot be confirmed and limits are not enforceable. One commenter recommended that EPA require a SSM plan similar to the SSM plan currently required under 40 CFR part 63, subpart ZZZZ. The commenter also pointed out that 40 CFR 63.6650(b) in the existing rule requires operators to operate and maintain their equipment in a manner consistent with good air pollution control practices at all times, including periods of SSM. The commenter believed that this requirement in conjunction with a SSM plan will achieve the same goals as the proposed rules in a much more cost effective and logical manner.

Many commenters recommended that EPA consider other alternatives to implement during SSM periods, such as possibly requiring work practice standards, which the commenters believe is the most reasonable approach and is justified under the CAA. Commenters believed that work practice standards that minimize the emissions during SSM periods is the most practical method of keeping HAP emissions from engines as low as possible.

Several commenters said that there is no method to determine compliance during SSM periods. The commenters said that it will be difficult or impossible to design a test program to describe emissions during SSM events, *e.g.,* the commenter is not sure how a

malfunction would be defined considering the unexpected and anomalous nature of the event. Therefore, emissions during these periods cannot be confirmed, the commenters said. Similarly, commenters believed that it is not reasonable to set numerical limits during startup because there are no available or repeatable test methods or procedures for measuring emissions during startup or malfunction, plus there is no prescribed definition of what constitutes startup of an engine, which can vary significantly for a number of reasons such as engine and catalyst type, fuel, climatic conditions, application and load.

One commenter said that there are no viable measurement methods available to measure CO, formaldehyde or VOC during transient operation and a review conducted by the commenter of Table 4 in the proposed rule shows the inconsistencies related to transient measurement acceptability with respect to stack gas moisture and flow rate, delays in the actual response of analyzers, issues in obtaining an accurate measurement during a transient test due to an axial diffusion function in long gaseous emissions sample lines, and field gaseous emission measurements require stack traverse as well for the emissions under measurement, per EPA Methods 7, 10, 25, *etc.*, which eliminates the possibility of getting an accurate measurement during transient events such as a startup.

One commenter claimed that issuance of numerical limits for SSM based on the emissions of the "best controlled sources prior to full warm up of the catalytic control" fails to consider emissions during malfunction of the engines themselves. The commenter asserts that while EPA appropriately determined that during a control device malfunction, the floor and standard cannot be set assuming operation of the control device, EPA errs in limiting its analysis solely to operation of the controls since emissions can increase as a result of engine malfunctions as well. The commenter noted that its experience is consistent with EPA's statements that emissions during an engine malfunction may increase due to the effects on exhaust temperatures and composition. The commenter concluded that emission limits would need to be based on the emissions level from the best performing sources without control while the engine is malfunctioning. One commenter added that it does not make sense to set any numerical standards during a malfunction of an engine because inherent in the concept of a malfunction is that emissions will be malfunctioning as well. It is also not logical to apply the concept of "best performing" malfunctioning engine, the commenter said. For these reasons, it is unreasonable for EPA to promulgate numerical emission limits for periods of malfunction, in the commenter's opinion. Emission testing for malfunctions would be near impossible to conduct given the sporadic and unpredictable nature of the events, the commenter said. The commenter said that the nature of malfunctions means it is not feasible to predict or simulate emissions that occur during periods of malfunctions. The commenter asserted that with respect to engines, it is not technologically or economically feasible to apply measurement methodology for the emissions during SSM periods and further, that it is unreasonable for the Agency in the face of the lack of accurate emission measurements to simply set the standard at the level for normal operations (*e.g.*, for sources not using a control device). The commenter stated that this situation is precisely the circumstance in which Congress envisioned that a work practice standard would be established, and urged EPA to adopt a work practice standard applicable to malfunction and startup periods for engines consistent with section 112(h) of the CAA and not to apply the numerical limits for normal operations.

One commenter stated that EPA solicited comment on the level of specificity needed to define the periods of startup and malfunction. The commenter believes the responses differ based on whether the event is a startup or malfunction. The commenter noted that startup of an engine begins with the start of fuel flow to the engine and ends when the engine has achieved normal operating temperature and air to fuel flows as indicated by the manufacturers' specifications, and while the initiation of a startup is predictable, its conclusion is not time-determined, but operationally-determined. The commenter noted where a catalyst is used to control emissions; startup does not end until the required catalyst bed temperature has been achieved, however, this may happen before the engine air and fuel flows are normal and thus catalyst bed temperature is not the exclusive criterion that defines the end of the startup period. The commenter noted that the start of the malfunction should be defined as when the normal operation emission limit is exceeded and the end of the malfunction should be set as when the normal operation emission limit is restored or the engine is shutdown. The commenter noted that malfunctions often require shutdown to address, but such shutdowns can be delayed because immediate engine shutdown would cause other upsets. Therefore, the commenter believes it would not be reasonable to set any specific time limits on either startup or malfunction periods, because their duration can be a function of operational need. Similarly, one commenter disagreed that it would be appropriate to set a specific limit on the time allowed for startup because not all engines experience the same type of startup and malfunction. The length of startup will depend on many factors including engine type, size, fuel type and duty cycle, plus the frequency of required startups will also vary greatly among engines because some engines are only used for intermittent operation.

Some commenters thought that limiting the engine startup time is a reasonable method to limit emissions. The commenter added that the most effective way to control emissions during startup for engines with catalysts is to limit the amount of time it takes to warm up the exhaust to initialize the catalyzation process and startup time can be easily monitored. The commenter added that the time to be monitored at startup be defined as from the initial engine in-cylinder combustion, corresponding with continuous operation, up to the point that a defined catalyst inlet temperature is reached. The commenter also recommended that owners/operators be able to request additional startup time if necessary in special circumstances, *e.g.*, in extremely cold climates or where sufficient load cannot be reached within 30 minutes. The commenters recommended a limit of one hour for startup and 30 minutes for shutdown. The rule should not include a time limit for malfunctions, as the length of time during which an engine will be out of compliance would depend on the type of malfunction, the commenters said. The commenters suggested that each affected source would be required to prepare a SSM plan, which would have to address appropriate actions and time limits for malfunctions. The commenter suggested that for engine startups, the work practice should require loading the engine to normal operating load as soon as practicable so that the catalytic controls are within operating range as soon as practicable

The commenters also objected to EPA's proposed second option. The commenter said the data are apparently derived from the best controlled engines not using catalytic controls. The commenter said that emissions data

from steady-state operation of uncontrolled engines does not account for the cooler engine and fuel temperature conditions during startup. Nor does the second option properly account for malfunctions.

One commenter proposed that EPA treat SSM emissions as de minimis, using the DC Circuit rationale in Alabama Power Co. v. Costle. The commenter noted that catalyst systems do not perform at low temperatures, and the SSM periods vary in duration and intensity, which can significantly impact actual emissions profiles. The commenter provided examples of why an assumption that SSM emissions are identical to normal stable operations emissions is erroneous and a gross over-simplification of unit operations.

Response: EPA received extensive comments on the proposed requirements applicable to existing stationary engines during SSM. Consistent with the recent Court decision that vacated the exemption in 40 CFR 63.6(f)(1) and (h)(1) for SSM (*Sierra Club* v. *EPA,* 551 F.3d 1019), EPA has established standards in this rule that apply at all times. EPA disagrees with those comments suggesting that EPA was premature in proposing standards during periods of startup, shutdown and malfunction. The United States Court of Appeals for the District of Columbia Circuit issued its opinion vacating the SSM exemption in December 2008, and we appropriately accounted for that decision in proposing the rule in February 2009. EPA does not believe it is appropriate to promulgate final rules that are inconsistent with the decision of the DC Circuit.

EPA has determined that the emissions from stationary CI engines during startup are significantly different than the emissions during normal operation. During startup, incomplete combustion of the diesel fuel causes variations in the pollutant concentrations and fluctuations in the flow rate of the exhaust gas. Incomplete combustion is due to cold areas of the cylinder walls that cause the temperature to be too low for efficient combustion. As the engine continues to operate, these cold regions begin to heat up and allow for more complete combustion of the diesel fuel and stabilization of the exhaust flow rate and pollutant concentrations. In addition, the engine experiences extreme transient conditions during startup, including variations in speed and load, poor atomization of the fuel injection, which leads to variable engine and engine exhaust temperatures, variable exhaust gas flow rates, and variable diluent pollutant concentration. Note for example the brief time spent at different load conditions as shown in Figure 1 of the attachment to EMA's letter dated February 17, 2009 (EPA–HQ–OAR–2008–0708–0019), which illustrates the transient nature of the engine startup phase. Other factors that cause emissions to be higher during startup, including for engines that are not equipped with oxidation catalyst, are a higher propensity for engine misfire and poorer atomization of the fuel spray during startup. After-treatment technologies like oxidation catalysts and CDPFs must also reach a threshold temperature in order to reduce emissions effectively. In the February 17, 2009, EMA letter, EMA provided various graphs illustrating sample engine startup profiles and graphs demonstrating the effect of engine exhaust temperature on catalyst efficiency. Figure 6 of the attachment to EMA's letter (EPA–HQ–OAR–2008–0708–0019.1) shows how the CO efficiency is a function of the catalyst inlet temperature.

EPA has evaluated the criteria in section 112(h) and carefully considered and reviewed the comments on this issue. EPA has determined that it is not feasible to prescribe a numerical emission standard for stationary CI engines during periods of startup because the application of measurement methodology to these engines is not practicable due to the technological and economic limitations described below.

EPA test methods (*e.g.,* 40 CFR part 60, appendix A, Methods 2, 3A, 4, and 10) do not respond adequately to the relatively short term and highly variable exhaust gas characteristics occurring during these periods. The innate and substantial changes in the engine operations during startup operations create rapid variations in exhaust gas flow rate as well as changes in both pollutant and diluent gas concentrations. Correlating the exhaust gas flow rates and the gas components concentration data for each fraction of time over the entire period of a startup operation is necessary to apportion the values appropriately and to determine representative average emissions concentrations or total mass emissions rate.

Measuring flow and concentration data in the types of rapidly changing exhaust gas conditions characteristic of stationary CI engines is unachievable with current technologies applicable to stack emissions testing. For example, application of Method 2 to measure stack flow rate requires collecting data for velocity pressure and stack temperature at each of 12 traverse points and a corresponding stack moisture and oxygen concentration (for molecular weight determination). This traverse operation requires about 30 minutes to complete to produce a single value for the test period, which is approximately the same amount of time as the engine startup period. Clearly a single flow rate value would not sufficiently represent the variable flow conditions nor allow appropriate apportioning of the pollutant concentration measurements over that same period for calculating a representative average emissions value. Even if the start-up period is longer than 30 minutes, the stack flow rate test period could not be short enough to represent the short term (*e.g.,* minute-by-minute) result necessary for representative emissions calculations. These findings lead us to conclude that correlating the flow and concentration data as necessary to determine appropriate proportional contributions to the emissions rates or concentrations in calculating representative emissions over these short highly variable conditions with currently available field testing procedures is problematic for stationary CI engines. In addition, even were it technically feasible to measure emissions during startups for stationary CI engines, the cost of doing so for every startup at every covered engine would impose a substantial economic burden. There are approximately 936,000 existing stationary CI engines that are subject to this rule; the cost for testing every one of these engines during engine startup could be more than $1 billion.

EPA is therefore finalizing an operational standard in lieu of a numerical emission limit during periods of startup in accordance with section 112(h) of the CAA. EPA is limited to the information before it, which, of course, includes any information provided by the commenters. *See* 112(d)(3)(A). In this case, EPA carefully analyzed all of the information before it, including that provided by commenters, and determined that this standard complies with the requirements of sections 112(d) and 112(h). The final rule requires that owners and operators of stationary engines limit the startup time to 30 minutes or less. Engine startup is defined as the time from initial start until applied load and engine and associated equipment reaches steady state or normal operation. For stationary engine with catalytic controls, engine startup means the time from initial start until applied load and engine and associated equipment reaches steady state or normal operation, including the catalyst. EPA is also including a requirement in the final rule to

minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the otherwise applicable emission standards apply. As with any work practice, CAA section 112(h)(3) and EPA's implementing regulations at 40 CFR 63.6(g) provide that major sources can petition the Administrator for approval of an alternative work practice, which must be at least as stringent as what is required in the regulation.

Regarding shutdown, EPA determined that it was not necessary to establish different standards that would be applicable during shutdown for stationary CI engines. The commenters did not provide any information that shows emissions would be higher during shutdown than during normal operation. In addition, commenters are incorrect that compliance with the standards must be instantaneous. Compliance with these emission standards has always been based on the results of testing that is conducted over a three-hour period; EPA has made this more explicit in this rule. Since the shutdown period for stationary CI engines is typically only a matter of minutes, it is believed that even if a shutdown occurred during the performance test, the engine would still be able to comply with the emission limitation. In a letter dated February 17, 2009 (EPA–HQ–OAR–2008–0708–0019), EMA indicates that HAP emissions will be sufficiently controlled during periods of shutdown. EMA stated in its letter that according to manufacturers, emissions control equipment would most likely continue to reduce emissions as designed throughout the shutdown period. According to EMA, this is because engine emissions control systems and equipment are, during the start of an engine shutdown, at high enough temperatures to control HAP emissions and will continue to be sufficiently high until the engine shuts down. This trend is illustrated in the attachment to EMA's February 17, 2009, letter to EPA, where EMA provided two graphs with sample engine shutdown profiles. Figure 2 of the attachment to EMA's letter (EPA–HQ–OAR–2008–0708–0019.1) shows catalyst temperatures versus minutes during engine shutdown and illustrates stable catalyst temperatures.

In establishing the standards in this rule, EPA has taken into account startup periods and, for the reasons explained above, has established different standards for those periods. With respect to malfunctions, EPA proposed two options for subcategories where the proposed emission standard was based on the use of catalytic controls. The first proposed option was to have the same standards apply during normal operation and malfunctions. The second proposed option was that standards during malfunctions be based on emissions expected from the best controlled sources prior to the full warm-up of the catalytic control. For subcategories where the proposed emission standard was not based on the use of catalytic controls, we proposed the same emission limitations apply during malfunctions and periods of normal operations. EPA is finalizing the first option described above, which is that the same standards apply during normal operation and malfunctions. In the proposed rule, EPA expressed the view that there are different modes of operation for any stationary source, and that these modes generally include startup, normal operations, shutdown, and malfunctions. However, after considering the issue of malfunctions more carefully, EPA believes that malfunctions are distinguishable from startup, shutdown and normal operations.

Periods of startup, normal operations, and shutdown are all predictable and routine aspects of a source's operations. However, by contrast, malfunction is defined as a "sudden, infrequent, and not reasonably preventable failure of air pollution control and monitoring equipment, process equipment or a process to operate in a normal or usual manner * * *" (40 CFR 63.2). EPA has determined that malfunctions should not be viewed as a distinct operating mode and, therefore, any emissions that occur at such times do not need to be factored into development of CAA section 112(d) standards, which, once promulgated, apply at all times. For example, we note that Section 112 uses the concept of "best performing" sources in defining MACT, the level of stringency that major source standards must meet. One commenter expressed the view that it is not logical to apply the concept of "best performing" to a source that is malfunctioning. Indeed, the goal of best performing sources is to operate in such a way as to avoid malfunctions of their units. Similarly, although standards for area sources are not required to be set based on "best performers," we believe that what is "generally available" should not be based on periods in which there is a "failure to operate."

Moreover, even if malfunctions were considered a distinct operating mode, we believe it would be impracticable to take malfunctions into account in setting CAA section 112(d) standards for stationary CI engines. As noted above, by definition, malfunctions are sudden and unexpected events and it would be difficult to set a standard that takes into account the myriad different types of malfunctions that can occur across all sources. Moreover, malfunctions can vary in frequency, degree, and duration, further complicating standard setting.

Finally, EPA believes that malfunctions will not cause stationary CI engines to violate the standard that applies during normal operations. Stationary CI engines would in most cases shut down immediately or with very little delay in the event of a malfunction. Because the standard is expressed as the average of three one-hour runs, or a work or management practice, any emissions that occur prior to engine shutdown should not affect a source's ability to comply with the standard. Commenters' concerns regarding compliance certifications should not be a concern for this same reason. This approach will also encourage shutdowns as soon as practicable when a malfunction that affects emissions occurs. In the unlikely event that a source fails to comply with the applicable CAA section 112(d) standards as a result of a malfunction event, EPA would determine an appropriate response based on, among other things, the good faith efforts of the source to minimize emissions during malfunction periods, including preventative and corrective actions, as well as root cause analyses to ascertain and rectify excess emissions. EPA would also consider whether the source's failure to comply with the CAA section 112(d) standard was, in fact, "sudden, infrequent, not reasonably preventable" and was not instead "caused in part by poor maintenance or careless operation." 40 CFR 63.2 (definition of malfunction).

EPA does not agree with the commenter who said that EPA should treat SSM emissions as de minimis. It is doubtful whether a de minimis exemption is even possible under section 112(d) of the Act in these circumstances, *see National Lime Ass'n* v. *EPA*, 233 F. 3d 625, 640 (DC Cir, 2000), but in any case the commenter provides no specific information to justify EPA making such a de minimis finding in this instance. Given the very narrow and specific circumstances delineated by the court in *Alabama Power* v. *Costle*, 636 F.2d 323 (DC Cir. 1979) for making such a finding, and the lack of specific information from the commenter that these circumstances exist in this instance, we do not make a *de minimis* finding.

E. Emergency Engines

Comment: Several commenters stated that EPA's proposed definition of emergency is not clear as to whether it includes emergency engines that operate in emergency demand response (DR) programs. The commenter believed that the record on 40 CFR part 60, subpart IIII, from which the proposed rule definition was drawn, clearly indicates that the 40 CFR part 60, subpart IIII definition was meant to address peak shaving, not emergency engines participating in emergency DR programs. Several commenters requested that EPA modify the proposed definition of emergency engines to enable engines to maintain their status as emergency engines, even though the engines that are used in DR programs are part of a financial agreement and based on the current definition would not be considered emergency engines. Two commenters stated that emergency DR programs should not be confused with economic DR programs (*e.g.*, peak shaving). Emergency DR programs are initiated by the transmission system operators when the threat of power outages is imminent and are critical to maintaining available power during periods of extreme load on the electric power infrastructure, according to the commenters. The events are rare and unplanned, out of the control of emergency engine owners/operators, and no power is supplied to the grid, but used at the individual facility, the commenter said. The commenter said that emergency DR events during the year are typically limited to no longer than 2 to 6 hours per event, with the number of events per year capped by the regional power pool. The commenter believed that, by establishing a subcategory for generators that serve facilities participating in a DR program and that only operate 200 hrs/yr, including any hours operated for maintenance purposes, EPA could require maintenance practices, and remove any disincentive that may be created over the increased administrative burden and potential post-combustion control retrofit costs if their emergency stationary RICE would be required to be re-characterized as "non-emergency" in order to participate in DR programs. The commenter suggested that a 100 hour operating limit could also be considered as an alternative. Three commenters (stated that they receive many benefits from their participation in the local DR program, and that they use emergency DR events and tests events to replace some of the Joint Commission on Accreditation of Healthcare Organizations' mandated hospital generator tests. According to the commenters the costs that they would have to absorb to meet the proposed emission limits would be prohibitive and that to require facilities to meet rigid emission limits with very little reduction in emissions is not encouraged. Emergency engines are used throughout the U.S. and provide vital safety requirements at hospitals and healthcare institutions, the commenters said. Commenters stated that emergency engines participating in emergency DR programs provide a critical service in stabilizing the electric grid on the rare occasions when the grid is about to fail. Many States endorse the use of emergency engines participating in emergency DR programs, according to commenter 82. Two commenters cited various DR programs in the New England area that existing engines participate in. A commenter provided detailed discussion of several emergency DR programs across the country, including States in New England, the Mid Atlantic and Midwest, and the South, that are supportive of using emergency engines as part of their emergency DR programs, and that accommodate operation of these engines through various definitions of emergency, or through permitting. The commenter concluded that it is very important that EPA not adopt rules that conflict with how much of the U.S. handles emergency DR.

Response: EPA agrees that it would be appropriate to allow emergency engines to operate as part of emergency demand response programs for a limited number of hours of operation per year in situations where grid failure and a blackout are imminent. In the final rule, EPA has revised the requirements for emergency engines to reflect this.

F. Emissions Data

Comment: Multiple commenters believe that the emissions data for engines is not adequate to conduct an appropriate MACT floor analysis. EPA should collect additional data and redo the MACT floor analysis, according to numerous commenters. The commenters also stated that EPA did not consider emissions variability in setting the MACT floor.

Commenters stated that the MACT floors should not be based on data using single measurements, when three measurements are a standard requirement for demonstrating compliance. In the absence of multiple measurements, outliers and erroneous errors cannot be caught, according to the commenters.

The commenters said that EPA should use data from units of similar size to set standards for sources of the same size, *e.g.*, emissions from a large engine should not be used to set standards for a 100 HP engine unless EPA can demonstrate that such an assumption is justified. The commenters are concerned that the data EPA has used for the MACT floor analysis is not representative of the current population of engines.

Commenters criticized the applicability and use of the RICE emissions database as representative of the engines being regulated. One commenter noted that the 40 ppmvd numerical emissions limit for CO appears to be based on 10 tests of only one make and model of engine (Caterpillar, Model No. 3508) over a 3-day period in the Research and Development Laboratory of CSU in 1999 (Docket No. EPA–HQ–OAR–2008–0708–0006). The commenter states that according to the engine population data presented in the impacts document in the docket (Docket No. EPA–HQ–OAR–2008–0798–0028) the promulgated rule would impose limits on more than 50,000 CI engines. The commenter believed that basing the limit on such a small and unrepresentative sample jeopardizes the accuracy of any assumptions made about the operational conditions or performance of the regulated population as well as the accuracy of any cost of compliance estimates, and leads to an underestimation of the impact of the rule.

Response: Section 112(d)(3) of the CAA requires EPA to set MACT standards based on the test data that is available to the Agency and this is what EPA did at proposal. EPA recognizes that it had limited emissions test data at the time it developed the proposed rule. However, EPA notes that it used the data that was available at the time of proposal. EPA requested additional test data to supplement the emissions database during the development of previous rules for stationary engines and also in an advance notice of proposed rulemaking for this rule and did not receive any data. EPA again requested additional test data during the comment period for the current engine rulemaking and made an additional effort post-proposal to reach out to industry and other sources in order to supplement the existing emission data set. EPA did receive additional emissions data for stationary CI engines during the post-proposal period for this rulemaking. The additional data include tests for 11 stationary engines, ranging in size from 160 HP to 3,570 HP. The

inclusion of this additional data in the MACT floor analysis for the final rule addresses the commenters' concerns about using data for one large engine to set the MACT floor for smaller engines.

EPA understands the concerns of commenters with regard to whether the MACT floor analysis for the proposed rule took emissions variability appropriately into account. EPA took emissions variability into account to a greater degree when conducting the MACT floor analysis for the final rule. For engines where EPA had data for multiple tests on the same engine, EPA used the highest test run concentration as the representative emissions for that engine. EPA also used the lowest percent reduction observed in determining the percent reduction expected from applicable aftertreatment controls in determining beyond-the-floor MACT standards. Therefore, the variability in emissions from the engine was factored into the MACT floor analysis and the beyond-the-floor MACT analysis.

EPA does not agree that it would be inappropriate to use data from one run in setting MACT floors; using the highest run from the testing takes into account the variability of emissions.

G. Final Rule Impacts

Comment: Several commenters indicated that the costs are not representative of actual costs of implementing the rule and numerous commenters said that the proposed rule will have a significant financial impact on their sources. According to the commenters, EPA has underestimated the cost impacts of the rule by an order of magnitude or more. Numerous commenters indicated that EPA has used old, faulty, and inappropriate data on the cost of controls, testing, recordkeeping and reporting to estimate the economic impacts of the rule. Commenters said that EPA should gather current information on the cost of controls and redo the cost calculations. The commenters provided specific examples of where they believe EPA has used inappropriate cost information. One concern expressed was that the cost of oxidation catalyst control for diesel engines was based on the cost of oxidation catalyst control for gas engines. Commenters also said that not all existing engines have hour meters. Commenters believed that EPA has underestimated the total cost of this rule by underestimating the number of engines requiring the addition of catalyst; assuming that catalysts can simply be added to effectively control existing engines; overlooking the significant cost of field installation; and underestimating the complexity of and administrative/operational burdens added by this rule.

Several commenters provided comments about the economic impact of the rule on emergency units. One commenter stated that overall the cost per ton of HAP or CO removal would be excessive for emergency CI engines since emissions were well below a ton/yr and the units use is very limited and intermittent. Another commenter noted that engine manufacturers do not recommend the use of after treatment devices for emergency engines, and that EPA appeared to support that position in the Regulatory Impact Analysis (RIA), which states that cost per ton removal of HAP ranged from $1 million to $2.8 million for engines larger than 500 HP and from $3.7 million to $8.7 million for engines between 50 and 500 HP. One commenter said EPA does not appear to consider any costs associated with testing emergency engines, even though owners may deem it prudent to test to confirm they are meeting the standard rather than risk an enforcement action if the unit does not meet the standard. Testing to comply with the 100 percent load requirement will require owners to purchase or rent load banks to meet the conditions contemplated in the standard, which can cost up to $10,000 per site. The load bank costs alone could add up to as much as $973 million. In addition, equipment modifications (sample ports) would be necessary to test emissions, and EPA has not included these costs in its calculations.

One commenter said that the proposed rule for existing CI engines greater than 300 HP at area sources is cost prohibitive for facilities with peak shaving engines with low operating hours. The commenter estimated that the cost per ton of HAP removed from these units would range from $200,000 to $1 million, similar to the cost for emergency generators.

While reducing HAP is an important goal, one commenter believed that the overbroad approach taken by EPA in subjecting all the RICE equipment in question to the requirements proposed, regardless of whether the equipment is located in urban or rural areas, particularly when considering the Congressional intent of reducing HAP in urban areas given the potential risks to public health, and the imposition of costs in excess of $528 million to reduce 13,000 tons of HAP a year (*i.e.*, a cost of $40,615 per ton) should be carefully scrutinized.

One commenter noted an additional concern with the proposed rule is the potential impact of parasitic load resulting from the use of catalytic diesel particulate filters (CDPF) and oxidation catalysts. Some back pressure penalty is associated with the use of both CDPF and oxidation catalysts methods to control HAP, the back pressure can increase with time, which may require regeneration of the catalyst or changing filters. The commenter believed that for those utilities that operate RICE with only marginal excess capacity, addition of either type of control could require installation of additional RICE capacity to maintain the needed reliability level. The commenter noted that it will not be possible to design around the pressure drop for existing engines and that the penalty should have been addressed and included by EPA in the cost assessment of retrofit and operation for the control devices.

Another commenter indicated that EPA's estimates are low for the capital and operating costs associated with the use of catalytic control, and are based on pricing data from one vendor and a limited number of data points. The commenter asserted that EPA's capital estimate and annual operating cost estimate for catalytic controls are each low by an order of magnitude of 2 to 3. The commenter also stated that because beyond-the-floor standards (which require catalytic controls) are based on the cost per ton of HAP removed and EPA significantly underestimated capital and operating costs of catalytic controls, EPA must reanalyze the proposed rule with better cost data to determine when catalysts are economically practical.

One commenter said the cost information contained in the docket for test costs is not representative of the sampling costs required to comply with the standards as proposed. Members of the commenter's organization indicated that the cost per sample run using Methods 1, 3, 4, and 10 could easily exceed $10,000, excluding costs to prepare for the sampling (*i.e.*, scaffolding, stack extensions, *etc.*). In addition to these cost considerations, as a practical matter, there would be significant difficulty in performing these EPA test methods on engine exhaust.

The commenter claimed that EPA has proposed compliance requirements that are more stringent than GACT requirements or management practices and that EPA has decided to institute MACT. However, even under MACT EPA can consider cost and energy impacts. The commenter disagreed with EPA's conclusion in the RIA that the rule will not likely have a significant impact on the supply, distribution, or use of energy. The commenter said that the proposed standards could have a

very detrimental impact on energy reliability, and many units may have to be shut down due to the cost of compliance.

Response: EPA used the information it had available at the time of proposal to estimate the cost impacts associated with the rule. This information included cost data obtained for the development of previous stationary engine rulemakings, which EPA believed would be appropriate to use for this rulemaking. Based on the significant number of comments received on the proposed rule costs, EPA revisited its cost analysis and assumptions underlying the proposed rule and revised that analysis and assumptions in the final rule.

EPA has made several attempts to obtain more current cost information, including through an advance notice of proposed rulemaking for this rule. EPA agrees with the commenters that it is inappropriate to base the cost for a diesel oxidation catalyst on the costs for oxidation catalysts for spark ignition engines. Therefore, EPA has based the catalyst cost estimate in the final rule on cost data for diesel oxidation catalysts obtained from a CARB study. More information on the cost estimate can be found in the memorandum entitled "Control Costs for Existing Stationary CI RICE." The cost estimates are based on the use of diesel oxidation catalyst rather than CDPF because we believe that sources will choose to use oxidation catalyst control because they are less costly than CDPF and achieve similar reduction in HAP. Based on a reanalysis of the MACT floor data and above-the-floor options, taking variability into account, the final rule requires engines equipped with catalysts to achieve 70 percent reduction rather than the 90 percent that was proposed.

Regarding the comment that catalysts cannot be added to existing engines, the commenter did not provide any information to show what engines would not be able to be retrofit. Regarding the concerns expressed about backpressure increases, the commenter did not provide any data to support the claim that the backpressure increases are so high that they would severely impact the engine output.

EPA does not agree with the claim that the rule will put a strain on hospitals. The stationary diesel engines at hospitals are typically emergency engines and EPA has determined that emergency engines located at institutional facilities such as hospitals that are area sources are not part of the listed source category and are therefore not subject to the final rule. EPA does not agree with the commenters that it is not appropriate to require peaking units and stationary diesel engines that are located in rural areas to install controls. This is discussed in more detail in the summary of comments and responses. EPA has specified in the final rule that performance testing is not limited to 100 percent load, so it should not be necessary to include the cost of a load bank in the performance testing cost. EPA has incorporated the costs for testing, monitoring, recordkeeping, and reporting in the cost analysis and believes that its estimates for these costs are appropriate. The costs for testing are based on information from source testing companies. As a result of the comments on testing costs, EPA reevaluated the estimate of how many engines could be tested in a single day and determined that two engines could be tested at a facility in one day, rather than three as was estimated in the proposal.

Regarding the concerns expressed by the commenters about the impact of the rule on emergency engines, the final rule requires existing stationary emergency engines to meet work practice or management practice standards, rather than numeric emission limitations; these work practices and management practices do not require that these engines be retrofit with aftertreatment controls or be performance tested to determine compliance. Information provided to EPA by engine manufacturers indicates that most engines are already equipped with an hour meter; therefore, EPA did not add this cost into the rule. EPA does not believe that the final rule will cause owners/operators to replace their emergency engines. The final rule imposes work or management practices on these engines, which EPA believes will not be overly burdensome to facilities and will not cause the retirement of existing stationary emergency engines.

VI. Summary of Environmental, Energy and Economic Impacts

A. What are the air quality impacts?

The final rule is expected to reduce total HAP emissions from stationary RICE by 1,010 tons per year (tpy) beginning in the year 2013 or the first year the rule will become effective. EPA estimates that over 900,000 stationary CI engines will be subject to the rule. These estimates include stationary engines located at major and area sources; however, not all stationary engines are subject to numerical emission standards. Further information regarding the estimated reductions of the final rule can be found in the memorandum entitled "Impacts Associated with NESHAP for Existing Stationary RICE," which is available in the docket.

In addition to HAP emissions reductions, the final rule will reduce other pollutants such as CO, PM, SO_X, and volatile organic compounds (VOC). The final rule is expected to reduce emissions of CO by 14,000 tpy in the year 2013. Reductions of PM are estimated at 2,800 tpy in the year 2013. Emissions of VOC are estimated to be reduced by 27,000 tpy in the year 2013. The final rule will also reduce emissions of SO_X through the use of ULSD. We have not quantified the SO_X reductions that would occur as a result of engines switching to ULSD because we are unable to estimate the number of engines that already use ULSD and therefore we are unable to estimate the percentage of engines that may switch to ULSD due to this rule. If none of the affected engines would use ULSD without this rule, then we estimate the SO_X reductions are 31,000 tpy in the year 2013. If all of the affected engines would use ULSD regardless of the rule, then the additional SO_X reductions would be zero.

B. What are the cost impacts?

The total national capital cost for the final rule for existing stationary RICE is estimated to be $744 million, with a total national annual cost of $373 million in year 2013 (the first year the rule is implemented). Further information regarding the estimated cost impacts of this proposed rule can be found in the memorandum entitled "Impacts Associated with NESHAP for Existing Stationary CI RICE," which is available in the docket.

C. What are the benefits?

We calculated the benefits of this rule in terms of the co-benefits associated with reducing fine particulate matter (PM) rather than calculating the benefits associated with reducing hazardous air pollutants (HAPs). These PM reductions are a consequence of the technologies installed to reduce HAP emissions from RICE. We estimate the monetized $PM_{2.5}$ co-benefits of this final regulatory action to be $940 million to $2.3 billion (2008$, 3 percent discount rate) in the fifth year (2013). The $PM_{2.5}$ co-benefits at a 7 percent discount rate are $850 million to $2.1 billion (2008$). Because the magnitude of the $PM_{2.5}$ co-benefits is largely driven by the concentration-response function for premature mortality, we examined alternate relationships between $PM_{2.5}$ and premature mortality supplied by

experts. Higher and lower co-benefits estimates are plausible, but most of the expert-based estimates fall between these two estimates above.[4]

A summary of the monetized co-benefits estimates at discount rates of 3 percent and 7 percent is in Table 4 of this preamble.

TABLE 4—SUMMARY OF THE MONETIZED $PM_{2.5}$ CO-BENEFITS ESTIMATES FOR FINAL RICE NESHAP

[Millions of 2008$]

Pollutant	Emission reductions (tons)	Total monetized co-benefits (3% discount)	Total monetized co-benefits (7% discount)
Direct $PM_{2.5}$	2,844	$910 to $2,200	$820 to $2,000.
$PM_{2.5}$ Precursors:			
VOC	27,395	$33 to $82	$30 to $74.
Total		$940 to $2,300	$850 to $2,100.

Note: All estimates are for the analysis year (the fifth year), and are rounded to two significant figures so numbers may not sum across rows. All fine particles are assumed to have equivalent health effects, but the benefit-per-ton estimates vary between precursors because each ton of precursor reduced has a different propensity to form $PM_{2.5}$. We assume that all PM reductions for this rule are $PM_{2.5}$ reductions. Benefits from reducing hazardous air pollutants (HAPs) are not included.

The benefits estimates of population-level improvements to human health from reductions in $PM_{2.5}$ air pollution. We generated estimates that represent the total monetized human health co-benefits (the sum of premature mortality and morbidity) of reducing a ton of $PM_{2.5}$ and $PM_{2.5}$ precursor emissions. We base the estimate of human health co-benefits derived from the $PM_{2.5}$ and $PM_{2.5}$ precursor emission reductions on the general approach and methodology laid out in the Technical Support Document that accompanied the RIA for the 2008 National Ambient Air Quality Standard for Ground-level Ozone (NAAQS) and Fann *et al.* (2009).[5]

To generate the benefit-per-ton estimates, we used a model to convert emissions of direct $PM_{2.5}$ and $PM_{2.5}$ precursors into changes in $PM_{2.5}$ air quality and another model to estimate the changes in human health based on that change in air quality. Finally, the monetized health co-benefits were divided by the emission reductions to create the benefit-per-ton estimates. Even though we assume that all fine particles have equivalent health effects, the benefit-per-ton estimates vary between precursors because each ton of precursor reduced has a different propensity to form $PM_{2.5}$. For example, SO_X has a lower benefit-per-ton estimate than direct $PM_{2.5}$ because it does not form as much $PM_{2.5}$, thus the exposure would be lower, and the monetized health co-benefits would be lower.

For context, it is important to note that the magnitude of the PM benefits is largely driven by the concentration response function for premature mortality. Experts have advised EPA to consider a variety of assumptions, including estimates based both on empirical (epidemiological) studies and judgments elicited from scientific experts, to characterize the uncertainty in the relationship between $PM_{2.5}$ concentrations and premature mortality. For this final rule we cite two key empirical studies, one based on the American Cancer Society cohort study[6] and the extended Six Cities cohort study.[7]

EPA strives to use the best available science to support our benefits analyses. We recognize that interpretation of the science regarding air pollution and health is dynamic and evolving. The question of whether or not to assume a threshold in calculating the co-benefits associated with reductions in $PM_{2.5}$ is an issue that affects the benefits calculations for many EPA rulemakings and analyses. Due to these implications, we solicited comment on appropriateness of both the no-threshold and threshold model for PM benefits analysis as part of the Portland Cement NESHAP (May 2009). The comment period closed on September 4, 2009, and EPA is still reviewing those comments. Since then, EPA finalized the *Integrated Science Assessment for Particulate Matter*,[8] which was reviewed by EPA's Clean Air Scientific Advisory Committee. Based on EPA's review of the body of scientific literature and the *Integrated Science Assessment*, EPA has concluded that the no-threshold model most adequately portrays the relationship between fine particles and premature mortality. Although this document does not necessarily represent agency policy, it provides a basis for reconsidering the application of thresholds in $PM_{2.5}$ concentration-response functions used in EPA's RIAs.

The $PM_{2.5}$ co-benefits for the incremental emission reductions from this final regulatory action reflect EPA's most current interpretation of the scientific literature, including four key changes from previous analyses for refineries: (1) A no-threshold model for $PM_{2.5}$ that calculates incremental co-benefits down to the lowest modeled air quality levels; (2) a revised Value of a Statistical Life (VSL); (3) two technical updates to the population dataset and aggregation method; and (4) presentation of results derived from Pope *et al.* (2002) and Laden *et al.* (2006) instead of using the extremes of EPA's Expert Elicitation on PM Mortality (Roman *et al.*, 2008). For more information on the updates to the benefit estimates, please refer to the RIA for this rule, which is available in the docket.

It should be noted that the $PM_{2.5}$ co-benefits estimates provided above do not include benefits from reduced hazardous air pollutants, improved

[4] Roman *et al.*, 2008. Expert Judgment Assessment of the Mortality Impact of Changes in Ambient Fine Particulate Matter in the U.S. Environ. Sci. Technol., 42, 7, 2268–2274.

[5] Fann, N., C.M. Fulcher, B.J. Hubbell. 2009. The influence of location, source, and emission type in estimates of the human health benefits of reducing a ton of air pollution. Air Qual Atmos Health (2009) 2:169–176.

[6] Pope *et al*, 2002. "Lung Cancer, Cardiopulmonary Mortality, and Long-term Exposure to Fine Particulate Air Pollution." Journal of the American Medical Association 287:1132–1141.

[7] Laden *et al*, 2006. "Reduction in Fine Particulate Air Pollution and Mortality." *American Journal of Respiratory and Critical Care Medicine*. 173: 667–672.

[8] U.S. Environmental Protection Agency (U.S. EPA). 2009. Integrated Science Assessment for Particulate Matter (Final Report). EPA–600–R–08–139F. National Center for Environmental Assessment—RTP Division. December. Available on the Internet at *http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=216546.*

visibility, reduced aquatic and terrestrial acidification. The benefits from reducing 1,014 tons of HAPs each year have not been monetized in this analysis. We do not have sufficient information or modeling available to provide such estimates for this rulemaking. In addition, we have not quantified the benefits attributable to the SO_2 reductions that would occur as a result of these engines switching to ULSD. Although we are confident that some SO_2 reductions would occur as a result of this rule, we are unable to estimate the percentage of engines that may switch to ULSD in the absence of this rule or the number of engines that already use ULSD. As a $PM_{2.5}$ precursor, these SO_2 emission reductions would lead to fewer $PM_{2.5}$-related health effects. Because of uncertainty in the magnitude of the attributable SO_2 reductions and to avoid the appearance of double-counting, we have chosen to not include these estimates in the results table shown above. If none of the affected engines would use ULSD without this rule, then we estimate the additional monetized $PM_{2.5}$-related health co-benefits would be $720 million to $1.8 billion in 2013 (2008$, 3% discount rate). If all of the affected engines would use ULSD regardless of the rule, then the additional monetized co-benefits from SO_2 reductions would be zero.

This analysis does not include the type of detailed uncertainty assessment found in the 2006 $PM_{2.5}$ NAAQS RIA because we lack the necessary air quality input and monitoring data to run the benefits model. However, the 2006 $PM_{2.5}$ NAAQS benefits analysis provides an indication of the sensitivity of our results to the use of alternative concentration response functions, including those derived from the PM expert elicitation study.

The costs of this rulemaking are estimated to be $373 million (2008$) in the fifth year, and the monetized $PM_{2.5}$ co-benefits are estimated at $940 million to $2.3 billion (2008$, 3 percent discount rate) for that same year. The co-benefits at a 7 percent discount rate are $850 million to $2.1 billion (2008$). Thus, net benefits of this rulemaking are estimated at $570 million to $1.9 billion (2008$, 3 percent discount rate) and $480 million to $1.7 billion (2008$, 7 percent discount rate). Using alternate relationships between $PM_{2.5}$ and premature mortality supplied by experts, higher and lower co-benefits estimates are plausible, but most of the expert-based estimates fall between the two estimates we present above. EPA believes that the co-benefits are likely to exceed the costs even when taking into account the uncertainties in the cost and benefit estimates.

For more information on the benefits analysis, please refer to the RIA for this rulemaking, which is available in the docket.

D. What are the economic impacts?

The economic impact analysis (EIA) that is included in the RIA indicates that prices of affected output from the affected industries will increase as a result of the rule, but the changes will be small. The largest impacts are on the electric power generating industry because it bears more costs from the rule than any other affected industry (nearly 80 percent of the total annualized costs). For all affected industries, annualized compliance costs are 0.6 percent or less on average of sales for firms. Thus, output prices will not increase more than 0.6 percent for consumers and producers affected by this rule.

Based on the estimated compliance costs associated with this rule and the predicted changes in prices and output in affected markets, the estimated social costs are $373 million (2008 dollars), which is the same as the estimated compliance costs.

For more information on the benefits analysis, please refer to the RIA for this rulemaking, which is available in the docket.

E. What are the non-air health, environmental and energy impacts?

EPA does not anticipate any significant non-air health, environmental or energy impacts as a result of the final rule.

VII. Statutory and Executive Order Reviews

A. 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 or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or Tribal governments or communities.

Accordingly, EPA submitted this action to the Office of Management and Budget (OMB) for review under EO 12866 and any changes made in response to OMB recommendations have been documented in the docket for this action.

B. Paperwork Reduction Act

The information collection requirements in the final rule have been submitted for approval to OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* The information collection requirements are not enforceable until OMB approves them.

The information collection activities in this final rule include performance testing for non-emergency engines larger than 100 HP, one-time notifications and periodic reports, recording information, monitoring and the maintenance of records. The information generated by these activities will be used by EPA to ensure that affected facilities comply with the emission limits and other requirements. Records and reports are necessary to enable EPA or States to identify affected facilities that may not be in compliance with the requirements. Based on reported information, EPA will decide which units and what records or processes should be inspected. The amendments do not require any notifications or reports beyond those required by the General Provisions. The recordkeeping requirements require only the specific information needed to determine compliance. These recordkeeping and reporting requirements are specifically authorized by CAA section 114 (42 U.S.C. 7414). All information submitted to EPA for which a claim of confidentiality is made will be safeguarded according to EPA policies in 40 CFR part 2, subpart B, Confidentiality of Business Information.

The annual monitoring, reporting, and recordkeeping burden for this collection (averaged over the first 3 years after sources must comply) is estimated to be 2,232,379 labor hours per year at a total annual cost of $4,200,492. This estimate includes notifications of compliance and performance tests, engine performance testing, semiannual compliance reports, continuous monitoring, and recordkeeping. The total capital costs associated with the requirements over the 3-year period of the ICR is estimated to be $20,444,316 per year. There are no additional operation and maintenance costs for the requirements over the 3-year period of the ICR. Burden is defined at 5 CFR 1320.3(b).

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

The Regulatory Flexibility Act (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 (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. The companies owning facilities with affected RICE can be grouped into small and large categories using Small Business Administration (SBA) general size standard definitions. Size standards are based on industry classification codes (*i.e.,* North American Industrial Classification System, or NAICS) that each company uses to identify the industry or industries in which they operate in. The SBA defines a small business in terms of the maximum employment, annual sales, or annual energy-generating capacity (for electricity generating units—EGUs) of the owning entity. These thresholds vary by industry and are evaluated based on the primary industry classification of the affected companies. In cases where companies are classified by multiple NAICS codes, the most conservative SBA definition (*i.e.,* the NAICS code with the highest employee or revenue size standard) was used.

As mentioned earlier in this preamble, facilities across several industries use affected RICE; therefore, a number of size standards are utilized in this analysis. For the 9 industries identified at the 6-digit NAICS code represented in this analysis, the employment size standard varies from 500 to 1,000 employees. The annual sales standard is as low as 0.75 million dollars and as high as 34 million dollars. In addition, for the electric power generation industry, the small business size standard is an ultimate parent entity defined as having a total electric output of 4 million megawatt-hours (MW-hr) in the previous fiscal year. The specific SBA size standard is identified for each affected industry within the industry profile to support this economic analysis.

After considering the economic impacts of this final rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. This certification is based on the economic impact of this final action to all affected small entities across all industries affected. We estimate that all small entities will have annualized costs of less than 1 percent of their sales in all industries except NAICS 2211 (electric power generation, transmission, and distribution) and NAICS 111 (Crop and Animal Production). For these industries, the number of small entities having annualized costs of greater than 1 percent of their sales is less than 5 percent. Hence, we conclude that there is no significant economic impact on a substantial number of small entities (SISNOSE) for this rule.

For more information on the small entity impacts associated with the final rule, please refer to the Economic Impact and Small Business Analyses in the public docket. These analyses can be found in the Regulatory Impact Analysis for this final rule.

Although the final rule would not have a significant economic impact on a substantial number of small entities, EPA nonetheless tried to reduce the impact of the final rule on small entities. When developing the revised standards, EPA took special steps to ensure that the burdens imposed on small entities were minimal. EPA conducted several meetings with industry trade associations to discuss regulatory options and the corresponding burden on industry, such as recordkeeping and reporting. In this rule, we are applying the minimum level of control (*i.e.,* the MACT floor) to small engines and emergency engines located at major HAP sources and the minimum level of testing, monitoring, recordkeeping, and reporting to affected RICE sources, both major and area, allowed by the CAA. Other alternatives considered that provided more than the minimum level of control were deemed as not technically feasible or cost-effective for EPA to implement for small engines and emergency engines as explained earlier in the preamble.

D. Unfunded Mandates Reform Act of 1995

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), 2 U.S.C. 1531–1538, requires Federal agencies, unless otherwise prohibited by law, to assess the effects of their regulatory actions on State, local, and Tribal governments and the private sector. This final rule contains 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 1 year. Accordingly, EPA has prepared under section 202 of the UMRA a written statement which is summarized below.

As discussed previously in this preamble, the statutory authority for the final rule is section 112 of the CAA. Section 112(b) lists the 189 chemicals, compounds, or groups of chemicals deemed by Congress to be HAP. These toxic air pollutants are to be regulated by NESHAP. Section 112(d) of the CAA directs us to develop NESHAP based on MACT, which require existing and new major sources to control emissions of HAP. EPA is required to address HAP emissions from stationary RICE located at area sources under section 112(k) of the CAA, based on criteria set forth by EPA in the Urban Air Toxics Strategy previously discussed in this preamble. These NESHAP apply to existing stationary CI RICE less than or equal to 500 HP located at major sources of HAP emissions, existing non-emergency stationary CI RICE greater than 300 HP, and existing stationary CI RICE located at area sources of HAP emissions.

In compliance with section 205(a), we identified and considered a reasonable number of regulatory alternatives. EPA carefully examined the regulatory alternatives, and selected the lowest cost/least burdensome alternative that EPA deems adequate to achieve the statutory requirements of Clean Air Act section 112 and effectively reduce emissions of HAP.

1. Social Costs and Benefits

The RIA prepared for the final rule, including the Agency's assessment of costs and benefits, is detailed in the "Regulatory Impact Analysis for the Final RICE NESHAP" in the docket. Based on estimated compliance costs on all sources associated with the final rule and the predicted change in prices and production in the affected industries assuming passthrough of costs to affected consumers, the estimated social costs of the final rule are $373 million (2008 dollars). It is estimated that by 2013, HAP will be reduced by 1,010 tpy

due to reductions in formaldehyde, acetaldehyde, acrolein, methanol and other HAP from existing stationary RICE. Formaldehyde and acetaldehyde have been classified as "probable human carcinogens." Acrolein and the other HAP are not considered carcinogenic, but produce several other toxic effects. The final rule is expected to reduce emissions of CO by more than 14,000 tpy in the year 2013. Reductions of PM are estimated at 2,800 tpy in the year 2013. Emissions of VOC are estimated to be reduced by 27,000 tpy in the year 2013. Exposure to CO can affect the cardiovascular system and the central nervous system.

The total monetized benefits of the final rule range from $940 million to $2.3 billion (2008 dollars).

2. Future and Disproportionate Costs

The UMRA requires that we estimate, where accurate estimation is reasonably feasible, future compliance costs imposed by the rule and any disproportionate budgetary effects. Our estimates of the future compliance costs of the final rule are discussed previously in this preamble. We do not believe that there will be any disproportionate budgetary effects of the final rule on any particular areas of the country, State or local governments, types of communities (*e.g.*, urban, rural), or particular industry segments.

3. Effects on the National Economy

The UMRA requires that we estimate the effect of the final rule on the national economy. To the extent feasible, we must estimate the effect on productivity, economic growth, full employment, creation of productive jobs, and international competitiveness of the U.S. goods and services if we determine that accurate estimates are reasonably feasible and that such effect is relevant and material. The nationwide economic impact of the final rule is presented in the "Regulatory Impact Analysis for RICE NESHAP" in the docket. This analysis provides estimates of the effect of the final rule on most of the categories mentioned above. The results of the economic impact analysis were summarized previously in this preamble. In addition, we have determined that the final rule contains no regulatory requirements that might significantly or uniquely affect small governments. Therefore, this rule is not subject to the requirements of section 203 of the UMRA.

E. Executive Order 13132: Federalism

This final rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. The final rule primarily affects private industry, and does not impose significant economic costs on State or local governments. Thus, Executive Order 13132 does not apply to the final rule.

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

This action does not have Tribal implications, as specified in Executive Order 13175 (65 FR 67249, November 9, 2000). It will not have substantial direct effects on Tribal governments, on the relationship between the Federal government and Indian Tribes, or on the distribution of power and responsibilities between the Federal government and Indian Tribes, as specified in Executive Order 13175. Thus, Executive Order 13175 does not apply to the final rule.

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

EPA interprets Executive Order 13045 (62 FR 19885, April 23, 1997) as applying to those regulatory actions that concern health or safety risks, such that the analysis required under section 5–501 of the Order has the potential to influence the regulation. This action is not subject to Executive Order 13045 because it is based solely on technology performance.

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

This final rule is not a "significant energy action" as defined in Executive Order 13211 (66 FR 28355, May 22, 2001) because it is not likely to have a significant adverse impact on the supply, distribution, or use of energy. EPA has prepared an analysis of energy impacts that explains this conclusion as follows below.

With respect to energy supply and prices, our analysis suggests that at the industry level, the annualized costs represent a very small fraction of revenue (generally less than 0.6 percent). As a result, we can conclude supply and price impacts on affected energy producers and consumers should be small.

To enhance understanding regarding the regulation's influence on energy consumption, we examined publicly available data describing energy consumption for the electric power sector. The electric power sector is expected to incur about 80 percent of the $373 million in compliance costs associated with the final rule, and is the industry expected to incur the greatest share of the costs relative to other affected industries. The Annual Energy Outlook 2010 (EIA, 2009) provides energy consumption data. Since this final rule only affects diesel-fired RICE, our analysis focuses on impacts of consumption of these fuels. As shown in Table 5 of this preamble, the electric power sector accounts for less than 0.5 percent of the U.S. total liquid fuels (which includes diesel fuel). As a result, any energy consumption changes attributable to the final rule should not significantly influence the supply, distribution, or use of energy nationwide.

TABLE 5—U.S. ELECTRIC POWER[a] SECTOR ENERGY CONSUMPTION

[Quadrillion BTUs]: 2013

	Quantity	Share of total energy use (percent)
Distillate fuel oil	0.12	0.1
Residual fuel oil	0.34	0.3
Liquid fuels subtotal	0.45	0.5
Natural gas	5.17	5.1
Steam coal	20.69	20.6
Nuclear power	8.59	8.5
Renewable energy[b]	6.06	6.0

TABLE 5—U.S. ELECTRIC POWER[a] SECTOR ENERGY CONSUMPTION—Continued

[Quadrillion BTUs]: 2013

	Quantity	Share of total energy use (percent)
Electricity Imports	0.09	0.1
Total Electric Power Energy Consumption[c]	41.18	40.9
Delivered Energy Use	72.41	72.0
Total Energy Use	100.59	100.0

[a] Includes consumption of energy by electricity-only and combined heat and power plants whose primary business is to sell electricity, or electricity and heat, to the public. Includes small power producers and exempt wholesale generators.
[b] Includes conventional hydroelectric, geothermal, wood and wood waste, biogenic municipal solid waste, other biomass, petroleum coke, wind, photovoltaic and solar thermal sources. Excludes net electricity imports.
[c] Includes non-biogenic municipal waste not included above.
Source: U.S. Energy Information Administration. 2009. Supplemental Tables to the Annual Energy Outlook 2010.

I. National Technology Transfer and Advancement Act

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

This final rulemaking does not involve technical standards. Therefore, EPA did not consider the use of any voluntary consensus standards.

Under § 63.7(f) and § 63.8(f) of Subpart A of the General Provisions, a source may apply to EPA for permission to use alternative test methods or alternative monitoring requirements in place of any required or referenced testing methods, performance specifications, or procedures.

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

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

EPA has determined that this final rule will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it 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. This rule is a nationwide standard that reduces air toxics emissions from existing stationary CI engines, thus decreasing the amount of such emissions to which all affected populations are exposed.

K. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this final rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is a "major rule" as defined by 5 U.S.C. 804(2). The final rule will be effective on May 3, 2010.

List of Subjects in 40 CFR Part 63

Administrative practice and procedure, Air pollution control, Hazardous substances, Incorporation by reference, Intergovernmental relations, Reporting and recordkeeping requirements.

Dated: February 17, 2010.

Lisa P. Jackson,

Administrator.

■ For the reasons stated in the preamble, title 40, chapter I, part 63 of the Code of Federal Regulations is amended as follows:

PART 63—[AMENDED]

■ 1. The authority citation for part 63 continues to read as follows:

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

Subpart A—[Amended]

■ 2. Section 63.6590 is amended by revising paragraphs (b)(1) and (3) to read as follows:

§ 63.6590 What parts of my plant does this subpart cover?

* * * * *

(b) * * *

(1) An affected source which meets either of the criteria in paragraph (b)(1)(i) through (ii) of this section does not have to meet the requirements of this subpart and of subpart A of this part except for the initial notification requirements of § 63.6645(f).

* * * * *

(3) A stationary RICE which is an existing spark ignition 4 stroke rich burn (4SRB) stationary RICE located at an area source of HAP emissions; an existing spark ignition 4SRB stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions; an existing spark ignition 2 stroke lean burn (2SLB) stationary RICE; an existing spark ignition 4 stroke lean burn (4SLB) stationary RICE; an existing compression ignition emergency stationary RICE with a site rating of more than 500 brake HP located at a

major source of HAP emissions; an existing spark ignition emergency or limited use stationary RICE; an existing limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions; an existing stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis; or an existing stationary residential, commercial, or institutional emergency stationary RICE located at an area source of HAP emissions, does not have to meet the requirements of this subpart and of subpart A of this part. No initial notification is necessary.

* * * * *

■ 3. Section 63.6595 is amended by revising paragraph (a)(1) to read as follows:

§ 63.6595 When do I have to comply with this subpart?

(a) * * *

(1) If you have an existing stationary RICE, excluding existing non-emergency CI stationary RICE, with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than June 15, 2007. If you have an existing non-emergency CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, an existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary CI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than May 3, 2013.

* * * * *

■ 4. Section 63.6600 is amended by adding an introductory paragraph, revising paragraph (c) and adding paragraph (d) to read as follows:

§ 63.6600 What emission limitations and operating limitations must I meet if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in § 63.6620 and Table 4 to this subpart.

* * * * *

(c) If you own or operate any of the following stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the emission limitations in Tables 1a, 2a, 2c, and 2d to this subpart or operating limitations in Tables 1b and 2b to this subpart: an existing 2SLB stationary RICE; an existing 4SLB stationary RICE; a stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis; an emergency stationary RICE; or a limited use stationary RICE.

(d) If you own or operate an existing non-emergency stationary CI RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2c to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

■ 5. Section 63.6601 is amended by adding a sentence at the beginning of the section to read as follows:

§ 63.6601 What emission limitations must I meet if I own or operate a 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP and less than 500 brake HP located at a major source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in § 63.6620 and Table 4 to this subpart.

* * *

■ 6. Section 63.6602 is added to read as follows:

§ 63.6602 What emission limitations must I meet if I own or operate an existing stationary CI RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions?

If you own or operate an existing stationary CI RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2c to this subpart which apply to you. Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in § 63.6620 and Table 4 to this subpart.

■ 7. Section 63.6603 is added to read as follows:

§ 63.6603 What emission limitations and operating limitations must I meet if I own or operate an existing stationary CI RICE located at an area source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in § 63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing stationary CI RICE located at an area source of HAP emissions, you must comply with the requirements in Table 2d to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

(b) If you own or operate an existing stationary non-emergency CI RICE greater than 300 HP located at area sources in areas of Alaska not accessible by the Federal Aid Highway System (FAHS) you do not have to meet the numerical CO emission limitations specified in Table 2d to this subpart. Existing stationary non-emergency CI RICE greater than 300 HP located at area sources in areas of Alaska not accessible by the FAHS must meet the management practices that are shown for stationary non-emergency CI RICE less than or equal to 300 HP in Table 2d to this subpart.

■ 8. Section 63.6604 is added to read as follows:

§ 63.6604 What fuel requirements must I meet if I own or operate an existing stationary CI RICE?

If you own or operate an existing non-emergency CI stationary RICE with a site rating of more than 300 brake HP with a displacement of less than 30 liters per cylinder that uses diesel fuel, you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel. Existing non-emergency CI stationary RICE located in Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, or at area sources in areas of Alaska not accessible by the FAHS are exempt from the requirements of this section.

■ 9. Section 63.6605 is amended by revising paragraphs (a) and (b) to read as follows:

§ 63.6605 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limitations and operating limitations in this subpart that apply to you at all times.

(b) At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to

reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

* * * * *

■ 10. Section 63.6612 is added to read as follows:

§ 63.6612 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions?

If you own or operate an existing CI stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary CI RICE located at an area source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct any initial performance test or other initial compliance demonstration according to Tables 4 and 5 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in § 63.6595 and according to the provisions in § 63.7(a)(2).

(b) An owner or operator is not required to conduct an initial performance test on a unit for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (b)(1) through (4) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

■ 11. Section 63.6620 is amended by revising paragraphs (b) and (c) to read as follows:

§ 63.6620 What performance tests and other procedures must I use?

* * * * *

(b) Each performance test must be conducted according to the requirements that this subpart specifies in Table 4 to this subpart. If you own or operate a non-operational stationary RICE that is subject to performance testing, you do not need to start up the engine solely to conduct the performance test. Owners and operators of a non-operational engine can conduct the performance test when the engine is started up again.

(c) [Reserved]

* * * * *

12. Section 63.6625 is amended by revising the section heading and adding new paragraphs (e) through (i) to read as follows:

§ 63.6625 What are my monitoring, installation, collection, operation, and maintenance requirements?

* * * * *

(e) If you own or operate an existing stationary RICE with a site rating of less than 100 brake HP located at a major source of HAP emissions, an existing stationary emergency RICE, or an existing stationary RICE located at an area source of HAP emissions not subject to any numerical emission standards shown in Table 2d to this subpart, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

(f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed.

(g) If you own or operate an existing non-emergency CI engine greater than or equal to 300 HP that is not equipped with a closed crankcase ventilation system, you must comply with either paragraph (g)(1) or paragraph (g)(2) of this section. Owners and operators must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements. Existing CI engines located at area sources in areas of Alaska not accessible by the FAHS do not have to meet the requirements of paragraph (g) in this section.

(1) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or

(2) Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates, and metals.

(h) If you operate a new or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.

(i) If you own or operate a stationary engine that is subject to the work, operation or management practices in items 1, 2, or 4 of Table 2c to this subpart or in items 1 or 4 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil before continuing to use the engine. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

■ 13. Section 63.6640 is amended by:

■ (a) Revising paragraph (a);

■ (b) Revising paragraph (b);

■ (c) Revising paragraph (d);

■ (d) Revising paragraph (e); and
■ (e) Adding paragraph (f) to read as follows:

§ 63.6640 How do I demonstrate continuous compliance with the emission limitations and operating limitations?

(a) You must demonstrate continuous compliance with each emission limitation and operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you according to methods specified in Table 6 to this subpart.

(b) You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in § 63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.

* * * * *

(d) For new, reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period) are not violations. Rebuilt stationary RICE means a stationary RICE that has been rebuilt as that term is defined in 40 CFR 94.11(a).

(e) You must also report each instance in which you did not meet the requirements in Table 8 to this subpart that apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing emergency stationary RICE, an existing limited use stationary RICE, or an existing stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency stationary RICE, or a new or reconstructed limited use stationary RICE.

(f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a new emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that was installed on or after June 12, 2006, or an existing emergency stationary RICE located at an area source of HAP emissions, you must operate the engine according to the conditions described in paragraphs (f)(1) through (4) of this section.

(1) For owners and operators of emergency engines, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as permitted in this section, is prohibited.

(2) There is no time limit on the use of emergency stationary RICE in emergency situations.

(3) You may operate your emergency stationary RICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year.

(4) You may operate your emergency stationary RICE up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity; except that owners and operators may operate the emergency engine for a maximum of 15 hours per year as part of a demand response program if the regional transmission organization or equivalent balancing authority and transmission operator has determined there are emergency conditions that could lead to a potential electrical blackout, such as unusually low frequency, equipment overload, capacity or energy deficiency, or unacceptable voltage level. The engine may not be operated for more than 30 minutes prior to the time when the emergency condition is expected to occur, and the engine operation must be terminated immediately after the facility is notified that the emergency condition is no longer imminent. The 15 hours per year of demand response operation are counted as part of the 50 hours of operation per year provided for non-emergency situations. The supply of emergency power to another entity or entities pursuant to financial arrangement is not limited by this paragraph (f)(4), as long as the power provided by the financial arrangement is limited to emergency power.

■ 14. Section 63.6645 is amended by revising paragraph (a) to read as follows:

§ 63.6645 What notifications must I submit and when?

(a) You must submit all of the notifications in §§ 63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply to you by the dates specified if you own or operate any of the following;

(1) An existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

(2) An existing stationary CI RICE located at an area source of HAP emissions.

(3) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(4) A new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 HP located at a major source of HAP emissions.

(5) This requirement does not apply if you own or operate an existing stationary CI RICE less than 100 HP, an existing stationary emergency CI RICE, or an existing stationary CI RICE that is not subject to any numerical emission standards.

* * * * *

■ 15. Section 63.6650 is amended by revising paragraphs (b) and (c)(4) to read as follows:

§ 63.6650 What reports must I submit and when?

* * * * *

(b) Unless the Administrator has approved a different schedule for submission of reports under § 63.10(a), you must submit each report by the date in Table 7 of this subpart and according to the requirements in paragraphs (b)(1) through (b)(9) of this section.

(1) For semiannual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in § 63.6595 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in § 63.6595.

(2) For semiannual Compliance reports, the first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in § 63.6595.

(3) For semiannual Compliance reports, each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) For semiannual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(5) For each stationary RICE that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6 (a)(3)(iii)(A), you may submit the first and subsequent Compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (b)(4) of this section.

(6) For annual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in § 63.6595 and ending on December 31.

(7) For annual Compliance reports, the first Compliance report must be postmarked or delivered no later than January 31 following the end of the first calendar year after the compliance date that is specified for your affected source in § 63.6595.

(8) For annual Compliance reports, each subsequent Compliance report must cover the annual reporting period from January 1 through December 31.

(9) For annual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than January 31.

(c) * * *

(4) If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with § 63.6605(b), including actions taken to correct a malfunction.

* * * * *

■ 16. Section 63.6655 is amended by:
■ (a) Revising paragraph (a) introductory text;
■ (b) Revising paragraph (a)(2);
■ (c) Adding paragraph (a)(4);
■ (d) Adding paragraph (a)(5);
■ (e) Adding paragraph (e); and
■ (f) Adding paragraph (f) to read as follows:

§ 63.6655 What records must I keep?

* * * * *

(a) If you must comply with the emission and operating limitations, you must keep the records described in paragraphs (a)(1) through (a)(5), (b)(1) through (b)(3) and (c) of this section.

(1) * * *

(2) Records of the occurrence and duration of each malfunction of operation (*i.e.*, process equipment) or the air pollution control and monitoring equipment.

(3) * * *

(4) Records of all required maintenance performed on the air pollution control and monitoring equipment.

(5) Records of actions taken during periods of malfunction to minimize emissions in accordance with § 63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

* * * * *

(e) You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan if you own or operate any of the following stationary RICE;

(1) An existing stationary CI RICE with a site rating of less than 100 brake HP located at a major source of HAP emissions.

(2) An existing stationary emergency CI RICE.

(3) An existing stationary CI RICE located at an area source of HAP emissions subject to management practices as shown in Table 2d to this subpart.

(f) If you own or operate any of the stationary RICE in paragraphs (f)(1) or (2) of this section, you must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engines are used for demand response operation, the owner or operator must keep records of the notification of the emergency situation, and the time the engine was operated as part of demand response.

(1) An existing emergency stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions that does not meet the standards applicable to non-emergency engines.

(2) An existing emergency stationary CI RICE located at an area source of HAP emissions that does not meet the standards applicable to non-emergency engines.

■ 17. Section 63.6660 is amended by revising paragraph (c) to read as follows:

§ 63.6660 In what form and how long must I keep my records?

* * * * *

(c) You must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to § 63.10(b)(1).

■ 18. Section 63.6665 is revised to read as follows:

§ 63.6665 What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§ 63.1 through 63.15 apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal

to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with any of the requirements of the General Provisions specified in Table 8: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing stationary RICE that combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, an existing emergency stationary RICE, or an existing limited use stationary RICE. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in the General Provisions specified in Table 8 except for the initial notification requirements: A new stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new emergency stationary RICE, or a new limited use stationary RICE.

■ 19. Section 63.6675 is amended:

■ (a) By revising the definition of Diesel fuel;

■ (b) By revising the definition of Emergency stationary RICE;

■ (c) By adding the definition of Black start engine;

■ (d) By adding the definition of Engine startup; and

■ (e) By adding the definition of Residential/commercial/institutional emergency stationary RICE, in alphabetical order, to read as follows:

§ 63.6675 What definitions apply to this subpart?

* * * * *

Black start engine means an engine whose only purpose is to start up a combustion turbine.

* * * * *

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is fuel oil number 2. Diesel fuel also includes any non-distillate fuel with comparable physical and chemical properties (*e.g.* biodiesel) that is suitable for use in compression ignition engines.

* * * * *

Emergency stationary RICE means any stationary internal combustion engine whose operation is limited to emergency situations and required testing and maintenance. Examples include stationary ICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary ICE used to pump water in the case of fire or flood, *etc.* Stationary CI ICE used for peak shaving are not considered emergency stationary ICE. Stationary CI ICE used to supply power to an electric grid or that supply non-emergency power as part of a financial arrangement with another entity are not considered to be emergency engines, except as permitted under § 63.6640(f). Emergency stationary RICE with a site-rating of more than 500 brake HP located at a major source of HAP emissions that were installed prior to June 12, 2006, may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by the manufacturer, the vendor, or the insurance company associated with the engine. Required testing of such units should be minimized, but there is no time limit on the use of emergency stationary RICE in emergency situations and for routine testing and maintenance. Emergency stationary RICE with a site-rating of more than 500 brake HP located at a major source of HAP emissions that were installed prior to June 12, 2006, may also operate an additional 50 hours per year in non-emergency situations. All other emergency stationary RICE must comply with the requirements specified in § 63.6640(f).

Engine startup means the time from initial start until applied load and engine and associated equipment reaches steady state or normal operation. For stationary engine with catalytic controls, engine startup means the time from initial start until applied load and engine and associated equipment, including the catalyst, reaches steady state or normal operation.

* * * * *

Residential/commercial/institutional emergency stationary RICE means an emergency stationary RICE used in residential establishments such as homes or residences, commercial establishments such as office buildings, hotels, or stores, or institutional establishments such as medical centers, research centers, and institutions of higher education.

* * * * *

■ 20. Table 1a to Subpart ZZZZ of Part 63 is revised to read as follows:

Table 1a to Subpart ZZZZ of Part 63. Emission Limitations for Existing, New, and Reconstructed Spark Ignition, 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions

As stated in §§ 63.6600 and 63.6640, you must comply with the following emission limitations for existing, new and reconstructed 4SRB stationary RICE at 100 percent load plus or minus 10 percent:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 4SRB stationary RICE	a. Reduce formaldehyde emissions by 76 percent or more. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may reduce formaldehyde emissions by 75 percent or more until June 15, 2007 or. b. Limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O_2.	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[1]

[1] Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

■ 21. Table 2a to Subpart ZZZZ of Part 63 is revised to read as follows:

Table 2a to Subpart ZZZZ of Part 63. Emission Limitations for New and Reconstructed 2SLB and Compression Ignition Stationary RICE >500 HP and New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions

As stated in §§ 63.6600 and 63.6640, you must comply with the following emission limitations for new and reconstructed lean burn and new and reconstructed compression ignition stationary RICE at 100 percent load plus or minus 10 percent:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 2SLB stationary RICE	a. Reduce CO emissions by 58 percent or more; or b. Limit concentration of formaldehyde in the stationary RICE exhaust to 12 ppmvd or less at 15 percent O_2. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may limit concentration of formaldehyde to 17 ppmvd or less at 15 percent O_2 until June 15, 2007.	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[1]
2. 4SLB stationary RICE	a. Reduce CO emissions by 93 percent or more; or b. Limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15 percent O_2.	
3. CI stationary RICE	a. Reduce CO emissions by 70 percent or more; or b. Limit concentration of formaldehyde in the stationary RICE exhaust to 580 ppbvd or less at 15 percent O_2.	

[1] Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

■ 22. Table 2b to Subpart ZZZZ of Part 63 is revised to read as follows:

Table 2b to Subpart ZZZZ of Part 63. Operating Limitations for New and Reconstructed 2SLB and Compression Ignition Stationary RICE >500 HP Located at a Major Source of HAP Emissions, Existing Non-Emergency Compression Ignition Stationary RICE >500 HP, and New and Reconstructed 4SLB Burn Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions

As stated in §§ 63.6600, 63.6601, 63.6630, and 63.6640, you must comply with the following operating limitations for new and reconstructed lean burn and existing, new and reconstructed compression ignition stationary RICE:

For each . . .	You must meet the following operating limitation . . .
1. 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to reduce CO emissions and using an oxidation catalyst; or 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and using an oxidation catalyst.	a. Maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst that was measured during the initial performance test; and b. Maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.[1]
2. 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to reduce CO emissions and not using an oxidation catalyst; or 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and not using an oxidation catalyst.	Comply with any operating limitations approved by the Administrator.

[1] Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(g) for a different temperature range.

■ 23. Add Tables 2c and 2d to Subpart ZZZZ of Part 63 to read as follows:

Table 2c to Subpart ZZZZ of Part 63. Requirements for Existing Compression Ignition Stationary Rice Located at Major Sources of HAP Emissions

As stated in §§ 63.6600 and 63.6640, you must comply with the following requirements for existing compression ignition stationary RICE:

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
1. Emergency CI and black start CI.[1]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[2] b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3]	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[3]
2. Non-Emergency, non-black start CI < 100 HP.	a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first;[2] b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3]	
3. Non-Emergency, non-black start CI RICE 100≤HP≤300 HP.	Limit concentration of CO in the stationary RICE exhaust to 230 ppmvd or less at 15 percent O_2.	
4. Non-Emergency, non-black start CI 300<HP≤500.	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd or less at 15 percent O_2; or b. Reduce CO emissions by 70 percent or more.	
5. Non-Emergency, non-black start CI>500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd or less at 15 percent O_2; or b. Reduce CO emissions by 70 percent or more.	

[1] If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in Table 2c of this subpart, or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the work practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable.

[2] Sources have the option to utilize an oil analysis program as described in § 63.6625(i) in order to extend the specified oil change requirement in Table 2c of this subpart.

[3] Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

Table 2d to Subpart ZZZZ of Part 63. Requirements for Existing Compression Ignition Stationary RICE Located at Area Sources of HAP Emissions

As stated in §§ 63.6600 and 63.6640, you must comply with the following emission and operating limitations for existing compression ignition stationary RICE:

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
1. Non-Emergency, non-black start CI ≤ 300 HP.	a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first;[1] b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
2. Non-Emergency, non-black start CI 300<HP≤500.	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd at 15 percent O_2; or b. Reduce CO emissions by 70 percent or more.	
3. Non-Emergency, non-black start CI > 500 HP.	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O_2; or b. Reduce CO emissions by 70 percent or more.	
4. Emergency CI and black start CI.[2]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[1] b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	

[1] Sources have the option to utilize an oil analysis program as described in § 63.6625(i) in order to extend the specified oil change requirement in Table 2d of this subpart.

[2] If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable.

■ 24. Table 3 to Subpart ZZZZ of Part 63 is revised to read as follows:

Table 3 to Subpart ZZZZ of Part 63. Subsequent Performance Tests

As stated in §§ 63.6615 and 63.6620, you must comply with the following subsequent performance test requirements:

For each . . .	Complying with the requirement to . . .	You must . . .
1. 2SLB and 4SLB stationary RICE with a brake horsepower >500 located at major sources and new or reconstructed CI stationary RICE with a brake horsepower >500 located at major sources.	Reduce CO emissions and not using a CEMS	Conduct subsequent performance tests semiannually.[1]
2. 4SRB stationary RICE with a brake horsepower ≥5,000 located at major sources.	Reduce formaldehyde emissions	Conduct subsequent performance tests semiannually.[1]
3. Stationary RICE with a brake horsepower >500 located at major sources.	Limit the concentration of formaldehyde in the stationary RICE exhaust.	Conduct subsequent performance tests semiannually.[1]
4. Existing non-emergency, non-black start CI stationary RICE with a brake horsepower >500 that are not limited use stationary RICE.	Limit or reduce CO or formaldehyde emissions.	Conduct subsequent performance tests every 8,760 hrs or 3 years, whichever comes first.
5. Existing non-emergency, non-black start CI stationary RICE with a brake horsepower >500 that are limited use stationary RICE.	.....	Conduct subsequent performance tests every 8,760 hrs or 5 years, whichever comes first.

[1] After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

■ 25. Table 4 to Subpart ZZZZ of Part 63 is revised to read as follows:

Table 4 to Subpart ZZZZ of Part 63. Requirements for Performance Tests

As stated in §§ 63.6610, 63.6611, 63.6612, 63.6620, and 63.6640, you must comply with the following requirements for performance tests for stationary RICE for existing sources:

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
1. 2SLB, 4SLB, and CI stationary RICE.	a. Reduce CO emissions.	i. Measure the O_2 at the inlet and outlet of the control device; and	(1) Portable CO and O_2 analyzer.	(a) Using ASTM D6522–00 (2005)[a] (incorporated by reference, *see* § 63.14). Measurements to determine O_2 must be made at the same time as the measurements for CO concentration.

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
		ii. Measure the CO at the inlet and the outlet of the control device.	(1) Portable CO and O_2 analyzer.	(a) Using ASTM D6522–00 (2005) [a,b] (incorporated by reference, *see* § 63.14) or Method 10 of 40 CFR appendix A. The CO concentration must be at 15 percent O_2, dry basis.
2. 4SRB stationary RICE.	a. Reduce formaldehyde emissions.	i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A § 63.7(d)(1)(i).	(a) Sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O_2 at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522–00 (2005).	(a) Measurements to determine O_2 concentration must be made at the same time as the measurements for formaldehyde concentration.
		iii. Measure moisture content at the inlet and outlet of the control device; and	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03.	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde concentration.
		iv. Measure formaldehyde at the inlet and the outlet of the control device.	(1) Method 320 of 40 CFR part 63, appendix A; or ASTM D6348–03 [c], provided in ASTM D6348–03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130..	(a) Formaldehyde concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
3. Stationary RICE	a. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust.	i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A § 63.7(d)(1)(i).	(a) If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O_2 concentration of the stationary RICE exhaust at the sampling port location; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522–00 (2005).	(a) Measurements to determine O_2 concentration must be made at the same time and location as the measurements for formaldehyde concentration.
		iii. Measure moisture content of the stationary RICE exhaust at the sampling port location; and	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03.	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde concentration.
		iv. Measure formaldehyde at the exhaust of the stationary RICE; or	(1) Method 320 of 40 CFR part 63, appendix A; or ASTM D6348–03 [c], provided in ASTM D6348–03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130.	(a) Formaldehyde concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
		v. Measure CO at the exhaust of the stationary RICE.	(1) Method 10 of 40 CFR part 60, appendix A, ASTM Method D6522–00 (2005) [a], Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03.	(a) CO concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour longer runs.

[a] You may also use Methods 3A and 10 as options to ASTM–D6522–00 (2005). You may obtain a copy of ASTM–D6522–00 (2005) from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106. ASTM–D6522–00 (2005) may be used to test both CI and SI stationary RICE.

[b] You may also use Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03.

[c] You may obtain a copy of ASTM–D6348–03 from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

■ 25. Table 5 to Subpart ZZZZ of Part 63 is revised to read as follows:

Table 5 to Subpart ZZZZ of Part 63. Initial Compliance With Emission Limitations and Operating Limitations

As stated in §§ 63.6612, 63.6625 and 63.6630, you must initially comply with the emission and operating limitations as required by the following:

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
1. 2SLB and 4SLB stationary RICE >500 HP located at a major source and new or reconstructed CI stationary RICE >500 HP located at a major source.	a. Reduce CO emissions and using oxidation catalyst, and using a CPMS.	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b); and iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
2. 2SLB and 4SLB stationary RICE >500 HP located at a major source and new or reconstructed CI stationary RICE >500 HP located at a major source.	a. Reduce CO emissions and not using oxidation catalyst.	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in § 63.6625(b); and iii. You have recorded the approved operating parameters (if any) during the initial performance test.
3. 2SLB and 4SLB stationary RICE >500 HP located at a major source and new or reconstructed CI stationary RICE >500 HP located at a major source.	a. Reduce CO emissions, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O_2 or CO_2 at both the inlet and outlet of the oxidation catalyst according to the requirements in § 63.6625(a); and ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and iii. The average reduction of CO calculated using § 63.6620 equals or exceeds the required percent reduction. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average percent reduction achieved during the 4-hour period.
4. 4SRB stationary RICE >500 HP located at a major source.	a. Reduce formaldehyde emissions and using NSCR.	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b); and iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
5. 4SRB stationary RICE >500 HP located at a major source.	a. Reduce formaldehyde emissions and not using NSCR.	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in § 63.6625(b); and iii. You have recorded the approved operating parameters (if any) during the initial performance test.
6. Stationary RICE >500 HP located at a major source.	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR.	i. The average formaldehyde concentration, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b); and

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
7. Stationary RICE >500 HP located at a major source.	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR.	i. The average formaldehyde concentration, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in § 63.6625(b); and iii. You have recorded the approved operating parameters (if any) during the initial performance test.
8. Existing stationary non-emergency RICE ≥100 HP located at a major source, existing non-emergency CI stationary RICE >500 HP, and existing stationary non-emergency RICE ≥100 HP located at an area source.	a. Reduce CO or formaldehyde emissions	i. The average reduction of emissions of CO or formaldehyde, as applicable determined from the initial performance test is equal to or greater than the required CO or formaldehyde, as applicable, percent reduction.
9. Existing stationary non-emergency RICE ≥100 HP located at a major source, existing non-emergency CI stationary RICE >500 HP, and existing stationary non-emergency RICE ≥100 HP located at an area source.	a. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust.	i. The average formaldehyde or CO concentration, as applicable, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde or CO emission limitation, as applicable.

■ 26. Table 6 to Subpart ZZZZ of Part 63 is revised to read as follows:

Table 6 to Subpart ZZZZ of Part 63. Continuous Compliance With Emission Limitations and Operating Limitations

As stated in § 63.6640, you must continuously comply with the emissions and operating limitations as required by the following:

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
1. 2SLB and 4SLB stationary RICE >500 HP located at a major source and CI stationary RICE >500 HP located at a major source.	a. Reduce CO emissions and using an oxidation catalyst, and using a CPMS.	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved [a]; and ii. Collecting the catalyst inlet temperature data according to § 63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
2. 2SLB and 4SLB stationary RICE >500 HP located at a major source and CI stationary RICE >500 HP located at a major source.	a. Reduce CO emissions and not using an oxidation catalyst, and using a CPMS.	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved [a]; and ii. Collecting the approved operating parameter (if any) data according to § 63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
3. 2SLB and 4SLB stationary RICE >500 HP located at a major source and CI stationary RICE >500 HP located at a major source.	a. Reduce CO emissions and using a CEMS	i. Collecting the monitoring data according to § 63.6625(a), reducing the measurements to 1-hour averages, calculating the percent reduction of CO emissions according to § 63.6620; and ii. Demonstrating that the catalyst achieves the required percent reduction of CO emissions over the 4-hour averaging period; and

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		iii. Conducting an annual RATA of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B, as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.
4. 4SRB stationary RICE >500 HP located at a major source.	a. Reduce formaldehyde emissions and using NSCR.	i. Collecting the catalyst inlet temperature data according to § 63.6625(b); and ii. reducing these data to 4-hour rolling averages; and iii. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and iv. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
5. 4SRB stationary RICE >500 HP located at a major source.	a. Reduce formaldehyde emissions and not using NSCR.	i. Collecting the approved operating parameter (if any) data according to § 63.6625(b); and ii. Reducing these data to 4-hour rolling averages; and iii. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
6. 4SRB stationary RICE with a brake HP ≥5,000 located at a major source.	Reduce formaldehyde emissions	Conducting semiannual performance tests for formaldehyde to demonstrate that the required formaldehyde percent reduction is achieved.[a]
7. Stationary RICE >500 HP located at a major source.	Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR.	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit[a]; and ii. Collecting the catalyst inlet temperature data according to § 63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
8. Stationary RICE >500 HP located at a major source.	Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR.	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit[a]; and ii. Collecting the approved operating parameter (if any) data according to § 63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
9. Existing stationary CI RICE not subject to any numerical emission limitations.	a. Work or Management practices	i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
10. Existing stationary RICE >500 HP that are not limited use stationary RICE, except 4SRB >500 HP located at major sources.	a. Reduce CO or formaldehyde emissions; or b. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust.	i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit.
11. Existing limited use stationary RICE >500 HP that are limited use CI stationary RICE.	a. Reduce CO or formaldehyde emissions; or b. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust.	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit.

[a] After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

■ 27. Table 7 to Subpart ZZZZ of Part 63 is revised to read as follows:

Table 7 to Subpart ZZZZ of Part 63. Requirements for Reports

As stated in § 63.6650, you must comply with the following requirements for reports:

You must submit a(n) . . .	The report must contain . . .	You must submit the report . . .
1. Compliance report	a. If there are no deviations from any emission limitations or operating limitations that apply to you, a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in § 63.8(c)(7), a statement that there were not periods during which the CMS was out-of-control during the reporting period; or	i. Semiannually according to the requirements in § 63.6650(b)(1)–(5) for engines that are not limited use stationary CI RICE subject to numerical emission limitations; and ii. Annually according to the requirements in § 63.6650(b)(6)–(9) for engines that are limited use stationary CI RICE subject to numerical emission limitations.
	b. If you had a deviation from any emission limitation or operating limitation during the reporting period, the information in § 63.6650(d). If there were periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in § 63.8(c)(7), the information in § 63.6650(e); or	i. Semiannually according to the requirements in § 63.6650(b).
	c. If you had a malfunction during the reporting period, the information in § 63.6650(c)(4).	i. Semiannually according to the requirements in § 63.6650(b).
2. Report	a. The fuel flow rate of each fuel and the heating values that were used in your calculations, and you must demonstrate that the percentage of heat input provided by landfill gas or digester gas, is equivalent to 10 percent or more of the gross heat input on an annual basis; and	i. Annually, according to the requirements in § 63.6650.
	b. The operating limits provided in your Federally enforceable permit, and any deviations from these limits; and	i. *See* item 2.a.i.
	c. Any problems or errors suspected with the meters.	i. *See* item 2.a.i.

■ 28. Table 8 to Subpart ZZZZ of Part 63 is revised to read as follows:

Table 8 to Subpart ZZZZ of Part 63. Applicability of General Provisions to Subpart ZZZZ.

As stated in § 63.6665, you must comply with the following applicable general provisions.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§ 63.1	General applicability of the General Provisions.	Yes.	
§ 63.2	Definitions	Yes	Additional terms defined in § 63.6675.
§ 63.3	Units and abbreviations	Yes.	
§ 63.4	Prohibited activities and circumvention	Yes.	
§ 63.5	Construction and reconstruction	Yes.	
§ 63.6(a)	Applicability	Yes.	
§ 63.6(b)(1)–(4)	Compliance dates for new and reconstructed sources.	Yes.	
§ 63.6(b)(5)	Notification	Yes.	
§ 63.6(b)(6)	[Reserved]		
§ 63.6(b)(7)	Compliance dates for new and reconstructed area sources that become major sources.	Yes.	
§ 63.6(c)(1)–(2)	Compliance dates for existing sources	Yes.	
§ 63.6(c)(3)–(4)	[Reserved]		
§ 63.6(c)(5)	Compliance dates for existing area sources that become major sources.	Yes.	
§ 63.6(d)	[Reserved]		
§ 63.6(e)	Operation and maintenance	No.	
§ 63.6(f)(1)	Applicability of standards	No.	
§ 63.6(f)(2)	Methods for determining compliance	Yes.	
§ 63.6(f)(3)	Finding of compliance	Yes.	
§ 63.6(g)(1)–(3)	Use of alternate standard	Yes.	
§ 63.6(h)	Opacity and visible emission standards	No	Subpart ZZZZ does not contain opacity or visible emission standards.
§ 63.6(i)	Compliance extension procedures and criteria.	Yes.	
§ 63.6(j)	Presidential compliance exemption	Yes.	
§ 63.7(a)(1)–(2)	Performance test dates	Yes	Subpart ZZZZ contains performance test dates at §§ 63.6610, 63.6611, and 63.6612.
§ 63.7(a)(3)	CAA section 114 authority	Yes.	
§ 63.7(b)(1)	Notification of performance test	Yes	Except that § 63.7(b)(1) only applies as specified in § 63.6645.
§ 63.7(b)(2)	Notification of rescheduling	Yes	Except that § 63.7(b)(2) only applies as specified in § 63.6645.
§ 63.7(c)	Quality assurance/test plan	Yes	Except that § 63.7(c) only applies as specified in § 63.6645.
§ 63.7(d)	Testing facilities	Yes.	
§ 63.7(e)(1)	Conditions for conducting performance tests.	No.	Subpart ZZZZ specifies conditions for conducting performance tests at § 63.6620.
§ 63.7(e)(2)	Conduct of performance tests and reduction of data.	Yes	Subpart ZZZZ specifies test methods at § 63.6620.
§ 63.7(e)(3)	Test run duration	Yes.	
§ 63.7(e)(4)	Administrator may require other testing under section 114 of the CAA.	Yes.	
§ 63.7(f)	Alternative test method provisions	Yes.	
§ 63.7(g)	Performance test data analysis, recordkeeping, and reporting.	Yes.	
§ 63.7(h)	Waiver of tests	Yes.	
§ 63.8(a)(1)	Applicability of monitoring requirements	Yes	Subpart ZZZZ contains specific requirements for monitoring at § 63.6625.
§ 63.8(a)(2)	Performance specifications	Yes.	
§ 63.8(a)(3)	[Reserved]		
§ 63.8(a)(4)	Monitoring for control devices	No.	
§ 63.8(b)(1)	Monitoring	Yes.	
§ 63.8(b)(2)–(3)	Multiple effluents and multiple monitoring systems.	Yes.	
§ 63.8(c)(1)	Monitoring system operation and maintenance.	Yes.	
§ 63.8(c)(1)(i)	Routine and predictable SSM	Yes.	
§ 63.8(c)(1)(ii)	SSM not in Startup Shutdown Malfunction Plan.	Yes.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§ 63.8(c)(1)(iii)	Compliance with operation and maintenance requirements.	Yes.	
§ 63.8(c)(2)–(3)	Monitoring system installation	Yes.	
§ 63.8(c)(4)	Continuous monitoring system (CMS) requirements.	Yes	Except that subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS).
§ 63.8(c)(5)	COMS minimum procedures	No	Subpart ZZZZ does not require COMS.
§ 63.8(c)(6)–(8)	CMS requirements	Yes	Except that subpart ZZZZ does not require COMS.
§ 63.8(d)	CMS quality control	Yes.	
§ 63.8(e)	CMS performance evaluation	Yes	Except for § 63.8(e)(5)(ii), which applies to COMS. Except that § 63.8(e) only applies as specified in § 63.6645.
§ 63.8(f)(1)–(5)	Alternative monitoring method	Yes	Except that § 63.8(f)(4) only applies as specified in § 63.6645.
§ 63.8(f)(6)	Alternative to relative accuracy test	Yes	Except that § 63.8(f)(6) only applies as specified in § 63.6645.
§ 63.8(g)	Data reduction	Yes	Except that provisions for COMS are not applicable. Averaging periods for demonstrating compliance are specified at §§ 63.6635 and 63.6640.
§ 63.9(a)	Applicability and State delegation of notification requirements.	Yes.	
§ 63.9(b)(1)–(5)	Initial notifications	Yes	Except that § 63.9(b)(3) is reserved. Except that § 63.9(b) only applies as specified in § 63.6645.
§ 63.9(c)	Request for compliance extension	Yes	Except that § 63.9(c) only applies as specified in § 63.6645.
§ 63.9(d)	Notification of special compliance requirements for new sources.	Yes	Except that § 63.9(d) only applies as specified in § 63.6645.
§ 63.9(e)	Notification of performance test	Yes	Except that § 63.9(e) only applies as specified in § 63.6645.
§ 63.9(f)	Notification of visible emission (VE)/opacity test.	No	Subpart ZZZZ does not contain opacity or VE standards.
§ 63.9(g)(1)	Notification of performance evaluation	Yes	Except that § 63.9(g) only applies as specified in § 63.6645.
§ 63.9(g)(2)	Notification of use of COMS data	No	Subpart ZZZZ does not contain opacity or VE standards.
§ 63.9(g)(3)	Notification that criterion for alternative to RATA is exceeded.	Yes	If alternative is in use. Except that § 63.9(g) only applies as specified in § 63.6645.
§ 63.9(h)(1)–(6)	Notification of compliance status	Yes	Except that notifications for sources using a CEMS are due 30 days after completion of performance evaluations. § 63.9(h)(4) is reserved. Except that § 63.9(h) only applies as specified in § 63.6645.
§ 63.9(i)	Adjustment of submittal deadlines	Yes.	
§ 63.9(j)	Change in previous information	Yes.	
§ 63.10(a)	Administrative provisions for record-keeping/reporting.	Yes.	
§ 63.10(b)(1)	Record retention	Yes.	
§ 63.10(b)(2)(i)–(v)	Records related to SSM	No.	
§ 63.10(b)(2)(vi)–(xi)	Records	Yes.	
§ 63.10(b)(2)(xii)	Record when under waiver	Yes.	
§ 63.10(b)(2)(xiii)	Records when using alternative to RATA	Yes	For CO standard if using RATA alternative.
§ 63.10(b)(2)(xiv)	Records of supporting documentation	Yes.	
§ 63.10(b)(3)	Records of applicability determination	Yes.	
§ 63.10(c)	Additional records for sources using CEMS.	Yes	Except that § 63.10(c)(2)–(4) and (9) are reserved.
§ 63.10(d)(1)	General reporting requirements	Yes.	
§ 63.10(d)(2)	Report of performance test results	Yes.	
§ 63.10(d)(3)	Reporting opacity or VE observations	No	Subpart ZZZZ does not contain opacity or VE standards.
§ 63.10(d)(4)	Progress reports	Yes.	
§ 63.10(d)(5)	Startup, shutdown, and malfunction reports	No.	
§ 63.10(e)(1) and (2)(i)	Additional CMS Reports	Yes.	
§ 63.10(e)(2)(ii)	COMS-related report	No	Subpart ZZZZ does not require COMS.
§ 63.10(e)(3)	Excess emission and parameter exceedances reports.	Yes.	Except that § 63.10(e)(3)(i) (C) is reserved.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.10(e)(4)	Reporting COMS data	No	Subpart ZZZZ does not require COMS.
§63.10(f)	Waiver for recordkeeping/reporting	Yes.	
§63.11	Flares	No.	
§63.12	State authority and delegations	Yes.	
§63.13	Addresses	Yes.	
§63.14	Incorporation by reference	Yes.	
§63.15	Availability of information	Yes.	

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ENVIRONMENTAL PROTECTION ADVISORY COUNCIL

MEETING MINUTES
June 3, 2010

I. CALL TO ORDER

Kristin A. Boggs, Ex Officio Chair designated by Secretary Randy Huffman, called to order a special meeting of the DEP Advisory Council at 1:40 p.m. on June 3 2010 at the headquarters of the West Virginia Department of Environmental Protection, 601 57th Street Southeast, Charleston, West Virginia. Agendas were distributed.

II. ROLL CALL

Members present: Lisa Dooley, Jackie Hallinan, Larry Harris, Karen Price, Bill Raney, and Rick Roberts.

The meeting was also attended by the following DEP personnel: Randy C. Huffman, DEP Cabinet Secretary; Lisa McClung, DEP Deputy Cabinet Secretary; Kathy Cosco, DEP Chief Communication Officer; Daniel T. Arnold, Division of Water and Waste Management; Bill Timmermeyer, Division of Water and Waste Management; Charles Sturey, Division of Mining and Reclamation; Dave Vandelinde, Division of Mining and Reclamation, Office of Explosives and Blasting; Yvonne Anderson, Division of Mining and Reclamation; Ken Holliday, Division of Water and Waste Management; Yogesh Patel, Division of Water and Waste Management; Fred Durham, Division of Air Quality; Jim Mason, Division of Air Quality; Lewis Halstead, Division of Mining and Reclamation.

Also in attendance were: Don Garvin of the Ohio Valley Environmental Coalition; Katherine Crockett and Emily Moy of Spilman Thomas & Battle; and Lewis Baker of the West Virginia Rural Water Association.

III. OLD BUSINESS

Minutes of the May 27, 2010 Meeting. The minutes were emailed and provided to Council in hard copy. Ms. Dooley moved for approval of the minutes, Mr. Raney seconded the motion, and it was carried by acclamation of Council.

IV. PROPOSED 2011 LEGISLATIVE RULES

Because the Advisory Council had received summaries of the rule two weeks prior to the meeting, he suggested that Ms. Boggs simply read the title of the rule and allow Council members to ask questions, rather than read the summaries to Council. The suggestion was well taken. Summaries of the proposed rules are set forth herein for completeness of the record, and so the minutes will reflect the complete information provided to Council.

Division of Air Quality

- 45 C.S.R. 8 – *Ambient Air Quality Standards.* Promulgated last in the 2010 Session. Revisions to the rule include a change in format to incorporation by reference, rather than reiterating the NAAQS in the rule. The rule now incorporates by reference the NAAQS promulgated by EPA under 40 C.F.R. § 50 and the ambient air monitoring reference methods and equivalent methods under 40 C.F.R. § 53, which become effective June 1, 2010. EPA has established a new primary one-hour NO_2 standard at a level of 100 parts per billion, based on the three-year average of the 98th percentile of the yearly distribution of one-hour daily maximum concentrations, to supplement the existing primary annual standard of 53 parts per million. This new NO_2 primary standard is incorporated by reference in this rule.

  Section 2, titled *Anti-Degredation Policy*, has been stricken for two reasons. First, the new incorporation by reference format incorporates the federal significant deterioration of air quality provisions under 40 C.F.R. § 50.2(c). Second, because West Virginia adopted the federal Prevention of Significant Deterioration program under 45 C.S.R. 14 in the early 1980s, the State has more than satisfied the intent of the relic language in Section 2 to protect the air quality in areas that were in attainment of the NAAQS. Section 2 was authored in the early 1970s as a placeholder in anticipation of the future PSD program and its provisions for best available control technology.

- 45 C.S.R. 14 – *Permits for Construction and Major Modification of Major Stationary Sources of Air Pollution for the Prevention of Significant Deterioration.* Promulgated last in the 2010 Session. Revisions to the rule include deletion of federally stayed provisions for fugitive emissions and clarification of affected facilities at large coal prep plants. EPA is now reconsidering inclusion of fugitive emissions and will issue a final rule in the future. Fugitive emissions from stockpiles (now an affected source under 40 C.F.R. § 60, Subpart Y) are now counted for large coal prep plants (but haul roads are still excluded). Other minor revisions ensure consistency with federal counterpart language.

- 45 C.S.R. 16 – *Standards of Performance for New Stationary Sources.* Promulgated last in the 2010 Session. Revisions to this rule are the annual incorporate-by-reference amendments to the NSPS, including Standards of Performance for Coal Preparation and Processing Plants. These final amendments include revisions to the emission limits for particulate matter and opacity standards for thermal dryers, pneumatic coal cleaning equipment, and coal handling equipment located at coal preparation and processing plants.

- 45 C.S.R. 18 – *Combustion of Solid Waste.* Promulgated last in the 2008 Session. Revisions to the rule include new federal emission guidelines for existing hospital/medical/infectious waste incinerators (HMIWI). The revised rule has been restructured to better comport to respective federal counterpart language. The stricken provisions in Section 12, *Compliance Dates*, have been moved to respective sections for existing HMIWI and commercial and industrial solid waste incinerators. The revisions

strike obsolete language regarding repealed provisions, as well as add new definitions to the rule. Other miscellaneous revisions are included that improve the clarity and accuracy of existing rule language.

- 45 C.S.R. 19 – *Permits for Construction and Major Modification of Major Stationary Sources of Air Pollution Which Cause or Contribute to Nonattainment.* Promulgated last in the 2010 Session. Revisions to the rule include a new subsection 1.5, which provides that references to the federal counterpart will be construed as the version that was in effect as of June 1, 2010. Also, the term "affected facilities" has been clarified. Fugitive emissions from stockpiles (now an affected facility under 40 C.F.R. § 60, Subpart Y) are now counted for large coal prep plants (but haul roads are still excluded). Other minor revisions ensure consistency with federal counterpart language to date.

- 45 C.S.R. 25 – *Control of Air Pollution from Hazardous Waste Treatment, Storage and Disposal Facilities.* Promulgated last in the 2010 Session. Revisions to the rule include annual incorporation-by-reference updates. Definitions that are not used in the rule have been stricken and requirements pertaining to ignitable, reactive or incompatible wastes have been updated to reference a federal counterpart. The fee schedule for hazardous waste management facilities ahs been simplified.

- 45 C.S.R. 34 – *Emission Standards for Hazardous Air Pollutants.* Promulgated last in the 2010 Session. Revisions to this rule include the annual incorporation-by-reference revisions to the Hazardous Air Pollutant rule that include the following source categories of new or revised NESHAP standards promulgated as of June 1, 2010 for non-major area sources: Chemical Manufacturing Area Sources. The revised rule also incorporates by reference the following source categories of new or revised NESHAP standards promulgated as of June 1, 2010 for major sources: Petroleum Refineries and Reciprocating Internal Combustion Engines.

- The following source categories of newly promulgated NESHAPS affecting non-major area sources of hazardous air pollutants are being excluded from incorporation by reference: Prepared Feeds Manufacturing; Aluminum, Copper, and Other Non-Ferrous Foundries; Asphalt Processing and Asphalt Roofing Manufacturing, Paints and Allied Products Manufacturing; and Chemical Preparations Industry. EPA has not provided any additional funding to implement these new federal area source air toxics rules. Further, DAQ considers these standards to be resource-intensive and costly to implement as a practical matter, without achieving commensurate air quality benefits. For these reasons, West Virginia is one of Several States in Region III that are adopting some, but not all, of these standards. EPA Regional Offices will be implementing those standards not adopted by the States, thereby providing a measure of regulatory certainty and consistency.

Division of Water & Waste Management

- 33 C.S.R. 20 – *Hazardous Waste Management System.* Promulgated last in the 2010 Session. Revisions to this rule include striking "Expansion to RCRA Comparable Fuel Exclusion" from exclusion from incorporation by reference of the federal rule.

- 47 C.S.R. 12 – *Requirements Governing Groundwater Standards.* Promulgated last in the 2010 Session. The proposed revision to this rule is technical cleanup from last year's revision. Last year's amendment incorrectly set a numeric standard for radon, which the EPA proposed in draft language in 2009 but has not yet finalized. Therefore, West Virginia's adoption of a radon standard for groundwater was premature.

- 47 C.S.R. 60 – *Monitoring Well Design Standards.* Promulgated last in the 2010 Session. Revisions to this rule are needed to correct requirements for documentation submittals to DEP. The current version requires reporting of all borehole abandonment, which is unenforceable and unnecessary. Revisions to this rule will require abandonment documentation for "high risk" boreholes and permanent monitoring wells, as was the original intention of the 2010 amendments recommended by the Monitoring Well Advisory Council.

Secretary's Office

- 60 C.S.R. 2 – *Rules on Freedom of Information Act Requests.* Promulgated last in 1997. Revisions to this rule include changing the fee structure for searching for and reproducing requested records to bring it in line with other State agencies by setting a flat search fee of $20.00 per hour (or a quarter fraction thereof) for a Division's time spent in locating, duplicating or compiling the requested records providing and a cost of $10.00 if the information is produced on diskette, tape or other storage media.

Division of Mining & Reclamation

- 38 C.S.R. 2 – *West Virginia Surface Mining Reclamation Rule.* Promulgated last in the 2009 Session. In addition to the amendments discussed at the December 9, 2009 meeting, which are currently in effect as an Emergency Rule, the proposed revisions include the following: (1) Clarification of the format and information necessary for complete application submittal and clarification on the renewal process to take into account DEP's electronic filing processes; (2) Provision for advertisement of the application when it is technically complete, as opposed to administratively complete; (3) Provision for reopening of the public comment period; (4) Provision that pre-subsidence surveys shall be confidential and only used for evaluating damage relating to subsidence; (5) Clarification of when an operator is considered to be in compliance with applicable environmental performance standards; (6) Provision that the Secretary has the authority to initiate bond release in lieu of the permittee; (7) Clarification that bonding for a permit in inactive status shall remain in effect for the life of the operation; and (8) Provision that the Secretary shall provide email notice of the issuance of a show cause order to members of the public who have subscribed to the Secretary's email notification service and otherwise provide notice to any person whose Citizen Complaint has resulted in the issuance of any violation that led to the issuance of a show cause order.

- 199 C.S.R. 1 – *Surface Mining Blasting Rule*. Promulgated last in the 2008 Session Revisions to this rule include modifying the definitions of "other structure" and "structure" to provide for dams as defined in 38 C.S.R. 4 § 2.7 and to provide that those dams will be exempt from the maximum air blast and ground vibration standards of the rule.

V. COMMENTS FROM COUNCIL

Ms. Dooley moved that Council recommend to the Secretary that the Air Quality rules contain language in their sections entitled "Inconsistency Between Rules" to read as follows: "In the event of any inconsistency between this rule and any other rule of the West Virginia Department of Environmental Protection, the inconsistency shall be resolved by the determination of the Secretary and the determination shall be based upon the application of the more stringent provision, term, condition, method, or rule using sound scientific information." *See*, 45 C.S.R. 8 proposed § 4.1. Ms. Dooley pointed out that DEP uses this language in some of its other Divisions' rules and some states surrounding West Virginia also use this language or similar language. Mr. Raney seconded the motion and discussion ensued. Ms. Hallinan pointed out that the proposed language is vague and may cause *Daubert*-related problems for attorneys arguing before boards and the courts using these rules. A vote was taken, and Ms. Dooley's motion passed by a majority vote of Council; Ms. Hallinan voted no and Dr. Harris abstained.

Regarding 45 C.S.R. 8, Dr. Harris asked about removing the anti-degredation section. He expressed concern about how many areas of the State are in attainment and asked if West Virginia does not still need the policy in order to stay in attainment. He was also concerned that removing the specific reference to "anti-degredation" might lead the public to believe that DEP does not enforce any such policy anymore. Mr. Mason explained that the anti-degredation was meant as a placeholder back when the rule was originally promulgated in the 1970s until the states could get their own programs up and running. Because West Virginia adopted the federal Prevention of Significant Deterioration program under 45 C.S.R. 14 in the early 1980s, the State has more than satisfied the intent of the relic "anti-degredation" language in Section 2 to protect the air quality in areas that were in attainment of the NAAQS. "Prevention of significant deterioration" in Rule 14 means the same thing as "anti-degredation."

Regarding 45 C.S.R. 14, Dr. Harris inquired about the justification for the proposed changes to the rule. Mr. Mason explained why the rule is being amended and a discussion ensued about fugitive emissions.

In relation to 45 C.S.R. 25, Mr. Roberts asked how many hazardous waste treatment, storage, and disposal facilities are in West Virginia, and Mr. Mason advised Council that he would have to research those numbers and report back.

Finally, regarding 45 C.S.R. 34, Dr. Harris asked for a definition of "area sources" and whether the federal EPA would enforce those provisions. Mr. Mason explained what area sources are and that EPA will enforce those standards.

In relation to 33 C.S.R. 20, Ms. Dooley inquired whether hazardous waste fees were being changed, and Ms. Boggs explained that, while fees are regurgitated in this rule, the statutory authority to change the fees was set forth in the statute; there are no changes to the fee structure proposed in this rule.

Dr. Harris asked the record to reflect that the Groundwater Standards rule was not submitted by the deadline, so Council had not yet had an opportunity to review the text or a summary of the rule prior to the Council meeting. Mr. Timmermeyer was on hand and did answer questions regarding why the rule had to be promulgated this year.

Regarding 60 C.S.R. 2, Ms. Dooley inquired about the language "shall furnish copies," and Ms. Boggs explained that the language for § 7.2 is in the disjunctive: the agency shall furnish copies or advise the requester when he or she can come in and review documents or deny the request. Ms. Dooley then inquired about the new exemptions, and Ms. Boggs explained that the exemptions mirror the West Virginia Freedom of Information Act, which is set forth at W. Va. Code 29B-1-1 et seq., and the federal Freedom of Information Act. Finally, Ms. Dooley asked whether the proposed fee changes would be sufficient to cover the agency's costs in responding to FOIA requests, and Ms. Cosco affirmed that they would.

Finally, regarding 38 C.S.R. 2, Dr. Harris inquired about the provisions relating to the addition of a trust account as an approved form of bond. Specifically, he asked whether the proposed trust account would cover perpetual treatment. Mr. Clarke explained that the proposed trust account is intended to be another form of bonding, not be a replacement for the Special Reclamation Fund. Dr. Harris then inquired as to how the cost of perpetual treatment is calculated. Mr. Clarke explained that the federal Office of Surface Mining Reclamation & Enforcement (OSM) has developed a computer model that estimates cost by developing a formula based on a mechanism that allows treatment for 40 or more years.

VI. COMMENTS FROM THE PUBLIC

Mr. Garvin asked for clarification on the trust account proposed by the Division of Mining and Reclamation. Mr. Clarke answered his questions.

Mr. Garvin then had several questions for Mr. Mason and Mr. Durham regarding the proposed Air Quality rules, which were duly answered.

VII. ADJOURNMENT

Mr. Raney moved that the meeting be adjourned, Ms. Dooley seconded the motion, and it carried by acclamation of Council. The meeting was adjourned at 3:05 p.m.