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.

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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 start-up 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;	Minimize the engine's time spent at idle and minimize the engine's startup time at start-up 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.
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	

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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