MEMORANDUM

Subject: Response to Public Comments on Proposed Amendments to the Standards of Performance for Stationary Compression Ignition and Spark Ignition Internal Combustion Engines

From: Melanie King, Energy Strategies Group

To: EPA Docket EPA-HQ-OAR-2010-0295

On June 8, 2010, EPA proposed amendments to the standards of performance for stationary compression ignition (CI) and spark ignition (SI) internal combustion engines in 40 CFR part 60, subparts IIII and JJJJ. The purpose of this document is to present a summary of the public comments that EPA received on the proposed standards and the responses developed. This summary of comments and responses serves as the basis for revisions made to the requirements between proposal and promulgation.

EPA received 32 public comments on the proposed rule. A listing of all persons submitting comments, their affiliation, and the Document ID for their comments is presented in Table 1. The comments can be obtained online from the Federal Docket Management System at http://www.regulations.gov. The docket number for this rulemaking is EPA-HQ-OAR-2010-0295. In this document, commenters are identified by the last two digits of the Document ID of their comments.

Table 1. List of Commenters on the Proposed Amendments to Standards of Performance for Stationary CI and SI Internal Combustion Engines

Document ID	Commenter/Affiliation
EPA-HQ-OAR-2010-0295-0021	Dan Chisholm Sr. MGI Systems, Inc.
EPA-HQ-OAR-2010-0295-0022 EPA-HQ-OAR-2010-0295-0055	Matt Todd Policy Advisor American Petroleum Institute
EPA-HQ-OAR-2010-0295-0023 EPA-HQ-OAR-2010-0295-0053	Alice Edwards Acting Director, Division of Air Quality State of Alaska Department of Environmental Conservation, Division of Air Quality
EPA-HQ-OAR-2010-0295-0024	Don C. DiCristofaro President Blue Sky Environmental, LLC
EPA-HQ-OAR-2010-0295-0026	Dan E. Brann Manager, Emissions Compliance Electro-Motive Diesel, Inc.
EPA-HQ-OAR-2010-0295-0027	James L. Kavanaugh Director State of Missouri Department of Natural Resources
EPA-HQ-OAR-2010-0295-0028 EPA-HQ-OAR-2010-0295-0029 (duplicative comment) EPA-HQ-OAR-2010-0295-0045	Ali Mirzakhalili Director State of Delaware Department of Natural Resources and Environmental Control Division of Air Quality
EPA-HQ-OAR-2010-0295-0030 EPA-HQ-OAR-2010-0295-0052	Rich Counihan Enernoc (on behalf of CPower, Inc., EnergyConnect, Inc., EnerNOC, Inc., Innoventive Power LLC.
EPA-HQ-OAR-2010-0295-0031	Don Mark Anthony Air Quality Engineer Alyeska Pipeline Service Company
EPA-HQ-OAR-2010-0295-0032	Allen Gillette Senior Vice President of Engineering Generac Power Systems, Inc.
EPA-HQ-OAR-2010-0295-0033	John S. Lyons Director Commonwealth of Kentucky Energy and Environment Cabinet Department for Environmental Protection Division of Air Quality
EPA-HQ-OAR-2010-0295-0034	David Meierhenry
EPA-HQ-OAR-2010-0295-0035	Jim Moxley Healthsouth
EPA-HQ-OAR-2010-0295-0036	Joseph Kubsh Executive Director Manufacturers of Emission Controls Association

Document ID	Commenter/Affiliation
EPA-HQ-OAR-2010-0295-0037 EPA-HQ-OAR-2010-0295-0057	Timothy A. French General Counsel Joseph L. Suchecki Director, Public Affairs Engine Manufacturers Association
EPA-HQ-OAR-2010-0295-0038	Bill Wemhoff Sr. Principal, Environmental Policy National Rural Electric Cooperative Association
EPA-HQ-OAR-2010-0295-0039	Mark Underhill Emissions Specialist Foley Engine Systems
EPA-HQ-OAR-2010-0295-0040 Supports the comments of EPA-HQ-OAR-2010-0295-0037	Brady Winkleman Caterpillar, Inc.
EPA-HQ-OAR-2010-0295-0041	Arthur W. Iler Assistant General Counsel Midwest Independent Transmission System Operator, Inc.
EPA-HQ-OAR-2010-0295-0042	William M. Nugent Executive Director New England Conference of Public Utility Commissioners
EPA-HQ-OAR-2010-0295-0043	Lisa Beal Director, Environment and Construction Policy Interstate Natural Gas Association of America
EPA-HQ-OAR-2010-0295-0044	Anna Garcia Executive Director Ozone Transport Commission
EPA-HQ-OAR-2010-0295-0046	Mike Wasson Director, North America Fleet Services Exterran
EPA-HQ-OAR-2010-0295-0047	Jack Mitchell Senior Consultant Trinity Consultants
EPA-HQ-OAR-2010-0295-0048	Cynthia A. Finley Director, Regulatory Affairs National Association of Clean Water Agencies
EPA-HQ-OAR-2010-0295-0049	Kate Williams Regulatory Affairs Representative Alaska Oil and Gas Association
EPA-HQ-OAR-2010-0295-0050	John Dutton GCA HSE Committee Chairman Gas Compressor Association

Document ID	Commenter/Affiliation
EPA-HQ-OAR-2010-0295-0051 Support the comments of EPA-HQ-OAR-2010-0295-0050 EPA-HQ-OAR-2010-0295-0055	John Dutton Manager of Operations J-W Power Company
EPA-HQ-OAR-2010-0295-0054 Support the comments of EPA-HQ-OAR-2010-0295-0055	Dan F. Hunter Manager, Regulatory Issues ConocoPhillips

Summary of Public Comments and Responses

The summary of public comments and responses is organized as follows:

1.0 General

2.0 10-30 Liters/Cylinder Displacement Engines

3.0 ≥30 Liters/Cylinder Displacement Engines

4.0 Operating and Maintenance Requirements

5.0 Alaska

6.0 Temporary, Replacement, and Marine Engines

7.0 Digester Gas Engines

8.0 Test Methods

9.0 Definitions
- 9.1 Reconstruction
- 9.2 Date of Manufacture
- 9.3 Installed
- 9.4 Certified Emissions Life
- 9.5 Emergency Engines
- 9.6 Freshly Manufactured Engines

10.0 Miscellaneous

1.0 General

1.1 Comment: Two commenters (22 and 23) requested that EPA provide additional time to submit comments on the proposed amendments to 40 CFR part 60, subparts IIII and JJJJ. Commenter 22 specifically asked that EPA provide a 30-day extension period for providing comments.

Response: EPA provided a 30-day extension to the public comment period to allow additional time for commenters to prepare and submit their comments.

1.2 Comment: One commenter (37) expressed general support of EPA's proposed amendments to 40 CFR part 60, subparts IIII and JJJJ. Specifically, commenter 37 said that the changes proposed by EPA are positive because they generally provide more flexibility and address various issues associated with the regulations as they currently exist.

Response: No response is needed.

1.3 Comment: One commenter (33) indicated that there is confusion regarding the applicability of 40 CFR part 60, subpart JJJJ and 40 CFR part 63, subpart ZZZZ, to new stationary SI emergency engines. The commenter (33) said that 63.6590(c) of the final National Emission Standards for Hazardous Air Pollutants (NESHAP) is confusing and the commenter (33) believes the paragraph contradicts the New Source Performance Standards (NSPS) for stationary SI engines. For example, the commenter's (33) understanding per 63.6590(c) is that an emergency

SI engine built in 2007 could comply with the NESHAP by meeting the requirements in the SI NSPS. However, the commenter (33) believes this contradicts 40 CFR part 60, subpart JJJJ, because new emergency SI engines built in 2007 are not subject to this regulation according to 60.4230(a)(4)(iv). The commenter (33) said that emergency SI engines constructed between June 12, 2006, and before January 1, 2009, are not subject to 40 CFR part 60, subpart JJJJ, and consequently are not subject to any requirements. The commenter (33) argued that 40 CFR part 60, subpart JJJJ should require these engines and other engines that are not subject to any requirements to at least meet work practice standards. Additionally, commenter 33 expressed that emergency engines should be subject to the same operational limitations as other emergency engines that are subject to 40 CFR part 60, subpart JJJJ.

Response: Stationary SI engines less than or equal to 500 horsepower (HP) that are located at major sources of hazardous air pollutant (HAP) emissions and stationary SI engines of any size that are located at area sources of HAP emissions that are considered new under 40 CFR part 63, subpart ZZZZ, but that pre-date NSPS applicability under 40 CFR part 60, subpart JJJJ, are not subject to any requirements. However, revisions to the substance of 40 CFR part 60, subpart JJJJ are beyond the scope of this rule, which deals primarily with revisions to 40 CFR part 60, subpart IIII and merely includes some minor revisions to 40 CFR part 60, subpart JJJJ to be consistent with the changes made to 40 CFR part 60, subpart IIII and to correct minor errors. EPA intends to address this issue during EPA's review of 40 CFR part 60, subpart JJJJ in the near future.

1.4 Comment: One commenter (39) indicated that it would be beneficial if EPA published material that could be used to calculate costs for determining rebuild costs to compare to the costs of a new engine. Specifically, commenter 39 suggested that a spreadsheet could be made available, which could be used as a template for this purpose. Such a tool would ensure regulation consistency and eliminate confusion because there are currently numerous different interpretations of the requirements, according to the commenter (39).

Response: EPA is not developing such material at this time, but will consider providing guidance material in the future

1.5 Comment: One commenter (44) recommended that EPA limit the sulfur content in the fuel to 15 parts per million (ppm) for stationary engines as soon as possible, as is currently required for on-road and nonroad engines. This would be consistent with the Northeast and Mid-Atlantic States' commitment to pursue low sulfur in fuel limits to assist in reaching State implementation plans regional haze goals.

Response: 40 CFR part 60, subpart IIII already limits the sulfur content in diesel fuel to 15 ppm for the majority of engines subject to the NSPS.

1.6 Comment: One commenter (44) said that the standards being proposed for stationary engines should be consistent with the standards that have already been finalized for nonroad engines. In addition, the commenter (44) recommended that these standards apply to portable engines that

remain on site for more than 30 days and does not believe these engines should be considered portable engines.

Response: EPA's approach is designed exactly according to what the commenter is requesting and EPA agrees with the commenter that the standards should be consistent with nonroad standards for similar engines. Regarding the commenter's recommendation for portable engines that remain on site for more than 30 days, the definition of nonroad engine requires that a portable engine be at a non-seasonal location for at least a year before it is considered stationary. That is a longstanding definition that was not revisited in this rule and is beyond its scope. Also, the commenter did not provide any reasons for changing this longstanding definition.

1.7 Comment: One commenter (44) suggested that the final rule include additional provisions that are being considered to be included in the Ozone Transport Commission model rule, which is currently being drafted. The suggested provisions include monitoring and data reporting on generator usage, combined heat and power incentives and innovative technologies, and emissions standards for demand response programs, the commenter (44) said.

Response: These comments are not in the scope of the rulemaking and have not been provided with enough specificity to take any further action.

1.8 Comment: One commenter (38) cited to several rulemakings EPA has promulgated over the years for stationary internal combustion engines under sections 111 and 112 of the Clean Air Act (CAA). The commenter (38) expressed that there are inconsistencies between the various rules

and there is confusion among the regulated community. The commenter (38) acknowledged in its comments that EPA has attempted to provide some consistency between regulations, e.g., by EPA's proposal to revise the emergency engine definition. The commenter (38) requested that consistency be provided for engines under 40 CFR part 63, subpart ZZZZ, and referred to the subcategory of existing non-emergency SI engines that operate 24 hours of less per year that was included in the August 2010 amendments to that subpart. Those engines may comply with work practices, the commenter (38) said, and the commenter (38) believes that it would be justified to also establish an equivalent subcategory for stationary non-emergency CI engines that operate 24 hours or less per year. According to the commenter (38), stationary CI engines that operate 24 hours or less per year emit low emissions and can be used in situations that are not allowed if the engines were considering emergency engines. The commenter (38) requested that EPA add this provision to the final rule, or alternatively address this issue under the stationary CI reconsideration.

Response: Amendments to 40 CFR part 63, subpart ZZZZ are outside the scope of this rulemaking.

2.0 10-30 Liters/Cylinder Displacement Engines

2.1 Comment: Several commenters (26, 36, 37, and 44) indicated that they agree that it is appropriate to extend the nonroad engine standards that were recently finalized to stationary CI engines with a displacement between 10 and 30 liters per cylinder (l/cyl).

Commenter 26 also supported EPA's proposed changes to incorporate 40 CFR part 1042 under the 60.4201 and 60.4202 of the CI NSPS and apply those requirements to appropriate

displacement stationary engines. In the commenter's (26) opinion, if this provision is finalized it will result in significant emissions reductions at a low cost.

Response: No response is needed.

2.2 Comment: One commenter (37) said that 60.4201 of the proposed CI NSPS is correct, but that Table 2 in the preamble to the proposed rule is not accurate. According to commenter 37 there are no Tier 3 particulate matter (PM) standards for marine engines between 15 and 30 l/cyl that are above 2,000 kilowatt (KW), but there are Tier 3 nitrogen oxides (NO_x) standards for marine engines between 7 and 15 l/cyl. EPA should correct Table 2 of the preamble to match the rule, the commenter (37) said.

The commenter (37) also indicated that section 60.4202(f) of the proposed rule that contains requirements for stationary emergency CI engines between 10 and 30 l/cyl is incorrect. Commenter 37 said that EPA refers to Tier 3 emission standards in that section, but there are no Tier 3 emission standards for comparable marine engines. According to the commenter (37), 40 CFR part 1042, which is the section that EPA cites in 60.4202(f) of the proposed rule, specifically excludes all marine CI engines above 3,700 KW as well as marine CI engines above 2,000 KW with displacements between 15 and 30 l/cyl from Tier 3 standards. Therefore, the commenter (37) said, the standards that EPA cites in 60.4202(f) of the proposed rule do not exist. The commenter (37) reiterated why EPA determined that there should be no Tier 3 standards for similarly sized marine CI engines under the marine rule and that it agreed with that previous determination. The commenter (37) asked that EPA correct the section in question in the

proposed rule and state in the final rule that stationary emergency CI engines under 60.4202(f) meet Tier 2 and not Tier 3 marine engine standards.

Response: EPA agrees with the commenter and notes that there were inadvertent errors in the preamble and regulatory language of the proposed rule. On the first issue regarding the standards being presented incorrectly in the preamble to the proposed rule, EPA concurs with the commenter. The Tier 3 standards are correctly laid out in the final preamble and are also shown in Table 2 below.

Table 2. First Tier of Standards for Stationary CI Engines with a Displacement ≥10 and <30 Liters per Cylinder

Engine Size – Liters per Cylinder, Maximum Engine Power	PM g/HP-hr (g/KW-hr)	NO_x+HC g/HP-hr (g/KW-hr)	Model Year
10.0≤displacement<15.0 <2,000 KW	0.10 (0.14)	4.6 (6.2)	2013+
10.0≤displacement<15.0 2,000≤KW<3,700	0.10 (0.14)	5.8 (7.8)	2013+
15.0≤displacement<20.0 <2,000 KW	0.25 (0.34)	5.2 (7.0)	2014+
20.0≤displacement<25.0 <2,000 KW	0.20 (0.27)	7.3 (9.8)	2014+
25.0≤displacement<30.0 <2,000 KW	0.20 (0.27)	8.2 (11.0)	2014+

On the second issue regarding the standards in section 60.4202(f) of the proposed rule being incorrect, the commenter is correct and EPA agrees that the same standards that apply to marine CI engines should apply to stationary CI emergency engines that have the same size and displacement. Tier 2 emission standards should apply to these engines where there are no Tier 3

marine engine standards for comparable engines. Subsequently, EPA is including language in the final rule that clarifies this.

2.3 Comment: One commenter (37) asked that EPA harmonize the displacement (l/cyl) cutoff between medium speed and high speed stationary engines. Commenter 37 recommended that EPA change the displacement threshold where stationary engines have to meet marine engine standards from 10 l/cyl to 7 l/cyl. The commenter (37) believes that most if not all engines with a displacement from 7 to 10 l/cyl are produced for marine purposes and for that reason suggested that the displacement threshold be aligned.

One commenter (37) asked that EPA provide 4 years of lead time from promulgation of the CI NSPS until the standards phase-in. According to the commenter (37), medium speed marine and stationary engines have similar designs, but generally require separate development programs based on certain differences.

Response: The standards for marine engines of 7 l/cyl to 10 l/cyl displacement are not as stringent as the standards that have already been in place for several years for stationary engines with a displacement of 7 l/cyl to 10 l/cyl. The commenter did not provide compelling information to justify reducing the stringency of the standards for stationary engines of this size range.

3.0 ≥30 Liters/Cylinder Displacement Engines

3.1 Comment: Three commenters (36, 37, and 44) indicated that they are supportive of the proposed amendments, which more closely align emission standards for stationary CI engines

with a displacement of 30 l/cyl and above with those that apply to similar nonroad engines. EPA proposed this change in 60.4204 and 60.4215 of 40 CFR part 60, subpart IIII. The commenter (37) said that the current limits, which are either emission standards or percent reduction limits, are not necessarily technically or economically feasible for these engines. The current requirements put engines with a displacement at or above 30 l/cyl at a disadvantage economically in comparison to other large engines or combustion technologies, according to the commenter (37). The commenter (37) said that finalizing emission standards for large displacement engines that are more consistent with the International Maritime Organization (IMO) marine engine standards, will mean that the standards are technically and economically feasible and would allow the lead time necessary to implement appropriate emissions control technologies for these engines. Large displacement stationary engines are derived from marine engines, but generally have different turbo specifications because of different loading optimization needs, the commenter (37) said.

Response: No response is needed.

3.2 Comment: One commenter (37) said that in the final rule EPA needs to add stipulated allowances from sections 6.3.11 and 6.4.13 of the IMO Marine Environment Protection Committee (MEPC) 58 Revised ANNEX VI from October 2008 to sections 60.4204 and 60.4215 of the rule.

Response: EPA contacted the commenter for additional information on what the IMO allowances are and what the commenter is requesting that EPA allow for stationary CI engines

with a displacement of 30 l/cyl and above. In response to EPA's request, the commenter replied[1] that it no longer believes that it would be necessary to incorporate the IMO allowances and subsequently withdrew its comments on this issue. Therefore, no further action is needed on this issue.

3.3 Comment: One commenter (37) said that in the preamble to the proposed amendments in the third column of page 32616 and the first column of page 32617, the emissions in parentheses are shown in grams per kilowatt-hour (g/KW-hr), but they should be in grams per HP-hour (g/HP-hr).

Response: The commenter is correct that these standards were presented incorrectly in the preamble to the proposed rule.

3.4 Comment: Two commenters (37 and 48) expressed support of EPA's proposal to not require aftertreatment-forcing standards for stationary emergency engines with a displacement at or above 30 l/cyl. Commenter 48 specifically noted support for the NO_x standards not necessitating aftertreatment in the proposed rule. According to the commenter (37), these engines are used to power emergency generators, especially in critically sensitive installations like nuclear power plants. The commenter (37) said that adding aftertreatment to these large engines in order to reduce emissions could potentially significantly affect the performance and reliability of the emergency engine and aftertreatment is not cost-effective. For these reasons, which the commenter (37) said that EPA has used in the past to justify standards for smaller emergency

[1] Email from Joe Suchecki, Engine Manufacturers Association to Melanie King, EPA. Request for Clarification on Comment Regarding IMO Allowances. February 22, 2011.

engines, commenter 37 believes that aftertreatment should not be required of stationary emergency engines with a displacement at or above 30 l/cyl. The commenter (37) urged EPA to finalize the proposed changes on page 32617 of the preamble and in 60.4205 of the proposed rule. Also, commenter 37 said that EPA should include the allowances requested in comment 3.2 (6.3.11 and 6.4.13 of the IMO MEPC 58 Revised ANNEX VI from October 2008) for these engines as well.

Response: No response is needed to the first part of this comment regarding the proposed standards for emergency engines with a displacement of 30 l/cyl or more.

Regarding the IMO allowances, EPA contacted the commenter for additional information. In response to EPA's request, the commenter replied[2] that it no longer believes that it would be necessary to incorporate the IMO allowances and subsequently withdrew its comments on this issue.

3.5 Comment: One commenter (37) indicated that it thought there was an error in the proposed rule on page 32623 in 60.4205(d)(2). According to the commenter (37), the NO_x standard that applies to emergency engines should be applicable past the year 2016 and the commenter (37) suggested that EPA take out the text "and before January 1, 2016."

Response: The commenter is correct and EPA has made this clear in the final rule.

3.6 Comment: One commenter (37) supports a fuel limit of 1,000 ppm sulfur content for engines with a displacement at or above 30 l/cyl. The commenter (37) agrees that it is appropriate to

[2] Id.

align fuel requirements for stationary engines with a displacement at or above 30 l/cyl with those that are in the IMO marine engine standards, since the stationary engine emission standards are also being aligned with IMO marine engine standards. However, the commenter (37) asked that EPA require that this limit become effective immediately and not in 2014, as proposed. The commenter (37) claimed that 500 ppm sulfur fuel, which is the sulfur level stationary engines with a displacement at or above 30 l/cyl currently must meet for the fuel they use, will become very limited and perhaps unavailable after the 15 ppm sulfur fuel requirements take effect in October 2010 for most mobile and stationary engines. Engines with large displacement are not designed to operate on 15 ppm sulfur fuel, the commenter (37) argued, therefore, appropriate fuel for these engines may not be available, or if it is, will be significantly more costly. To ensure the availability of appropriate fuel, the commenter (37) asked that EPA allow engines with a displacement at or above 30 l/cyl to use 1,000 ppm immediately.

Response: EPA agrees that it would be appropriate to require that stationary engines with a displacement of 30 l/cyl or more limit the sulfur content in the fuel to 1,000 ppm beginning earlier than 2014, which is the timeframe that was proposed. However, EPA disagrees with the commenter's logic and that the requirement should become effective immediately. Diesel fuel containing 500 ppm sulfur will be the designated off-spec fuel within the diesel stream until 2014 and should be available at least for locomotives and marine engines until June 1, 2012. Therefore, EPA believes it is appropriate to finalize the 1,000 ppm fuel requirement for large displacement engines, but require that these engines begin using this fuel on June 1, 2012. EPA has made this clear in 60.4207(d) of the final rule.

3.7 Comment: One commenter (37) supports the proposal to require a PM emission standard of 0.40 g/KW-hr for engines with a displacement at or above 30 l/cyl. According to the commenter (37), it is not technically feasible to achieve the limits for PM that are in the current final rule without the use of low sulfur fuel, nor is it feasible for emergency engines.

Response: No response is needed.

4.0 Operating and Maintenance Requirements

4.1 Comment: One commenter (37) expressed concern about the proposal that for certified engines, owners and operators would be allowed to develop and follow their own operation and maintenance (O&M) procedures as an alternative to following the manufacturer's O&M procedures. Commenter 37 recommended that engines that do not follow the manufacturer's O&M procedures be considered as operating in a non-certified manner and subject to initial performance testing requirements. The commenter (37) indicated that it is supportive of providing additional flexibility, but that in those cases where an owner or operator opts to take an alternative O&M approach, which differs from what the manufacturer recommends for the engine, the engine manufacturer or certificate holder should no longer be responsible for emissions compliance. EPA should make that clarification as to who is responsible for the emissions from the engine and if operated differently than recommended by the manufacturer, the engine should no longer be classified as a certified engine.

The commenter (37) also recommended that in order to avoid disputes regarding who would be the responsible party in cases where alternative O&M procedures are being followed, that EPA establish a mechanism for owners and operators to identify specific engines or facilities

where such procedures are being used. In the absence of such designation, the regulatory agency and the engine manufacturer would not know if the engine is maintained according to the manufacturer's guidelines and conflict could arise if there is a deviation. The commenter (37) suggested the owner or operator could apply a permanent label to the engine, if the engine had been altered beyond the manufacturer's recommended O&M procedures.

Commenter 37 additionally noted concern over the proposed provision in 60.4211(g) that allows owners and operators to adjust engine settings outside of the manufacturer's recommendations. The commenter (37) is of the opinion that such adjustment should only be allowed in association with performance testing and the commenter (37) requested that clarifying language be included in the final preamble and rule. All engines with a displacement below 30 l/cyl are under 40 CFR part 60, subpart IIII, required to be certified, and commenter 37 said that the certification and emissions compliance are contingent upon the engine being operated within certain parameters and settings. Therefore, if these settings are changed, the engine may be out of compliance, the commenter (37) said, and such actions significantly affect engine performance and emissions levels. Consequently, the commenter (37) recommended that changing CI engine settings only be permitted under the following conditions:

- If the factory settings are changed by the owner or operator, an initial performance test should be conducted to confirm that the emission standards are still being met;
- EPA clearly indicates in the final rule that if factory settings are changed, the engine manufacturer is no longer responsible for the engine being in compliance with the standards and the emissions warranty becomes void at the time of the adjustment and after;
- The engine is no longer considered a certified engine;

- The owner or operator of the engine alerts the regulatory agency with a notification including the engine serial number that it is adjusting the engine settings beyond the manufacturer's recommendations and that acknowledges that the engine is no longer considered a certified engine under the stationary (or nonroad, if applicable) regulation, and
- The owner or operator applies a permanent label to the engine to indicate that it had been altered beyond the manufacturer's settings.

The commenter (37) urged EPA to make it clear that the additional flexibility provided in the final rule by permitting engine settings to be adjusted beyond manufacturer's recommended specifications means that the manufacturers are still required to sell only new certified stationary engines and that when owners and operators purchase new engines subject to the NSPS, they have to purchase new NSPS-certified engines. The commenter (37) specifically said that EPA should make it clear in the final rule that the provision for owners and operators to operate a certified engine in a non-certified manner, does not mean that manufacturers are permitted to sell new engines that are subject to the NSPS that are non-certified nor does it mean that owners and operators can buy new non-certified NSPS-covered engines.

Response: EPA agrees that the engine manufacturer should not be held responsible once owners and operators of a certified engine no longer operate and maintain the engine and control device according to the manufacturer's O&M procedures. This is consistent with the language in section 207 of the CAA and 40 CFR 1068.505, regarding mobile source engines, that specifies that EPA not require a recall of engines by the manufacturer unless EPA determines that a

substantial number of engines, although properly maintained and used, do not conform to emission regulations. EPA thinks that it is clear in the rule language that the owner/operator, not the manufacturer, is required to show compliance in such situations, as was specifically laid out in 60.4211(g) of the proposed rule. Further, EPA stated in the preamble to the proposed rule that engines operated in this manner would be considered non-certified engines and generally subject to performance testing (see 75 FR 32615, middle column).

Regarding the commenter's recommendation that engines that do not follow the manufacturer's O&M procedures be considered as operating in a non-certified manner and subject to initial performance testing, EPA points to 60.4211(g) of the proposed rule, which requires all engines greater than 100 HP to conduct a performance testing. Engines greater than 500 HP also have to conduct subsequent testing every 8,760 hours of operation or 3 years, whichever comes first. Also, owners and operators of engines that are less than 100 HP, where the engine and control device are not installed and configured according to the manufacturer's emission-related written instructions or if the emission-related settings are changed in a way that is not permitted by the manufacturer, an initial performance test has to be conducted. Again, EPA cites to the preamble to the proposed rule where EPA explained that in cases where owners/operators take an alternative approach and follow their own O&M procedures versus the manufacturer's procedures, EPA will need more assurance that the engine is meeting the emission standards and consequently generally subject these engines to performance testing.

Regarding the comment about identifying specific engines or facilities where alternative procedures are being used, EPA points out that in 60.4211(g) of the proposed rule it is required of owners/operators who follow alternative procedures to keep a maintenance plan and records of conducted maintenance. Therefore, documentation of the maintenance conducted would be

available and would indicate if the engine is being maintained according to the manufacturer's guidelines or not. Therefore, EPA does not anticipate that a conflict would arise as to who is the responsible party for demonstrating compliance. For this reason, EPA does not believe that applying a permanent label to the engine would be necessary.

EPA notes that there was an inadvertent error in the proposed rule language at 60.4211(a) and (c) where EPA incorrectly referred to subsection 60.4211(f) of the proposed rule. In the final rule, EPA correctly references paragraph (g) of 60.4211 in 60.4211(a) and (c).

4.2 Comment: One commenter (48) expressed that it is supportive of gearing O&M requirements toward the engine manufacturers, as opposed to the owners and operators. However, the commenter (48) said that it is concerned with how owners and operators would comply with manufacturer's O&M procedures related to emissions. These requirements are not written as permit enforceable documents and the commenter (48) anticipates several inadvertent violations, which in the commenter's (48) opinion would not necessarily mean an increase in emissions. The commenter (48) acknowledged the proposed amendments that incorporate additional compliance flexibility in this area; however, the option to use alternative procedures requires a compliance test to be conducted on engines above 100 HP. According to the commenter (48), compliance testing will be costly and prohibitive for wastewater plants effectively eliminating the option to following alternative O&M procedures. The commenter (48) feels that EPA should extend the provision that allows engines below 100 HP to simply keep a maintenance plan to larger engines as well.

Response: EPA disagrees that a performance test should not be required for this group of engines. Assurance is needed to demonstrate that the limits are being met. Also, it is not true that all engines below 100 HP are not required to conduct performance testing. If owners and operators of stationary CI engines below 100 HP do not install and configure their engine and control device according to the manufacturer's emission-related written instructions or change emission-related settings in a way that is not permitted by the manufacturer, an initial performance test is required (see proposed 60.4211(g)(1)). The requirement has been retained in the final rule. Also, under the SI NSPS, owners and operators meeting standards in section 60.4233(d) or (e) that have non-certified engines between 25 and 500 HP are subject to testing (see 40 CFR 60.4243(b)(2)(ii)).

5.0 Alaska

5.1 Comment: One commenter (37) believes there is an oversight in the language in 60.4216 of the proposed rule and asked that EPA clarify in the final rule that stationary engines with a displacement of greater than 30 l/cyl that are located in Alaska are not required to use 15 ppm sulfur fuel, which it believes EPA does not intend requiring. The commenter (37) suggested removing the reference to 40 CFR part 69.

Response: EPA agrees with the commenter and recognizes that the language in 60.4216(a) is misleading in terms of the fuel required for larger displacement engines. EPA has clarified in the final rule that 60.4216(a) is limited to engines with a displacement of less than 30 l/cyl.

5.2 Comment: One commenter (37) expressed support for EPA's proposal to include different requirements for stationary CI engines located in Alaska, i.e., those proposed in 60.4216 of the CI NSPS. The commenter (37) also believes that those changes need to be incorporated for engines with a displacement 30 l/cyl or greater and suggested that EPA may have inadvertently not included those engines when adding those provisions.

Response: EPA agrees that the provisions in 60.4216(c) of the proposed rule should not be limited to stationary CI engines with a displacement below 30 l/cyl, but should also include stationary CI engines with a displacement of 30 l/cyl and above. Subsequently, EPA has made this clear in the final rule. Also, EPA notes that it has clarified that stationary non-emergency CI engines with a displacement of 30 l/cyl and above that are located in areas of Alaska not accessible by the Federal Aid Highway System (FAHS) are subject to the PM requirements in 60.4204(c)(4) that apply to owners and operators of stationary non-emergency CI engines greater than or equal to 30 l/cyl.

5.3 Comment: One commenter (53) asked that EPA reconsider how urban and rural areas of Alaska are defined. The commenter (53) acknowledged the definition that is currently in place, which defines rural areas as those areas not accessible by the FAHS. This definition has been used in Federal regulations for years, but based on recent changes that will require the transition to ultra low sulfur diesel (ULSD) for mobile source engines this year in rural areas, the commenter (53) requested that EPA evaluate whether the definition remains appropriate. In the commenter's (53) opinion, the current definition does not appropriately consider impacts to small rural public utilities in Alaska that may be accessible by FAHS or not. These rural public

utilities must deal with higher costs and have less financial resources than utilities in urban areas, plus are operated by staff with limited technical knowledge and training, the commenter (53) said. Consequently, drawing a line between sources subject to the rule or not by being accessible by FAHS would lead to inequities between small communities in Alaska who mostly all experience the same issues, according to commenter 53. The commenter (53) added that a source being accessible by FAHS is a reasonable determining factor, but is not an absolute. For example, according to the commenter (53), there are sources located along the Alaska Marine Highway System and other small remote sources along the highway system that must meet different requirements than those off the FAHS, however, their circumstances may not be different. Commenter 53 did not have a specific recommendation, but wanted EPA to look at possible alternatives for defining urban and rural sources in Alaska that would affect regulated stationary engines under the NSPS and NESHAP rules. During this evaluation, the commenter (53) asked that EPA take into account engine size and size of communities for instance, in determining which engines should not be subject to certain requirements of the rule, and indicated that it is willing to discuss this issue further with EPA.

Response: EPA does not believe that it is appropriate at this time to change how EPA delineates between areas of Alaska. The regulations currently in place, which separate areas based on their accessibility to the FAHS, were developed under the original rule (71 FR 39154, July 11, 2006) and have been in place for regulation of both mobile and stationary engines for several years. That rule distinguished accessible areas from non-accessible areas and this criterion is still the most reasonable distinguishing factor and EPA therefore believes that it is still appropriate to maintain this definition in order to distinguish between stationary engines in Alaska. There are

several places around the country that are small and economically disadvantaged, but only those areas of Alaska that are not readily accessible by the highway system are treated differently, in particular based on their isolation and the difficulty they have in accessing other areas. EPA also notes that this issue has not been brought up before and was not part of the commenter's request letter.[3] Also, all the background information and rationale justifying the recommendations provided in the commenter's request letter to distinguish remote Alaska from the rest of the country were based on this split based on accessibility. Many of the requirements in the rule are already in place and EPA has not heard of problems in these accessible areas. EPA notes that accessibility is interpreted to mean accessibility on a year-round basis, which includes the portions of Alaska serviced by the contiguous road system, and portions of the Alaska Marine Highway System with regular drive-on, drive-off vehicle service on ferries (e.g., Kodiak, Ketchikan, Juneau, Sitka, Haines, Skagway, Petersburg, Wrangell, Cordova). [see http://www.dec.state.ak.us/air/anpms/ulsd/ulsdtranplan.htm and http://www.dot.state.ak.us/amhs/] The commenter did not provide any specific recommendations in terms of how it believes urban and remote areas should be redefined and in the absence of clarity on what the boundaries should be, there is no real basis at this time for the commenter's request to make a change to the current distinction. EPA continues to believe that the distinction in treatment between engines in Alaska should be based on whether areas are on the FAHS system and is therefore not making any changes at this time to this criterion in the final rule.

[3] Letter from Alice Edwards, State of Alaska to Jaime Pagán, EPA. Alaska Comments on NSPS for Stationary Diesel Engines. October 31, 2008.

5.4 Comment: One commenter (53) expressed concern over the proposed requirements for small remote power plants in Alaska that would necessitate aftertreatment in order to meet the PM limits. The commenter (53) pointed out that EPA recognized that selective catalytic reduction (SCR) is not justified in rural Alaska. The commenter's (53) concern regarding aftertreatment for PM is based on the majority of small rural power plans being un-staffed and the technical capability of staff is minimal and includes only basic maintenance tasks, including maintaining the oil, filter, belts and hoses. The commenter (53) said that engines that are equipped with aftertreatment like diesel particulate filters (DPF) and oxidation catalysts have automatic safety devices installed that will derate the engine in the event that the backpressure or temperature go beyond prescribed limits. Commenter 53 made the argument that should a prime power generator derate at a plant that was not staffed, the engine would not maintain frequency and would trip off line. The engine would shutdown and power would be interrupted or unavailable to the community, the commenter (53) said, and should this happen during extreme temperatures, the life, health and safety of a community are at stake. Defeat devices are not permitted under EPA's regulations for certified engines so the consequence would be that the only way an engine could be restarted would be for a technician to fly to the plant and address the issue, the commenter (53) said. Considering transportation limitations in rural Alaska, especially during extreme cold weather at winter time, it could take several days for the technician to arrive at the site, commenter 53 noted. Because of the following reasons, the commenter (53) recommended that aftertreatment for reducing PM emissions not be required for small unmanned rural Alaska power plants:

- Power plant PM emissions in rural Alaska are substantially less than what EPA used for baseline emissions in 1990 calculated from AP-42 information, which means the air is already cleaner than EPA's estimation;
- The density of emissions in a rural community is normally lower than an urban area. Since the only diesel engine operating in a rural community is the one at the power plant, the magnitude of diesel PM emissions in a rural area is different than an urban one;
- Not requiring PM traps removes issues with high sulfur fuel (from used oil blending) contaminating aftertreatment;
- Reliable electric power is vital to life, health and safety; and
- The cost over the entire life span of PM aftertreatment in rural Alaska is two to three times higher than EPA estimated for urban areas in the U.S. EPA used this rationale to exclude stationary engines in rural Alaska from numerical emission standards under the NESHAP and from meeting emission limits based on the use of SCR under the NSPS.

Response: EPA disagrees with the commenter that PM limits that necessitate the use of aftertreatment like DPF should not be required at all for stationary CI engines located in remote areas of Alaska. The need for PM control was in the commenter's original request to EPA noting that PM is the most significant pollutant of concern in remote areas of Alaska. Stationary CI engines are often in very close proximity to the towns and the diesel PM emissions, which are highly toxic, can fall on the towns. Substantial health impacts are associated with diesel PM emissions and EPA does not believe it is appropriate to reduce the stringency of PM

requirements in remote Alaska. EPA's Diesel Health Assessment Document[4] (Diesel HAD) classified exposure to diesel exhaust as "likely to be carcinogenic to humans by inhalation" at environmental levels of exposure. Other agencies at the international, federal and state level have come to similar conclusions.[5] The Diesel HAD concludes "that acute exposure to DE [diesel exhaust] has been associated with irritation of the eye, nose, and throat, respiratory symptoms (cough and phlegm), and neurophysiological symptoms such as headache, lightheadedness, nausea, vomiting, and numbness or tingling of the extremities."[6] There is also evidence of immunologic effects such as the exacerbation of allergenic responses to known allergens and asthma-like symptoms.

The commenter has not provided any evidence to support the claim that PM traps using low sulfur fuel tend to cause shutdowns. These devices are going on unmanned units in numerous places, but there should be people in the towns who are in much closer proximity to the engines than the engines in remote locations across the United States. Regarding the concerns raised by the State of Alaska regarding the feasibility and cost of installing and operating DPF in remote villages, EPA is providing additional time in the final rule before new stationary engines in remote areas of Alaska are required to meet PM standards that would require DPF. The final rule requires new engines in remote areas of Alaska to meet the more stringent PM standards and use ULSD beginning with 2014 model year engines. The use of DPF for new nonroad and stationary diesel engines in the United States will be phased in from 2011 to 2015. Waiting until there is more widespread experience with operating and maintaining DPF

[4] Health Assessment Document for Diesel Engine Exhaust,'' U.S. Environmental Protection Agency, 600/8–90/057F, *http://www.epa.gov/ttn/atw/ dieselfinal.pdf,* May 2002.
[5] A number of other agencies (National Institute for Occupational Safety and Health, the International Agency for Research on Cancer, the World Health Organization, California EPA, and the U.S. Department of Health and Human Services) have made similar classifications regarding the diesel exhaust lung cancer hazard.
[6] "Health Assessment Document for Diesel Engine Exhaust," U.S. Environmental Protection Agency, 600/8–90/057F, *http://www.epa.gov/ttn/ atw/dieselfinal.pdf,* May 2002, p. 9–9.

would allow time for Alaska's concerns regarding the feasibility of maintaining DPF on engines in remote areas to be addressed. The type of engines most often used to power the remote villages were required by the original final NSPS to meet PM standards based on the use of DPF beginning with the 2011 or 2012 model year, depending on the engine size. Providing a delay until the 2014 model year for engines located in remote Alaskan villages would provide State with 2 to 3 years to gain experience with the operation of the controls and develop the equipment infrastructure needed to properly operate and maintain the DPF. In response to this comment, EPA consulted with vendors of DPF, who indicated that the installation and maintenance costs for the systems are not as high as the estimates provided by the State of Alaska.[7] EPA recognizes that the blending of used oil into diesel fuel is a concern for engines equipped with DPF; however, EPA believes that given the restrictions in the rule for used oil blending (no more than 1.75 percent of total fuel and no more than 200 ppm sulfur in the oil), the increase in sulfur caused by the blending should not be a significant concern for the operation of DPF-equipped engines.

5.5 Comment: One commenter (55) said that it supports the proposed revisions to 60.4216 of 40 CFR part 60, subpart IIII, affecting engines in Alaska.

Response: No response is needed.

5.6 Comment: One commenter (53) supported allowing used oil blending under the CI NSPS and reiterated its concerns from 2008. The commenter (53) argued that used oil blending is

[7] See memorandum titled "Summary of Calls with Vendors of Diesel Particulate Filters (DPF)" in docket EPA-HQ-OAR-2010-0295.

important for rural Alaska facilities. According to the commenter (53), the used oil that is used for blending with diesel fuel does not come from outside sources, but comes from within the facility from the operation of the facility's own engines. Being permitted to blend used oil for burning in the facility's own engine is important and decreases risks related to disposal and spills in areas that have limited resources available to deal with such costs, the commenter (53) said. Blending also provides additional energy from an available resource and according to the commenter (53), a significant environmental concern in rural Alaska is the improper disposal of used oil. In most rural Alaska communities, there are no permitted used oil disposal facilities and the cost of exporting used oil is burdensome and can be the same price or more than purchasing new oil, commenter 53 noted. According to the commenter (53), the Alaska Energy Authority has developed a system of used oil blending that is cost-effective, reliable, environmentally appropriate, and that is used by several power plants in rural Alaska. The commenter (53) recommended that used fuel blending be allowed in the rule at a maximum blend level of 1.75 percent; a level that the commenter (53) has determined will keep fuel within the American Society for Testing and Materials specifications.

Response: EPA acknowledges the commenter's concern on used oil blending, but notes that there is nothing in the rule that prevents the use of used oil unless it has a sulfur level above 15 ppm. Nonetheless, EPA believes it is appropriate to provide an additional provision to allow a very limited percentage of used oil (no more than 1.75 percent) as the commenter proposed. EPA is also requiring that the motor oil used for blending have no more than 200 ppm sulfur. Used oil blending, under this provision and in general, is permitted if the used oil is "on-spec," i.e., it meets the on-specification levels and properties of 40 CFR 279.11. If the used oil does not

meet these on-spec criteria the used oil would be considered a solid waste and subject to requirements under CAA section 129 for solid waste incineration units. The requirements for these units are in 40 CFR part 60, subpart CCCC.

6.0 Temporary, Replacement, and Marine Engines

6.1 Comment: Three commenters (37, 54 and 55) agree with EPA's treatment of temporary engines as not having to meet requirements beyond those for nonroad engines, and the proposed language in 60.4200(e) of 40 CFR part 60, subpart IIII, regarding temporary replacement engines. Commenter 55 suggested making the same change in 40 CFR part 60, subpart JJJJ.

Three commenters (37, 54 and 55) indicated that while they are supportive of the proposed language in 60.4200(e) of 40 CFR part 60, subpart IIII, regarding temporary replacement engines they do not entirely agree with EPA's rationale provided in the preamble to the proposed rule at 75 FR 32616 and another commenter (31) also does not agree with EPA's rationale. Commenter 54 said the language in the preamble could lead to confusion. Specifically, commenter 54 indicated that the preamble seems to incorrectly assume that any replacement engine is a stationary engine. Similarly, commenter 37 indicated that the language in the preamble to the proposed rule is confusing and inconsistent. Commenter 31 and 47 expressed similar concerns regarding EPA's interpretation. One commenter (37) recommended that EPA should clarify the language, in particular EPA's second paragraph. Equally, commenters 31 and 49 indicated that some of the supporting rationale language provided in the preamble to the proposed rule is overly broad and with the provision in 60.4200(e) of the proposed CI NSPS could lead to mobile source engines being inadvertently treated as stationary

sources. Commenter 31 asked that EPA remove 60.4200(e) from the CI NSPS or, as an alternative, modify what the commenter (31) believes to be overly broad language in the preamble, including "portable engines that replace existing stationary engines on a temporary basis are considered stationary engines" and add clarification to the language in the preamble on this issue.

Two commenters (31 and 49) provided an example of a situation where a portable generator is used temporarily when the primary generator is not in service. Three commenters (31, 49 and 54) said that EPA has made it clear that a portable generator is (absent the clarifications under the definition of a nonroad engine) a mobile source, not a stationary source and some commenters quoted the following language from the final 2004 nonroad rule (69 FR 38979) where EPA stated:

"The final standards are based on our evaluation of the differing technical issues presented by the two primary kinds of equipment in this category, mobile power generation equipment (generator sets) and mobile machinery."

The commenters (31, 49 and 54) recognize that the definition of a nonroad engines in 40 CFR 1068.30 places restrictions on using portable equipment for stationary purposes and cited 40 CFR 1068.30(2)(iii) of the definition of a nonroad engine:

"(2) An internal combustion engine is not a nonroad engine if:

…

(iii) the engine otherwise included in paragraph (1)(iii) of this definition remains or will remain at a location for more than 12 consecutive months or a shorter period of time for an engine located at a seasonal source. A location is any single site at a building, structure, facility, or installation. Any engine (or engines) that replaces an engine at a location and that is intended

to perform the same or similar function as the engine replaced will be included in calculating the consecutive time period."

Commenters 49 and 54 indicated that they believe the consecutive period language is intended to capture replacement of portable equipment with portable equipment, not the replacement of stationary equipment. The commenters (49 and 54) argued that the reference to "engine" in the underlined text in the above quoted language refers to a "nonroad" engine. Further, the commenters (49 and 54) cited EPA statements from the June 17, 1994 preamble to 40 CFR part 89, which said:

"A portable generator engine which functions as a permanent back-up generator and which is replaced by a different engine (or engines) that performs the same function would be an example of engines covered by (2)(iii). In such a case, the cumulative "residence" of time of both generators, including the time between removal of the original engine and installation of the replacement, would he counted toward the consecutive residence time period."

The commenters' (31, 49 and 54) point was that if the consecutive residence time calculation includes a permitted, non-portable stationary engine, as opposed to a portable engine operating as a permanent engine, originally contemplated as part of the existing stationary source older than 1 year, the commenters (49 and 54) said that the time will always be more than 12 months and any portable unit that replaces a permanent stationary unit even temporarily, will be considered a stationary engine. In the commenter's (49) opinion this in inaccurate and there is no meaning here.

Commenter 49 also presented the example where an existing emergency generator is being replaced by another emergency generator, but that during construction and installation, the facility might bring in a portable generator in the meantime during if there is a time period where

neither the existing emergency generator nor the replacement emergency generator is operating. The portable generator may be on a trailer at the facility, but is not at the exact same location as the existing emergency generator. The commenter (49) noted that the portable generator sitting on a trailer is clearly a nonroad engine because it is not replacing the existing unit and is not at the same location and the commenter (49) agrees that this portable unit should be treated identically to an engine brought to a site for less than 1 year for general maintenance or construction. Classifying the portable unit in this manner is critical, the commenter (49) said because otherwise, if the engine is considered a stationary unit, it would be subjected to Prevention of Significant Deterioration (PSD) and minor stationary source construction permit requirements. According to the commenter (49), portable generators frequently exceed permitting thresholds on a potential to emit (PTE) basis, however the actual emissions from the unit is minimal to none. The commenter (49) added that portable units do not quality as replacement units as defined in 40 CFR 51.166(b)(32) and consequently would be subject to the PTE test. The commenter (49) expressed that it does not agree with EPA treating any portable equipment that replaces a stationary unit to PSD and minor stationary source construction permitting requirements, even if the unit is temporarily at the site for less than 12 months. The commenter (49) recommended that EPA require stationary source permitting only if a portable engine stays or will stay at the stationary location for more than 12 consecutive months. The commenter (49) also asked that EPA either remove 60.4200(e) or revise the preamble discussion on this issue, particularly the statement: "Portable engines that replace existing stationary engines on a temporary basis are considered stationary engines" and clarify EPA's intentions.

Commenter 55 said that it believes that a nonroad engine is a nonroad engine until it no longer meets the definition in 40 CFR 1068.30. Commenter 55 indicated that it does not believe

that a nonroad engine is considered a nonroad engine and a stationary engine, as discussed in the preamble to the proposed amendments.

Commenter 47 asked that EPA clarify language on page 32616 of the proposed preamble that discusses portable engines, specifically the language in the third paragraph under the section C. The commenter (47) highlighted the language in the first three sentences of that paragraph to be most troublesome. The commenter (47) believes that this language as written is confusing when it comes to the status of portable engines that temporarily replace stationary engines and argued that this could actually cause temporary portable engines to be restricted in some jurisdictions. The commenter (47) wanted EPA to specifically clarify the language on this issue and that the same approach as taken when the CI NSPS was finalized in 2006 remains in effect. The commenter (47) indicated that it disagrees that portable engines that replace stationary engines temporarily should be treated as stationary engines, which the commenter (47) said is inconsistent with EPA's prior approach. Again, treating portable engines as such could lead to portable engines not be allowed to be used as temporary replacement units, the commenter (47) said, who stressed the importance and need for portable engines, highlighting the ability to quickly move a portable engine to replace a stationary engine that has experienced a malfunction or is in need of repairs that were not anticipated. The commenter (47) emphasized the significance of portable engines, which are critical to support facility operations short term while the main, stationary engine is temporarily out of service. According to the commenter (47), there are several State and local agencies who have categorical pre-construction permitting exemptions for nonroad or portable engines, if the engine meets the definition in 40 CFR 1068.30 of a nonroad engine (excluding paragraph (2)(ii) of that definition), e.g., Massachusetts. The commenter (47) argued that if EPA considers temporary replacement engines stationary sources

and subject to requirements under 40 CFR part 60, subpart IIII, State and local authorities may require pre-construction approval based on the engine being subject to NSPS (e.g., Colorado and Oklahoma). Also, the commenter (47) said that if such engines are considered stationary and regulated as such, it might be necessary for facilities to acquire a State construction permit prior to operation. The permit approval process could take several months, the commenter (47) said, which clearly would preclude the ability to use temporary, emergency replacement units. The commenter (47) does not believe that EPA needs to treat portable engines that temporarily replace stationary engines as stationary engines. The commenter (47) recommended that EPA at a minimum clarify that portable engines that replace stationary engines on a temporary basis that are undergoing bona fide maintenance and repair would not be considered stationary engines. In situations where the maintenance and repair cannot be documented, the portable engine should be treated as a stationary engine and its emissions should be included in emission calculations, the commenter (47) asserted.

Response: EPA notes that this rulemaking does not change the definition of nonroad engine or stationary engine and is merely reiterating its views on these longstanding definitions. EPA disagrees with the commenters' statements that portable engines that replace existing stationary engines on a temporary basis should not be considered stationary engines. The definition of nonroad engine explicitly states that "Any engine (or engines) that replaces an engine at a location and that is intended to perform the same or similar function as the engine replaced will be included in calculating the consecutive time period [for determining whether engines are nonroad or stationary]." See, e.g. 40 CFR 89.2 and 1068.30. The import of this language is that all engines that are at a location performing the same or similar function would be considered

stationary engines if the combined time period is greater than 1 year for a non-seasonal source. This is clear in the preamble to the rule that promulgated this definition.

The revised nonroad engine definition also includes a provision that if an engine is replaced by another engine within the 12 month period, the replacement engine should be considered in calculating the consecutive time period. This provision is designed to ensure that where an internal combustion engine is necessary for the operation of a stationary facility, the replacement of one particular engine with another would not prevent the engines from being included as part of the stationary facility (59 FR pages 31305, 31311).

Thus, all engines that perform the same or similar function at a location would be considered stationary if their combined residence time is greater than 1 year.

This is not inconsistent with the language in the preamble to the 2004 nonroad engine rule. Certainly mobile generators sets, i.e., those that are not defined to be stationary, would be covered by that rule. This would include many portable engines, but not those excluded from the definition of nonroad engine in paragraph (2)(iii) of that definition. Indeed, the reason why the stationary CI engine standards were coordinated with the nonroad engine regulations is because many of the same types of engines would be used in both nonroad and stationary applications. EPA notes that the language in the 2006 CI NSPS Response to Comment document is confusing in that it initially seems to be counter to the language regarding replacement engines in paragraph (2)(iii) of the nonroad engine definition, but it then caveats its initial statement by referencing that paragraph. To the extent the language in the 2006 document is inconsistent with this Response to Comment document, the language in the preamble to the initial nonroad rule, and the language in the regulatory text, it should not be relied upon.

The commenters' view that the language in the definition refers only to replacement of one portable engine with another is belied by the language in the definition ("Any engine (or engines) that replaces an engine at a location and that is intended to perform the same or similar function as the engine replaced will be included," *emphasis added*) and in the preamble language quoted above. The distinction the commenter attempts to make is also illogical in that the distinction it makes between the engines being replaced is not based on the criteria (e.g., residence time or the stationary nature of the replaced engine) found in the definition. In addition, the suggestion that word "engine" in the definition of "nonroad engine" should be interpreted to mean only nonroad engines is contrary to the plain language of the definition and is also illogical, since the point of the definition is to define what engines are nonroad engines, as opposed to other types of engines, and restricting the word "engine" to nonroad engine would defeat that purpose and would also involve circular logic. Nor does this interpretation mean that the residence time requirement will always result in engines being considered stationary engines, as in many instances (e.g., engines brought in to perform a particular service like construction or maintenance or drilling) the residence time language defines whether the engine is stationary or nonroad.

However, EPA agrees with the views of commenters that note the replacement engine must be at the same location as the engine it is replacing to be included in the same residence time, which may in many cases address the concerns of the commenters. EPA has revised the language of the preamble to adhere more closely to the language in the regulatory definition of nonroad engine.

Commenter 49 does not believe emissions from these engines should be included in the emissions for the stationary source, but the entire purpose of defining these engines as stationary

engines is to prevent sources from excluding these emissions (as well as the emissions of the engine they replace) in calculating emissions from the source, despite the fact that they clearly are tied to the permanent emissions profile of the source. The commenter does not explain why these engines would have potential-to-emit any greater than the engines they replace, unless they actually do emit more, in which case such emissions should be accounted for. It is not clear if the commenter is stating that operators would be required to account for the emissions of both engines at the same time even if one is truly replacing the other temporarily and they never operate at the same time. That issue is beyond the scope of the NSPS. In any case the provisions of both this definition and those in 40 CFR part 51 have been in place for many years and were not changed in this rule.

6.2 Comment: Several commenters (37, 54, and 55) provided their opinion and recommendations on how to treat stationary engines used in marine offshore settings. One commenter (54) said that marine engines should not be subject to land-based standards and indicated support for revisions to allow the use of marine based standards as opposed to NSPS for offshore platform installations. The commenter (54) indicated that these engines are normally nonroad engines that are subject to marine engine standards. The engines remain a nonroad engine until it no longer meets the criteria of the nonroad engine definition in 1068.30 and becomes instead a stationary engine, as defined in 40 CFR 60.4219 (CI NSPS) and 40 CFR 60.4248 (SI NSPS), according to the commenter (54). Further, the commenter (54) said that these criteria should apply if an engine replaces or acts as a stationary engine, or is on the platform for less than 1 year for general maintenance or construction activities. The commenter (54) said that if the marine engine is used in a stationary manner, the commenter (54) is

supportive of language being added to indicate that stationary engines in marine offshore settings may comply with applicable marine engine standards as opposed to the land-based standards. The commenter (54) asked that this language be added to both 40 CFR part 60, subparts IIII and JJJJ.

Two commenters (37 and 55) responded to EPA's request for comment on the need for stationary engines in marine offshore settings to use engines meeting the marine engine standards, rather than land-based engine standards. Commenter 55 said that it supports using marine-based standards for offshore platform installations. The commenter (55) said that those engines are nonroad engines subject to marine-based standards unless the engines stay in one location on the platform for more than 12 months. The commenter (55) believes that these criteria should apply if the engine replaces a stationary engine or is at the platform for less than 1 year for general maintenance or construction activities. In the event that the marine nonroad engine becomes a stationary engine, the addition of language in 60.4200(e) or another section of 40 CFR part 60, subpart IIII indicating stationary engines in marine offshore settings may comply with applicable marine engine standards rather than the land-based engine standards in 40 CFR part 60, subpart IIII. For consistency, this approach should also be applied to the SI NSPS (40 CFR part 60, subpart JJJJ) and the NESHAP (40 CFR part 63, subpart ZZZZ).

Commenter 37 said that it supports the use of either nonroad or marine certified engines for stationary engines on offshore platforms because it provides flexibility and advantages where space and weight limitations could lead to significant considerations. Furthermore, in the commenter's (37) opinion, the difference between emissions from marine and nonroad engines should be of minimal concern because of the remote location of offshore platforms.

Response: EPA requested comment on the need for stationary engines in marine offshore settings to use engines meeting the marine engine standards, rather than land-based engine standards. Based on comments received on this issue, EPA agrees that it would be appropriate to allow stationary engines used in marine offshore settings to meet marine engine standards. EPA understands that engines used in these settings are generally certified to marine standards and that it may not be possible to know how an engine will be used throughout its life when it is first used. EPA does not see a need to require engines utilized in the same marine offshore setting to be certified to different standards based solely on the time an engine remains in one offshore location. It therefore is appropriate to require engines used in both mobile and stationary marine offshore applications to be able to meet the same standard.

7.0 Digester Gas Engines

7.1 Comment: One commenter (48) requested relief for stationary engines fueled by digester gas claiming that the emission standards applicable to these engines are hard to comply with. Moreover, the digester gas that is used in engines to create power is generated from wastewater treatment and contains methane, a potent greenhouse gas, the commenter (48) said. This gas can be used to power engines while reducing utility reliance on other fuel sources and decreasing greenhouse gas emissions, the commenter (48) argued and believes that utilities should be encouraged to operate engines on digester gas, as opposed to going with the option of purchasing power and wasting a valuable fuel source by flaring the digester gas created from the wastewater treatment process. Therefore, the commenter (48) asked that stationary engines that utilize digester gas fuel be exempt from the NSPS.

Response: EPA contacted the commenter for further information regarding this comment and confirmed with the commenter that the comment pertains to both 40 CFR part 60, subpart IIII and subpart JJJJ. The commenter indicated that its members operate digester gas fueled engines that are both CI and SI engines, and according to the commenter, these engines would have difficulties meeting the NSPS emissions standards. What the commenter is requesting related to exempting digester gas engines that are SI engines is not in the scope of this rulemaking. This rulemaking only makes substantive changes to 40 CFR part 60, subpart IIII (CI NSPS) and minor changes to 40 CFR part 60, subpart JJJJ (SI NSPS) more for consistency purposes. EPA is not exploring issues that are unique to the SI NSPS at this time. The commenter did not provide any information to support the claim that digester gas engines cannot meet the applicable emission standards. In addition, 60.4217 in 40 CFR subpart IIII allows owners/operators of engines using special fuels to petition the Administrator for alternative emission standards for the engines.

8.0 Test Methods

8.1 Comment: One commenter (37) said that the test method for stationary engines with a displacement at or above 30 l/cyl needs to be changed from Method 5 to Method 5B or Method 17. The commenter (37) indicated that it has previously submitted a letter to EPA describing its concerns with using Method 5 for these engines. The commenter (37) reiterated its position that Method 5 is inappropriate and that EPA should allow alternative methods for measuring PM. The main reason the commenter (37) believes Method 5 is not suitable is because it requires the use of glass fiber filters maintained at 120 degrees Celsius (°C). The method also requires that in

sources that have sulfur dioxide (SO_2) or sulfur trioxide (SO_3) that the filter material be unreactive to these pollutants and International Organization for Standardization (ISO) method 9096 2003 does not recommend glass fiber filter use where this reaction occurs. The commenter (37) went on to say that the temperature required by Method 5 is generally much lower than normal exhaust temperatures from large displacement engines. This necessitates cooling of the exhaust gas in order to use Method 5, the commenter (37) said, which would lead to the formation of additional condensation particles that would affect the sampling results. The commenter (37) argued that the method would not yield reproducible results and recommended that due to inconsistencies, EPA should allow alternative methods. Commenter 37 recommended that EPA raise the PM sampling temperature in Method 5 to a minimum of 160°C, which essentially means changing Method 5 to Method 5B, and also allow stationary engines to use Method 17 as an alternative.

Response: EPA disagrees with the comment that EPA Method 5 does not provide accurate and precise measurements of PM. The statements in EPA Method 5 and ISO 9096 2003 regarding the selection of filtration media that are unreactive to SO_3 are intended to ensure that the proper filter media are used. When acceptable filter media are selected, including glass fiber filters that are unreactive to SO_2 or SO_3, EPA Method 5 has been shown to provide reproducible results irrespective of the filtration temperature chosen.

EPA also disagrees that EPA Method 5 cannot achieve a filtration temperature of 120°C (250°F) since there are no procedures for cooling the sample gas from the stack temperature to the required filtration temperature. EPA Method 5 is silent on the method for cooling the sample gas, as this is left to the discretion of the source test individual. The method employed depends

upon the stack gas temperature, the required filtration temperature, and the equipment available to the individual test contractor. In most situations, no special procedures are required since sufficient cooling is achieved by normal air exposure of the probe and filter holder. Where filtration temperature is likely to exceed the method specified temperature, contractors have used specially constructed air cooled or water cooled probes to achieve the proper temperature.

Regarding the use of Method 5B or Method 17 as an alternative to Method 5, the mass of filterable PM emissions perhaps more than any other pollutant is defined by the test method and the associated sampling conditions. Filter temperature is the primary driver of differences between results from different methods along with the relative concentrations of constituents of the stack gas that condense at or above the filter temperature. For fossil fuel combustion products, there are ash particles that will be solid and collected at any practical sampling temperature. Any of the three methods will measure the same mass of ash-derived particle emissions. The complexity comes because of some acid gases also in the stack exhaust, particularly sulfuric acid from oxidation of the sulfur in the fuel. These acid gases begin to condense at temperatures below 160°C more or less in proportion to the acid gas concentration. That means that a method such as Method 5B with a filter temperature controlled to 160°C will collect less mass of these acid gas particles than will a Method 5 with a filter temperature controlled to 120°C. Method 17 provides for inserting the filter in the stack presenting an even more variable measurement. The practical stack gas upper temperature limit for Method 17 is about 160°C but the method can be used at much lower temperatures (until water droplets form in the stack). EPA cannot predict how results collected at different filter temperatures will compare for a particular source or between sources except that particulate samples collected at lower filter temperatures will produce higher mass emissions than samples collected with higher

filter temperatures. EPA does not agree that it would be appropriate to allow the use of Method 5B or Method 17 as an alternative to Method 5 due to this difference in results, and lack of predictability regarding how particulate levels will change at different temperatures.

8.2 Comment: One commenter (37) noted that the June 13, 2007, final NSPS for Electric Utility Steam Generating Units and Industrial-Commercial-Institutional Steam Generating Units specified the use of EPA Method 5 with a sample temperature of 160°C, and also allowed EPA Method 17 for boilers.

Response: The commenter is correct that NSPS for Electric Utility Steam Generating Units and Industrial-Commercial-Institutional Steam Generating Units allows the use of EPA Method 5 at 160°C (320°F). EPA Method 5 at 160°C is used for compliance since all test data used as the basis of the numerical emissions limit in that NSPS were collected at 160°C.

8.3 Comment: One commenter (27) said that it agrees with EPA's earlier response to previous comments regarding Method 5. The commenter (27) indicated that material deposited in the probe as sample gas cools from stack temperature to 248 °F required by Method 5 will be recovered and weighed under the Method 5 normal procedures. Despite the commenter (27) noting this, it is concerned about another aspects of the method, i.e., PM emissions may still be in the vapor phase at temperatures of 248°F and the commenter (27) recommends that EPA lower the probe and filter temperature to more accurately represent actual PM emissions. Alternatively, commenter 27 suggested that EPA require the use of the new "back half," Other Test Method (OTM) 28 for measure PM emissions. Further, the commenter (27) noted that if

emissions are found to be very low, Method 5I would be a more appropriate alternative than Method 5 because it ensures a lower detection limit for PM collected from low concentration sources. The commenter (27) added that the above temperature considerations apply to Method 5I also. In the commenter's (27) opinion, if in-stack sampling methods are chosen, i.e., Method 17, Method 201A or OTM 27, OTM 28 should also be specified to assure that all PM that is solid or aerosol at ambient temperature will be quantified.

Response: EPA Method 5 does exclude PM which are vaporous at elevated temperatures, but which condense to form fine PM at ambient temperatures. The addition of the recently promulgated revised Method 202 (which replaced both the 1990 version of Method 202 and OTM 28) to Method 5 quantifies this additional PM. The maximum filtration temperature for Method 202 is 30°C (85°F) and would be expected to retain a greater mass that any of the previously mentioned test methods. While each of these test methods will quantify a different mass of PM, when performed consistently within their respective specifications, each method provides for precise mass emissions measurements.

9.0 Definitions

9.1 Reconstruction

9.1.1 Comment: Several commenters (26, 32, 37, 39, 40, 43, 46, 50, 53, and 55) are concerned with the proposed definition of reconstruction. According to Commenter 55, this and other terms (date of manufacture and installed) have been included by EPA in order to redesignate stationary engines currently not subject to the rule to become subject to NSPS after conducting routine

maintenance, repair, rework, and overhaul. Several commenters (43, 46, 50, and 55) stated that EPA has not provided sufficient rationale for adding this new definition and the term is significantly different from other NSPS definitions and applicability determinations regarding reconstruction. One commenter (55) also stated that the definition is inconsistent with the definition used in the NESHAP. Two commenters (43 and 55) said that the proposed revisions add problems and commenter 55 is of the opinion that the rulemaking adds burden and implementation issues to the regulated community beyond currently unresolved issues, which the commenter (55) said it has previously brought to EPA's attention.[8]

One commenter (50) said that if the definition is finalized as proposed the outcome for the commenter's (50) industry is that most existing natural gas engines will trigger reconstruction at every overhaul. Subsequently, nearly all these engines would transition from an existing engine to being subject to 40 CFR part 60, subpart JJJJ, in an infeasible time frame. As discussed in comment 9.2.1, the commenter (50) further indicated that this would also result in (due to the removal of the crankshaft language) these engines having to meet new engine standards; levels that these older engines were not designed to achieve and some would be incapable of meeting. The commenter (50) asserted that the proposal will have substantial cost impacts that necessitate a cost-benefit analysis to support the justification for basically instituting a new rulemaking for existing engines.

Two commenters (46 and 50) said that the proposed definition excludes the cost of fundamental components from the fixed capital costs, such as the engineering costs, construction and site installation and startup costs, and the costs associated with auxiliary components that service or that are critical to the engine's operation. Commenter 55 made similar claims. One

[8] Letter from Stephanie R. Meadows, Senior Policy Advisor, American Petroleum Institute, to Michael Horowitz, Office of General Counsel, U.S. Environmental Protection Agency. March 10, 2010.

commenter (50) indicated that there are several examples of precedent that demonstrates the components that should be included in fixed capital costs. The commenter (50) cited to several EPA applicability determinations (e.g., Control #9800085 dated 5/11/98 and Control #0200048 dated 9/3/99), pointed out the language in EPA's December 16, 1975 preamble to the NSPS, and other applicability determinations EPA has conducted, which all demonstrate that key components necessary for engine operation should be included in the fixed capital cost calculation. Again, the commenter (50) said that it believes EPA has failed completely in providing the public justification for changing the definition, which EPA is legally obligated to do.

Commenter 43 asserted that it strongly objects any exclusion of components necessary for engine operation in the reconstruction determination and stressed that such components like the cooling system, should be included even though it is not connected to the engine like it is for smaller engines.

Two commenters (43 and 55) requested that EPA use the definition of reconstruction that is currently in 40 CFR 60.15(b) in the final rules and asked that the proposed new definition of "reconstruct" in 60.4219 and 60.4248 not be included in the final rules. According to commenter 55, reconstruction under 40 CFR 60.15(b) differs substantively from the proposed definition under 60.4219 and 60.4248, including unjustifiably designating many rebuilt engines, that would have remained "existing", as "reconstructed" (and therefore subject to new emission limits). Likewise, commenter 46 requested that EPA maintain the definitions in 40 CFR 60.15(b) and 40 CFR 60.15(c), for reconstruction and fixed capital cost, respectively, in the final SI NSPS. The costs of the compressor and any driven equipment and other components not needed to operate the engine should be excluded from the term fixed capital cost, the commenter (46) said.

Similarly, commenter 50 asked that EPA retain the reconstruction definition from 40 CFR 60.15, but limit the applicability to stationary SI engines as follows in 60.4248:

"Reconstruct means to replace or refurbish components of an existing engine to such an extent that the fixed capital cost of the new and refurbished components exceeds 50 percent of the fixed capital cost of a comparable entirely new facility. The fixed capital cost of the new and refurbished components and the fixed capital costs of the comparable new facility shall not include the cost of replacing components driven by the engine, such as pumps, generators and compressors, or other components not connected to the engine or not essential for engine operation. For purposes of reconstruction of SI engines, an existing stationary engine is defined as including those components necessary for engine operation and those components mounted to or within the cylinder block, the engine housings, and engine mounted components. Those components that relate to both the engine and the driven equipment shall only be included in the fixed capital cost by the pro-rata amount the directly relates to the engine."

The commenter (50) argued that stationary industrial engines are intended to be overhauled multiple times during their useful life through the replacement of certain parts that experience normal wear and tear, and that this standard overhaul process does not mean that it would be feasible for the engine to meet NSPS emission standards because the replacement of the components during the normal overhaul process does not typically alter the technological capabilities of the engine.

If EPA includes the definition of "reconstruct" in the final rules, commenters 43, 46, 50, and 55 recommended that the definition be revised to make sure that all engine components are included in the reconstruction determination that are necessary for engine operation. According to commenter 55, the proposed definition seeks to restrict the existing stationary engine

components to a narrow prescribed list of included and excluded parts. The commenter (55) strongly recommends relying on the 40 CFR General Provisions definition and associated determinations.

Two commenters (43 and 55) said that the definition deviates from EPA's Applicability Determination Index (ADI) and Control Cost Manual, which indicate which costs should be included in conducting the reconstruction cost analysis. Commenter 55 claimed that EPA's historical definition of the fixed capital costs associated with reconstruction includes peripheral, indirect costs and all depreciable components; whereas the proposed definition is more narrowly defined. Commenter 55 asserted that this narrow definition shows a continued reliance by EPA on a mobile source or small, packaged engine design, and that this paradigm is inappropriate for many stationary units affected by the rule. Furthermore, the commenter (55) stated that the proposed definition would also inappropriately and unjustifiably eliminate the provision for demonstrating technological and economic feasibility of the reconstructed source meeting the applicable standard(s).

Commenter 55 believes that the term "reconstruct" is not well defined and is not technically supported by EPA. If the term is included in the final rules then EPA should explain why it is taking a different position compared to previously when in response to comments on the 2008 SI NSPS EPA said that the General Provisions definitions are appropriate, commenter 55 said. Additionally, EPA should provide the basis and rationale for the definition and also present the cost and benefit of finalizing this definition.

If the definition is included in the final rule, commenter 55 requested that the definition only affect reconstruction that began after the effective date of the final rule. The commenter (55) does not believe that retrospective review is justified and should not be required. Plus, the

commenter (55) asked that EPA also define related terms that are used in the definition in order to prevent confusion and to ensure clarity. For example, the terms "refurbish" and "refurbished components" are not defined in the proposal, the commenter (55) said, and additionally, if these terms are used in the final rule, they need to be distinguished from other terms like routine preventative maintenance, repair, overhaul, replacement and rework.

Commenter 37 supports a specific definition for "reconstruction," but is concerned about EPA's change in the manufacturing date criteria for reconstructed engines. The commenter (37) had previously submitted comments on the original proposed SI NSPS that a specific definition for "reconstruction" was needed and the commenter (37) said that it had indicated at that time that the current definition in the General Provisions of 40 CFR part 60 was outdated and not suitable for stationary engines and that some of the terms in the General Provisions are not appropriate for stationary engines. The commenter (37) indicated that it is generally supportive of the definition of "reconstruction" that EPA has proposed, but believes that when determining the cost to reconstruct an engine, the costs for ancillary components such as external cooling or fuel supply should be included in the total new engine costs because such components are necessary to make sure the proper fit and function of the new engine. Other commenters (46 and 50) echoed these comments asserting that the costs for the operation of a comparable new facility should include the costs associated with construction, engineering, and equipment necessary for operation of the facility, which would be consistent with the historical approach EPA has taken. EPA should explicitly recognize commenter 46 said that the costs of the cooler, skid, wiring and other equipment necessary for the engine to operate should be included in the reconstruction calculation on a pro-rata basis. The commenter (46) additionally recommended that EPA add a definition for "comparable entirely new facility" to the definition of "reconstruct" in order to

make sure that the reconstruction cost denominator includes the cost of all components necessary for the engine to operate. Similarly, commenter 50 said that EPA should clarify the meaning of comparable entirely new facility and in the commenter's (50) opinion the term should include only the engine and the relevant portions of components that are necessary for engine operation.

According to the commenter (37), such components would be necessary if an owner was to purchase and install a new engine and therefore should be included in the reconstruction determination. Similarly, commenter 40 said that the costs of a comparable new engine have not been properly defined and a new engine cannot simply with dropped in place, but may require different components than the old engine and should also include facility modifications necessary in order to accommodate the new engine. Another commenter (39) also agreed with previous commenters that ancillary components should be included in the determination. Commenter 40 specifically recommended that EPA incorporate the following language into the definition in 60.4219 and 60.4248:

"For the purposes of reconstruction, the costs of a comparable new stationary engine include those components mounted to or within the cylinder block, the engine housings, engine mounted components, ancillary components and facility modifications necessary to allow a new engine to fit and function in the existing engine's application."

One commenter (39) asked what is supposed to be included in the fixed capital cost determination, and specifically wanted to know what rates should be used in calculating the total labor costs because there is a wide variation. Commenter 39 recommended that if labor is part of the fixed capital cost then EPA should define the cost of labor and suggested that EPA specify that sources must use the Federal Government minimum wage.

The commenter (37) also said that EPA should also include the technological criteria, in addition to the cost criteria in the definition of reconstruction in the final rule for stationary CI and SI engines that was part of the original definition of reconstruction. The commenter (37) argued that even though a source exceeds the 50 percent capital cost threshold, it may be technologically and economically infeasible to meet the emission standards for new engines. Commenters 46 and 50 similarly expressed that the technical and economical feasibility criteria should be put back into the definition of reconstruction. These are key components of the concept of reconstruction included in the original rule, the commenter (50) said, which is something that prevents owners from prematurely retiring engines prior to the end of their useful life because they cannot meet the standards for new engines in an economic way. To this point, EPA has always included the technical and economical criteria in the reconstruction analysis and EPA is legally required to explain the rationale for this regulatory decision through data, analysis, and demonstrably rational decision-making. Motor Vehicle Manufacturers Ass'n v. State Farm Mutual Insurance Co., 463 U.S. 29, 43 (1983).

Commenters 37 and 40 said that EPA should in the final CI and SI NSPS include the criteria currently in 40 CFR 60.15 when determining reconstruction that takes into account the technical and economical feasibility of meeting the standards in those two parts.

Similarly, commenter 53 said that the proposed definition of reconstruct is a departure from how EPA typically defines the term in the General Provisions (40 CFR 60.15(b)), which includes language regarding the technical and economical feasibility of meet the standards in 40 CFR 60.15(b)(2). As other commenters have noted, commenter 53 also does not believe that EPA has adequately explained the reasons for proposing a different reconstruction provision. The commenter (53) recommended that EPA provide an explanation for this and describe why it

believes the rule should not use the definition from the General Provisions. Further, the commenter (53) believes that it is not feasible for existing reconstructed engines to meet Tier 4 standards without applying retrofit add-on control technologies. As it relates to remote rural areas of Alaska, the cost, complexity and risk of utilizing these control technologies on prime power plants are not justified considering the minimal PM reduction that would be achieved, in the commenter's (53) opinion.

One commenter (26) asked that EPA clarify the requirements that apply to reconstructed engines. Specifically, the commenter (26) believes that the language in II.F. of the preamble to the proposed rule that states "EPA is also proposing to add provisions to the NSPS that require reconstructed engines to meet the emissions standards for the model year in which the reconstruction occurs if the reconstructed engine meets any of…" and the language in 60.4201(f) and 60.4202(g) that states "Notwithstanding the requirements in [the above paragraphs] of this section, stationary CI internal combustion engine manufacturers are not required to certify reconstructed engines; however they may elect to do so" appear to be conflicting. The commenter (26) asked that EPA clarify if reconstructed engines are required to meet emission standards. In an attempt to clarify the requirements for reconstructed engines, the commenter (26) suggested that EPA include specific sections with the requirements for reconstructed engines to make it clear what applies to these engines.

Commenter 43 expressed that it could not provide substantive comments on this issue particularly as it relates to suggesting specific changes to the definition because it does not understand EPA's intent with the proposed changes. If EPA identifies the goals in proposing revisions affecting the reconstruction determination process, the commenter (43) said it could provide additional comments and recommendations.

Response: EPA proposed to add a definition of "reconstruct" to the CI and SI NSPS as an attempt to clarify the meaning of reconstruction. EPA's objective with the proposal was to provide a more specific definition applicable to stationary engines rather than the broader definition provided in the General Provisions of 40 CFR part 60. The proposed definition was intended to clarify how to conduct the reconstruction analysis by specifically proposing to include a definition that would be applicable to stationary engines subject to NSPS. EPA believed that providing a specific definition applicable only to stationary engines would be beneficial by bringing clarity to how reconstruction is determined in the stationary engine setting.

EPA did not expect the proposed change to be controversial, nor did EPA anticipate that the proposed change would cause such significant concern among affected sources. However, as illustrated in the summary of comments on this issue, several affected stakeholders strongly opposed EPA's suggested changes to the historical definition of reconstruction. Based on the extensive concerns provided by commenters and subsequent information EPA has received from stakeholders after the proposal, EPA determined that it is appropriate to not include the proposed definition of "reconstruct" in the final rule. Instead, EPA is finalizing the rule using the definition of "reconstruction" from the General Provisions of 40 CFR part 60. Again, EPA intended to provide more guidance than what was originally provided in the rule on reconstruction; however, it is nearly impossible to capture all potential situations in a definition. EPA believes it is appropriate to continue to rely on the definition in 40 CFR 60.15. Therefore, EPA is not finalizing the proposed definition of "reconstruct."

9.1.2 Comment: Two commenters (37 and 40) said that EPA should indicate which parts of 60.15 of the General Provisions in 40 CFR part 60 apply to stationary engines.

Response: EPA is not finalizing the proposed definition of "reconstruct," but is instead pointing to 40 CFR 60.15 for the definition of "reconstruction." Therefore, it is not necessary to indicate in Table 8 of 40 CFR part 60 subpart IIII and Table 3 of 40 CFR part 60 subpart JJJJ which parts of the General Provisions of 40 CFR part 60 apply, because the entire part applies.

9.1.3 Comment: One commenter (26) suggested that there may be a typo in 60.4219 and 60.4248 of the proposed rule language and asked if the text "external cooling for fuel supply" should be replaced with "external cooling or fuel supply."

Response: The language the commenter is referring to was in the proposed definition of "reconstruct." EPA is not including this definition in the final rule, but is pointing to 40 CFR 60.15 for the definition of "reconstruction."

9.2 Date of Manufacture

9.2.1 Comment: A number of commenters (26, 31, 32, 37, 40, 43, 46, 50, and 55) took issue with the criteria in the definition of the "date of manufacture" and asked that the definition either be removed or revised.

Commenters 43 and 55 indicated that the criteria in the definition are flawed and inconsistent with previous definitions of reconstruction. Commenter 55 stated that it does not

understand EPA's motivation or objectives for the significant revisions reflected in the proposed definition of manufacture date, and therefore could not offer detailed comments to improve EPA's proposal at this time. Commenters 46 and 50 said that EPA has not provided a reasonable explanation for the definition either. According to commenter 50, EPA has totally failed in meeting its legal obligation to justify applying new engine standards to reconstructed engines and contradicts the original SI NSPS, where the commenter (50) cited text indicating that EPA recognized the need for different standards for certain reconstructed engines. Several commenters (32, 39, 43, 46, 50, and 55) are of the opinion that it is not appropriate to include the removal of the crankshaft as criteria for designating an engine being subject to new standards. This component is frequently removed during inspection and maintenance, according to commenters 32, 39, 46, and 50, who suggested that the criteria related to the crankshaft be removed entirely. According to commenter 55, removal of the crankshaft is sometimes necessary to access components, but this should not constitute replacement.

Commenter 39 asked that the replacement of the crankshaft be included in the fixed capital cost of reconstruction. According to commenter 39, the crankshaft does not have an effect on the engine's emissions. Further, commenter 39 expressed that if the definition is finalized as proposed, it could lead to rebuilding engines properly being impossible due to the increase in costs. It could certainly lead to a rebuilding process that is lesser quality where the crankshaft is not inspected and new bearings are simply installed without removal and inspection of the components, the commenter (39) said. According to the commenter (39), there would be enforceability issues as well because during an inspection it would not be possible to determine whether the crankshaft had been removed or not.

At a minimum, commenter 32 recommended that EPA at least allow the removal and reassembly of the original engine crankshaft. Similarly, commenter 43 said that at a minimum, EPA should indicate that replacement of the original crankshaft would trigger a new engine classification, not simply the removal of the crankshaft. Also, the definition of "date of manufacture" does not consider the feasibility assessment of 40 CFR 60.15(b)(2), the commenter (55) said. EPA's proposed amendments would likely require engine replacement in some cases because retrofit control to achieve new engine standards may not be feasible, according to commenter 55. Commenter 55 said that the proposed definition is an important issue because it could have costly implications with little or no benefit, since emission standards may not be achievable (for reconstructed engines categorized as new based on the redefined manufacture date).

One commenter (37) opposes the definition of the "Date of Manufacture" and said that it has significant concerns with the definition. The commenter (37) said that removing the crankshaft alone should not trigger the need to meet new engine standards. According to commenter 37, a relatively new engine might need the crankshaft to be removed or replaced if it experiences a main bearing failure, but the engine might not need other extensive reconstruction procedures in this case and subsequently the commenter (37) does not believe added modifications or engine replacement necessary to meet new engine standards would be justified in such a situation. Commenters 37 and 46 do not believe that the removal of the serial number from the engine should necessitate the need to comply with new engine standards. That provision could restrict the current practical and effective remanufacturing of engines for stationary purposes, according to commenter 37. One commenter (50) said that the proposed changes to the date of manufacture definition constitute significant concern for industry because

of the cost and operational impacts, plus regulatory confusion the commenter (50) believes the changes create. Based on the criteria for assigning a new date of manufacture, the commenter (50) argued the possibility that some existing engines may become obsolete due to the 1 g/HP-hr NO_x emission limit, which for lean burn engines may not be achievable. The commenter (50) supported this argument by indicating that lean burn engines cannot use non-selective catalytic reduction (NSCR) technology, which reduces NO_x emissions and would theoretically make it feasible to reach a 1.0 g/HP-hr limit, because of the excess oxygen in the exhaust. The technology that is applicable to lean burn engines is oxidation catalyst, but the technology does not reduce NO_x, the commenter said (50). Therefore, lean burn engines, which typically emit around 1.5 to 2.0 g/HP-hr of NO_x would become unusable if it receives a new date of manufacture, according to commenter 50. Further, the commenter (50) claimed that this would lead to rich burn engines replacing lean burn engines because of rich burn engines are capable of reducing NO_x emissions by NSCR. In the commenter's (50) opinion, lean burn engines are inherently lower emitting, more fuel efficient and emissions are stable. For example, in terms of efficiency, the commenter (50) indicated that a rich burn engine utilized about 6,220 million British Thermal Unit per year more of fuel than a lean burn engine that was similarly sized.

Commenter 46 indicated that the serial number could be inadvertently be knocked off during transportation or use, and asked that it also not be included as a criteria in the final rule. The commenter (46) indicated that it believes that if EPA finalizes a different definition of reconstruct, as previously suggested by the commenter (46), that the issue concerning the date of manufacture definition is generally resolved since the date of manufacture definition incorporates the definition of reconstruct. Again, the commenter (46) emphasized the importance of not including the removal of the crankshaft and the reference to the serial number

because those two components do not indicate that an engine has undergone modification at the end of its useful life nor to the degree that the engine can technically and economically meet the new engine standard. Commenter 46 recommended that EPA make the following revisions to the proposed definition of date of manufacture in the final rule:

"Date of manufacture means one of the following things:

(1) For freshly manufactured engines and modified engines, date of manufacture means the date the engine is originally produced.

(2) For reconstructed engines, date of manufacture means the date the engine was originally produced, except as specified in paragraph (3) of this definition.

(3) Reconstructed engines are assigned a new date of manufacture if ~~the crankshaft is removed as part of the reconstruction or if~~ the fixed capital cost of the new and refurbished components exceeds 75 percent of the fixed capital cost of a comparable <u>entirely</u> new <u>facility</u> ~~engine~~ (see the definition of "reconstruct"). An engine that is produced from a previously used engine block does not retain the date of manufacture of the engine in which the engine block was previously used if the engine ~~serial number was removed (or the engine otherwise loses its identity), or the engine~~ is produced using all new components except for the engine block. In all these cases, the date of manufacture is the date of reconstruction or the date the new engine is produced."

One commenter (50) said that the automatic trigger of 75 percent in the fixed capital cost of a comparable new engine will most likely make lean burn engines obsolete and subsequently requiring it being replaced by a rich burn engine. The commenter (50) indicated that if EPA retains the automatic 75 percent trigger in the definition of date of manufacture in the final rule, the commenter (50) asked that EPA specify that if reconstructed facilities must meet the engine

standard for existing engines in 60.4233(f) and not the new engine standard, claiming that this approach would meet the economically and technically feasible regulatory standard.

Commenter 50 recommended a very similar definition, except that the commenter (50) suggested that paragraph (3) of the definition be revised to read:

"An engine that is produced from a previously used engine block does not retain the date of manufacture of the engine in which the engine block was previously used if the engine is produced using all new components except for the engine block."

Commenters 43 and 55 recommended a different modified definition, with the following changes to paragraph (3) of the Date of Manufacture definition:

(3) Reconstructed engines are assigned a new date of manufacture if ~~the crankshaft is removed as part of the reconstruction or if~~ the fixed capital cost of the new and refurbished components exceeds 75 percent of the fixed capital cost of a comparable new engine (see the definition of "reconstruct"). An engine that is produced from a previously used engine block does not retain the date of manufacture of the engine in which the engine block was previously used if the engine serial number was removed (or the engine otherwise loses its identity), or the engine is produced using all new components except for the engine block. In all these cases, the date of manufacture is the date of reconstruction or the date the new engine is produced."

Commenters 43 and 55 asked that if EPA does not remove the crankshaft criteria that EPA at least modify the criteria to specify that a new date of manufacture is triggered if the crankshaft is replaced (not removed). Commenter 55 also recommends that the following text be replaced with simply "the date the engine is placed into service following reconstruction:"

"An engine that is produced from a previously used engine block does not retain the date of manufacture of the engine in which the engine block was previously used if the engine serial

number was removed (or the engine otherwise loses its identity), or the engine is produced using all new components except for the engine block. In all these cases, the date of manufacture is the date of reconstruction or the date the new engine is produced."

According to the commenter (37), those engines are normally built from major components from failed or worn-out engines. The failed or worn-out engines are sent as cores to the engine remanufacturer, according to the commenter (37), in exchange for a remanufactured engine. In the process, the used engine loses its identity and becomes loose parts, and the remanufacturer determines which parts can be re-used, according to the commenter (37). A mixture of new and re-useable components is used in assembling a remanufactured engine and unique serial numbers are assigned with no correlation to the original engines, commenter 37 said. The entire process provides end-users with cost-effective options the replaces that need of rebuilding engines in place or in a repair shop, the commenter (37) said. The commenter is of the opinion that using the removal of the serial number as a criterion alone to comply with new engine standards would lead to an increase in the number of engine rebuilds performed in less-structured facilities. The commenter (37) also expressed that it does not concur with the requirement that a relatively new engine needing extensive repairs should not need to comply with new engine standards. The commenter (37) said that as it previously recommended, consideration should be given to take into account the age of the engine. It was recommended by the commenter (37) that reconstruction should not be triggered unless the existing engine is at least 15 years old compared to the current model year. The commenter (37) believes that a 15-year threshold would be appropriate as one of the factors in determining if compliance with new engine standards is required. Commenter 37 also indicated that there is a precedent for the 15-year threshold in the replacement engine provisions in 40 CFR 60.4210(i). The commenter (37)

further argued EPA's proposed definition claiming that it would impose requirements beyond those required for nonroad and marine engine that are reconstructed and remanufactured. The commenter (37) noted that the definition proposed would lead to a separate and new set of requirements for stationary engines only that are refurbished or remanufactured, that would change current industry practice by altering the date of manufacture and consequently the emission limits that apply for a small group of such engines. The commenter (37) argued that since EPA has followed mobile and marine regulations in areas of emission standards, test methods and other requirements, it is not correct or appropriate to apply different and more stringent requirements on one subset of stationary engines, i.e., reconstructed engines. Instead, the commenter (37) recommended that EPA adopt the following definition in the final rules:

"Reconstructed engines are assigned a new date of manufacture if the engine is more than 15 years old relative to the current model year and the fixed capital cost of the new and refurbished components exceeds 75 percent of the fixed capital cost of a comparable new engine (see the definition of reconstruct). For reconstructed engines meeting the above criteria, the date of manufacture is the date that reconstruction is commenced."

Commenter 40 echoed commenter 37's points on this matter (commenter 40 also concurs with all of commenter 37's comments), and specifically recommended that EPA remove paragraph (3) of the proposed definition of the date of manufacture and apply the reconstruction specific emission limits that are already in the CI and SI NSPS, which the commenter (40) stated already adequately consider the economically and technically feasible opportunities for updating older engines. Alternatively, if EPA does not revise the definition as suggested and the criteria that require reconstructed engines to meet the latest standards are retained, the commenter (40) expressed EPA should revise the current proposed criteria, including changing the crankshaft

criteria to when it is replaced or refurbished as part of reconstruction. Consistent with prior commenters, the commenter (40) does not believe the crankshaft is an appropriate trigger because it is routinely removed for inspection and possibly replaced if necessary. Commenter 40 said that EPA should make sure that in the definition, remanufacturing is treated consistently with other rebuilding practices. In the commenter's (40) opinion, replacing or refurbishing crankshafts would only be appropriate triggers if the definition of reconstruction is revised as commenter 40 recommended in comment 9.1.1. Also, the proposed trigger related to the 75 percent fixed capital cost in paragraph (3) of the proposed definition of date of manufacture is only acceptable if the definition of reconstruction is revised according to the commenter's (40) recommendation in comment 9.1.1. Moreover, the commenter (40) said that the language in paragraph (3) of the definition of date of manufacture related to an engine produced from a previously used engine block is completely inconsistent with EPA's earlier conclusions regarding remanufactured engines as discussed in comment 9.1.1 and this language should be removed, the commenter (40) expressed. Finally, commenter 40 indicated that a new trigger should be included in the provisions that define the date of manufacture, consistent with comments from commenter 37 that specify that new emission standards should not be required for rebuilt engines unless they are at least 15 years old. The commenter (40) pointed to similar provision currently in 40 CFR 60.4210(j).

One commenter (31) believes that the proposed definition of date of manufacture places significant burden on reconstructed engines and said that the criteria in the proposed definition seem arbitrary (e.g., the removal of the crankshaft) and trigger emission standards that would be applicable in the year the reconstruction occurs. The commenter (31) argued that EPA has not sufficiently discussed the justification for revising the requirements for reconstructed engines

and asked that EPA explain the basis and intent for this for the final rule. Alternatively, EPA should remove the elements of proposal that supersede the definition of reconstruction in the General Provisions of 40 CFR part 60, commenter 31 said.

One commenter (39) indicated that it does not agree with the language in the date of manufacture definition that says "the reconstructed engine consists of a previously used engine block with all new components." The commenter (39) said that there are instances when an engine is damaged to the point where a replacement block (and other necessary components) is necessary in order for the engine to become operational again. When this occurs, the serial number from the replacement block is kept and the engine is rebuilt according to the arrangement number of the original engine. If the definition remains as proposed, this means that the cost to build an engine utilizing a used block and new components would exceed the 75 percent capital cost in the definition, according to commenter 39. The commenter (39) added that it is the arrangement number that determines the emissions of the engine, which specifies the components that are used to build the engine (e.g., pistons, turbocharger, injectors, etc.) and stressed that the arrangement number is a more appropriate indicator as to what the engine is rather than the serial number. Consequently, the commenter (39) recommended that the above quoted phrase be eliminated from the rule and the leave the 75 percent cost threshold as the criteria.

In addition, two commenter (26, 39) pointed out that in the preamble the capital cost threshold is 50 percent, while on page 32627 of the FR notice of the regulation (and on page 32630 of the FR notice), the capital cost threshold is 75 percent. Commenters 32 and 39 said that the threshold indicated in the preamble on page 32619 should be increased from 50 percent

to 75 percent because of the significant cost of many replacement engines, commenter 32 added. According to the commenter (32), replacement engines can cost more than $50,000.

Commenter 55 contends that if EPA retains the new definitions of reconstruction and date of manufacture, applicability should not be retrospective – that is, previous reconstruction determinations relying on definitions in 40 CFR 60.15 should not be required to revisit or re-evaluate previous determinations.

Response: As with EPA's proposed definition of "reconstruct," the proposal to add a definition for the "date of manufacture" led to a significant concern with affected stakeholders as reflected in this comment summary. Commenters were generally not opposed to having a definition for the "date of manufacture," but were against some of the criteria used in the proposed definition.

Based on the comments related to removal of the crankshaft, EPA agrees that including the engine crankshaft language in the definition of "date of manufacture" would not be appropriate. EPA does not wish to trigger more stringent standards for engines that are simply undergoing regular maintenance. Notably, solely removing the engine crankshaft is not an indication that a substantial amount of work has been conducted on the engine to the extent that it should have to meet to more stringent emission standards. Consequently, EPA is not including the crankshaft criteria in the definition of "date of manufacture" in the final rule.

Regarding comments opposing the inclusion of the serial number in the definition of "date of manufacture," EPA agrees that it would be appropriate to exclude that specific criterion in the final rule. EPA does not wish to require more stringent standards for reconstructed engines solely due to the possibility that in some cases, the serial number might not be available, for instance, it may have been knocked off during transportation, use or maintenance, or if the

engine was acquired and it did not have a tag. EPA is not interested in penalizing affected sources, where information simply is not available or missing based on a technicality, by subjecting them to more stringent standards. Importantly, the lack of the engine serial number is not an indicator that the engine has undergone significant modification to the point where it should be subject to more stringent standards. Therefore, in the final rule, EPA has not included the serial number criteria in the definition of "date of manufacture."

EPA believes that finalizing a cost threshold of 75 percent in the definition of "date of manufacture" is appropriate. Based on the comments received, it appears that the majority of the issues surrounding the date of manufacture concept were related to the crankshaft being included in the definition. Since EPA is not including the engine crankshaft as a determining factor for assigning an engine a new date of manufacture, EPA believes that most of the issues brought up by commenters would be resolved. EPA also agrees that the cost threshold analysis should be consistent with what is used for reconstruction, and therefore specifies in the final rule that the cost of the new and refurbished components should be compared to the fixed capital cost of a comparable entirely new facility. Commenter 50 indicated to EPA in a meeting on October 26, 2010, that having a consistent cost threshold analysis would alleviate its concerns with the 75 percent threshold.[9]

Commenter 39 expressed concern with the requirement that a reconstructed engine consisting of a previously used engine with all new components be given a new date of manufacture. EPA disagrees that a bare engine block with all new components should not be required to meet the emission standards applicable for a new engine. That type of engine rebuilding would significantly extend the life of the engine, and EPA believes it is appropriate

[9] Memorandum from Tanya Parise, EC/R to Melanie King, EPA. Summary of the October 26, 2010 Meeting with the Gas Compressor Association Regarding the Proposed Amendments to the SI NSPS for Stationary Engines. November 10, 2010. EPA-HQ-OAR-2010-0295.

that the engine meet the most stringent emission standards, and that the equipment necessary to meet those standards can be incorporated into the extensive rebuilding of the engine. EPA also notes that 40 CFR 60.4210(i) includes replacement engine provisions for stationary CI engines replacing existing equipment that is less than 15 years old.

The commenters who pointed out that there was a typo in the preamble concerning when reconstructed engines would be subject to more stringent standards are correct. EPA notes that there was a typo on page 32619 of the preamble to the proposed rule in the middle column. The language in section II.F. that read "The fixed capital cost of the new and refurbished components exceeds 50 percent of the fixed capital cost of a comparable new engine" should have read "The fixed capital cost of the new and refurbished components exceeds 75 percent of the fixed capital cost of a comparable new engine" consistent with the proposed definition of "date of manufacture" in proposed 60.4219 and 60.4248.

In response to the commenter who believes that previous reconstruction determinations conducted using definitions in 40 CFR 60.15 should not be required to be revisited or re-evaluated, EPA notes that any provisions finalized under this rulemaking are not retroactive. EPA has no control over what State agencies or other regulatory authority may require, but in any event, EPA is not including a separate definition for reconstruction in the final rule, but is instead pointing to the General Provisions definition.

9.2.2 Comment: One commenter (50) said that the criteria for reconstruction are different in 40 CFR part 63, subpart ZZZZ, and in the proposal under 40 CFR part 60, subpart JJJJ. This creates confusion because an engine could be defined as reconstructed under the NSPS and has to meet the new engine standard of 1.0 g/HP-hr of NO_x or 3.0 g/HP-hr of NO_x, depending on the

threshold for fixed capital cost. The same engine under 40 CFR part 63, subpart ZZZZ, may not be considered reconstructed, and would still be subject to existing requirements under that rule, the commenter (50) said. Accordingly, the commenter (50) stated, this leads to conflicting and duplicative requirements between a new or reconstructed NSPS engine and an existing NESHAP engines. This also directly conflicts with EPA's attempts to streamline and simplify compliance, which it stated in the response to comments for the final SI NSPS/NESHAP consolidated rulemaking.

Response: EPA is not finalizing the proposed definition of "reconstruct," but is instead pointing to 40 CFR 60.15 for the definition of "reconstruction." This is consistent with the definition of "reconstruction" used for 40 CFR part 63, subpart ZZZZ, which points to the definition in 40 CFR 63.15. Therefore, the commenter's issue is resolved.

9.3 Installed

9.3.1 Comment: Two commenters (37 and 55) thought that the definition of "installed" in sections 60.4248 and 60.4219 of the proposed NSPS should be deleted or modified. EPA proposed to add the following definition:

"Installed means the engine is placed and secured at the location where it is intended to be operated; piping and wiring for exhaust, fuel, controls, etc., is installed and all connections are made; and the engine is capable of being started."

The commenter (55) indicated that installation has typically meant the start of site construction, as opposed to when the engine is ready to operate. The commenter (55) expressed

that it did not anticipate this change and was of the opinion that if the new definition is included in the final rule it should only be applied from the effective date of the rule and not retroactively.

Commenter 37 indicated that part of the definition is appropriate, i.e., in terms of having the engine "placed and secured at a location where it is intended to operate" for defining "installed." However, the commenter (37) does not agree with the rest of the definition as that states "…the piping and wiring for exhaust, fuel, controls, etc., is installed and all connections are made; and the engine is capable of being started."

The commenter (37) recommended that the final definition read as follows:

"Installed means the engine is placed and secured at the location where it is intended to be operated."

Because stationary engines are often part of a larger facility, the engines may be placed at the location in advance of completing the rest of the facility and this could be significantly prior to utilities being completed (including local permits and building inspections). In the commenter's (37) opinion, creating the foundation and placing the engine at the location indicates major commitment by the owner and the commenter (37) does not believe that it is necessary to finalize the remaining connections in order to demonstrate the owner's intent, and such connections are typically more related to the larger construction project than the engine itself.

Response: EPA disagrees that the proposed definition of "installed" should not be included in the final rule. The proposed definition of "installed" is intended to describe the point when the engine is capable of being operated at the site. This is consistent with EPA's previous position,

notably in the response to comments on the original CI NSPS proposal.[10] Specifically, EPA stated in response to comment 1.3 that the term "install" refers to "the date the engine is installed at the operator site." This clearly indicates that EPA did not mean for the word "install" to be equivalent to "commence construction," and EPA explicitly stated that EPA did not want "install" to be interpreted to mean "commence construction."

EPA agrees with commenter 37's recommendations regarding the definition of "installed." EPA agrees that installation should be defined as the engine has been placed and secured where it is intended to be operated, and that the engine does not have to be capable of being started before it can be considered installed, since the final piping and wiring may not be completed until well after the engine is secured in its permanent location.

9.4 Certified Emissions Life

9.4.1 Comment: One commenter (26) indicated that it is supportive of EPA proposing to use "certified emissions life" in place of "useful life." Commenter 26 said that it is common that "useful life" and "service life" are thought to be the same thing, but incorporating the term "certified emissions life" will remove confusion surrounding this issue. The commenter (26) asked that EPA also incorporate the term into other rules, where appropriate. Commenter 26 said that the transition should be timed to change of model year to avoid scrappage of stocks of emissions labels using the older term. The commenter (26) said that because drawings for 2011 model year emissions labels are already made and being obtained, the commenter (26) recommended that the terminology does not take effect until 2012 model year or later.

[10] Memorandum from Jaime Pagán, EPA to EPA Docket EPA-HQ-OAR-2005-0029. Response to Public Comments on Proposed Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.

Response: EPA's revision to change the term "useful life" to "certified emissions life" does not create any substantive change to the requirements under the rule and EPA is not making any changes to the labeling requirements themselves. Also, incorporating the term "certified emissions life" into other regulations is beyond the scope of this rule.

9.5 Emergency Engines

9.5.1 Comment: Multiple commenters (24, 30, 32, 34, 41, 42, 43, 44, 47, and 55) had comments regarding the proposed definition of an emergency engine in the CI and SI NSPS, particularly as it relates to demand response operation. The proposed language reads as follows:

"You may operate your emergency stationary ICE 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 RTO 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 nonemergency situations. The

supply of emergency power to another entity or entities pursuant to financial arrangement is not limited by this paragraph (d)(4), as long as the power provided by the financial arrangement is limited to emergency power."

One commenter (43) supports clarifications made to the definition. Two commenters (43 and 55) disagree with the provisions in 60.4243(d)(4), which limit operating hours for various types of operation. According to commenters 43 and 55, the proposed time limit for grid support is unnecessarily restrictive, and may, in the commenters' (43 and 55) opinion impact the viability of demand response programs that are important for providing energy reliability. Another commenter (24) also indicated that the 15 hours proposed to be allowed for demand response operation is too restrictive. Although emergency demand response programs are rarely called because of Independent System Operators (ISO) tariff requirements, an engine needs to be allowed to participate in demand response programs for more than 15 hours per year, commenter 24 said.

One commenter (30) is in agreement that emergency engines should be allowed to operate in emergency demand response programs. However, the commenter (30) is opposed to EPA's proposal of a 15 hour restriction on such operation because it may prevent emergency engines from being able to participate in emergency demand response programs because in order to qualify, the engines must meet the ISO tariff requirements, which specify the minimum number of hours the engine will be able to operate. The commenter (30) referred to the petition for reconsideration submitted to EPA on May 27, 2010[11], on the final NESHAP, which describes in detail the commenter's justifications. The petition for reconsideration and supporting documentation were also submitted under this proposed rule. In summary, the commenter (30)

[11] Letter from David M. Friedland, Beverage and Diamond, P.C., to Ms. Lisa Jackson, Administrator. Petition for Reconsideration of National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines, Final Rule. May 27, 2010.

rationalized not limiting emergency demand response operation to 15 hours per year for the following reasons:

- Emergency demand response programs are beneficial to the environment, according to commenter 30;
- During dispatch of demand response for capacity and energy emergencies, ISO must follow North American Electric Reliability Council standards;
- As stated above, allowing only 15 hours per year for emergency demand response operation has the potential of emergency engines not qualifying to participate in emergency demand response programs;
- It is rare that emergency demand response programs are called, according to commenter (30) and as a result the chance these engines will be operated to the maximum number of hours is small;
- The rationale EPA has provided for supporting the 15 hours appears to reflect a misinterpretation of comments previously submitted in support of demand response;
- A number of States allow emergency demand response operation and none of them restrict operation under such programs to 15 hours per year; and
- EPA set a precedent under the greenhouse gas reporting final rule for the use of emergency engines in emergency demand response programs.

Commenter 30 recommended that EPA specify that emergency engines can operate for a maximum of 60 hours per year or the minimum hours required by the ISO tariff, whichever is less.

In this definition, two commenters (43 and 55) recommended that EPA should strike the 15 hours per year limitations for demand response programs because operation is only authorized

if warranted by a legitimate emergency regarding power availability. Commenter 43 indicated that EPA should also make this change to the NESHAP when EPA has an opportunity to do so. If EPA does not eliminate the 15 hours restrictions, the commenter (55) argued that EPA should justify such a decision and provide the environmental and cost benefit of this restriction.

According to one commenter (32), in general, industry's interpretation of the definition of an emergency engine is that the power source must be abruptly interrupted in order to be classified as an emergency. In the commenter's (32) opinion, the definition is a reactionary one that does not work well in emergency planning and certain emergencies can be anticipated by the use of weather event tracking and utility monitoring. In such cases, provisions can be made in advance to minimize the impact of the emergency, the commenter (32) said, who further cited a recent tornado storm that was tracked in Wisconsin 30 to 60 minutes prior to impact, and information like that is used to prepare emergency generators to prevent actual power interruption. The commenter (32) added that frequently utility networks who observe rapid decline in reserve capacities will take preventative action in order to prevent grid collapse by setting up agreements with large electricity consumers to "go off the grid" for a short duration. According to the commenter (32), the maximum hours defined in the agreements are between 80 and 100 hours, but all those hours are rarely used, in the commenter's (32) experience. The commenter (32) emphasized the importance of including such flexibility for national grid reliability and safety and does not believe it would deter from environmental goals. Specifically, the commenter (32) recommended that EPA retain the 50 hours per year for non-emergency purposes. Further, the commenter (32) recommended that in 60.4211(f)(4), EPA delete the limitation of not operating the engine more than 30 minutes prior to the time when an emergency is expected to occur and the requirements to shut down the engine immediately following the

event. Similarly, another commenter (34) disagrees with these limitations in both 60.4211(f)(4) and 60.4243(d)(4) and indicated that it would expect disputes with respect to the term "immediately." The commenter (34) asked why 30 minutes would be acceptable, but why 31 minutes would not be. Also, the commenter (34) wanted to know what criteria are supposed to be used to determine when the emergency condition is expected to occur and to determine when the emergency condition is no longer imminent. The commenter (34) indicated that it believes that most entities are not interested in operating emergency generators any longer than necessary. The commenter (34) recommended that EPA remove the time restrictions or keep them only as guidelines and require records only to indicate the time and purpose of generator operation.

Commenter 32 argued that emergency situations often lead to operational decisions that are difficult and that vary on a case-by-case basis, and the commenter (32) believes this should be left within the management of the 50 hour limit. The commenter (32) is of the opinion that the allowance provided for demand response operation should be increased to a minimum of 100 hours. According to the commenter (32), this is a typical length of the agreement between the utility and the facility. Finally, the commenter (32) added that one could argue that EPA could allow an indefinite period for demand response operation that would be subject to audits of this type of operation. The commenter (32) said that the key factors of needing demand response operation is overall grid reliability and frequency of disruptive weather events and are matters of public record.

One commenter (47) asked that EPA allow 60 hours per year for demand response operation arguing that 15 hours is too restrictive in ensuring national grid reliability. Commenters 24 and 30 also requested that EPA specify that 60 hours are allowed. The commenter (47) believes that emergency demand response operation is infrequent and only to

prevent brownouts and blackouts. The power generated during these events is not supplied to the grid, but is used at the facility, the commenter (47) stated. Allowing demand response operation prevents rolling brownouts and blackouts from happening and without it reduction in power and power outages would increase, according to commenter 47. The commenter (47) cited language in the proposed amendments claiming that EPA acknowledged the need for emergency demand response programs in 60.4211(f)(4) and 60.4243(d)(4). The commenter (47) recommended that the demand response limit be removed or alternatively that EPA revise 60.4243(d)(4) to read: "…owners and operators may operate the emergency engine for a maximum of 60 hours per year or the amount of time required by the Independent System Operator tariff, whichever is less, as part of a demand response program…" Three commenters (24, 30, and 47) also recommended that EPA remove the provision that counts the hours used for emergency demand response purposes towards the 50 hours per year in non-emergency situations.

One commenter (41) stated that the proposed amendments are in direct conflict with section 69.3.5 of the Midwest ISO Federal Energy Regulatory Commission (FERC) approved Open Access Transmission and Energy and Operating Reserves Markets Tariff. The Midwest ISO's Tariff, which has been approved by FERC, allows entities to obtain demand resources for generating capacity during emergency conditions, which frequently includes engines, the commenter (41) said. The Tariff states at 69.3.5(iv) and (v) that a demand resource that qualifies as a capacity resource must be able to operate (during emergency conditions where the reliability of the electric grid needs to be maintained) at least five times for at least 4 continuous hours per event during the summer season. Therefore, any engine that could qualify to be considered for such operation has to be able to be operated for a minimum of 20 hours per year, the commenter (41) said, who added that similar requirements are including in other Regional Transmission

Organizations (RTO). The commenter (41) requested that EPA allow additional time for demand response operation consistent with qualification requirements developed by RTO and approved by FERC. As such, the commenter (41) asked that EPA allow such operation to be at least 20 hours per year and that such operation be considered an emergency situation as opposed to a non-emergency situations and accounted for accordingly. The commenter (41) acknowledged the potential environmental impact, but asked that EPA recognize the significant of balancing environmental concerns with the importance of maintaining grid reliability during emergency conditions.

One commenter (42) asked that EPA reconsider the language in the emergency engine definition that restricts emergency demand response operation to 15 hours per year. One commenter (44) asked that EPA delete the definition of emergency demand response in the proposed definition of emergency engine. Also, the commenter (44) asked EPA to clarify between emergency response units and price response units in the definition because there are differences between how emergency generator operations are treated by ISO. The commenter (44) suggested that EPA review the following definition of "real-time emergency generation resource" from the ISO New England, Inc. Transmission, Markets and Services Tariff, FERC Electric Tariff No. 3, issued December 22, 2004:

"Real-Time Emergency Generation Resource is Distributed Generation whose Federal, State and/or local air quality permits limit operation in response to requests from the ISO to the times when the ISO implements voltage reductions of five percent of normal operating voltage that require more than 10 minutes to implement. A Real-Time Emergency Generation Resource must be capable of: (i) curtailing its end-use electric consumption from the New England grid

within 30 minutes of receiving a Dispatch Instruction; and (ii) continuing that curtailment until receiving a Dispatch Instruction to restore consumption."

The commenter (44) recognizes the need for emergency generation and on-peak demand response to provide reliable electricity delivery, and acknowledges, as demonstrated in 2003, the substantial health and economic impact associated with wide-scale grid failure. Regardless, operating emergency engines to create electricity for on-peak demand during high electric demand days (HDDE) creates significant public health impacts, such as high emission rates of ozone precursors and air toxics, commenter 44 said. Such high emission rates significantly make problems worse on air quality that is already impaired during HDDE. Consequently, the commenters (42 and 44) believe that EPA should discourage the use of emergency generators unless it is for a true power emergency.

For real emergencies (including blackouts and brownouts, including periods of 5 percent voltage reduction), the commenter (55) does not believe that EPA should have to limit the number if the definition of "emergency" is specific and restrictive enough to prevent operating for price-response purposes. Commenter 42 also cited the above tariff and argued that current market rules and definitions established by ISO-New England (ISO-NE) are sufficient enough to adequately restrict the use of emergency engines for financial reasons. Therefore, the commenter (44) recommended that EPA finalize a definition of emergency that specifically lays out the conditions, including periods of 5 percent voltage reduction, illustrated by the ISO-NE cited above. Commenter 42 similarly requested that EPA adopt rules similar to those in effect in New England through the ISO-NE Tariff or allow regions to define their own programs that restrict the use of emergency engines in a way that is consistent with EPA's goals without strictly limiting the number of hours of participation. Further, the commenter (44) requested that EPA

coordinate with FERC to determine the estimated energy and environmental benefit from implementing this definition of emergency on a national level to be used by all ISO. Also, the commenter (44) recommended that EPA set standards that will provide incentives to dispatch non-generating demand response resources prior to the dispatch of polluting demand response resources. Additionally, the commenter (44) said that EPA should make sure that control technology matches the intended use of emergency engines that are used to meet on-peak demand for quick start capacity and require that emission controls are operating at full efficiency as soon as possible and no later than 10 minutes after engine start-up or the time recommended by the engine manufacturer if add-on controls such as SCR is used.

One commenter (42) encouraged EPA to review material developed by Synapse Energy Economics, Inc., referenced in the Petition for Reconsideration filed by CPower, EnergyConnect, EnerNOC and Innoventive Power. The material concluded in fact that availability of these resources could improve air quality when used to provide system reserves, under certain dispatch models, the commenter (42) said. According to the commenter (42), in these cases, emergency engines would be providing non-spinning quick start reserves in place of old load-following boilers providing spinning reserves through their operation at minimum load. The commenter (42) argued that emergency engine resources are vital parts of the resource mix that displace other types of power and play an important role in ensure electric grid reliability.

Another commenter (24) argued similar points that it is critical to allow stationary emergency engines to participate in demand response programs in order to stabilize the electric grid. Consistent with other commenters, EPA should not institute regulations that conflict with existing emergency demand response programs that are also endorsed by several States with no restrictions on the numbers of hours, the commenter (24) said. The commenter (24) cited to the

ISO-NE, and to language in various New England State regulations addressing emergency engines. The commenter (24) indicated that under the ISO-NE, operators are fully aware that operation is only permitted during emergency conditions and such conditions are clearly defined when the ISO-NE declares Operating Procedure (OP) 4, Action 12.[12] According to the commenter (24), the emergency demand response program is totally independent of the ISO-NE price response program, and emergency engines are only contracted to operate under OP 4, Action 12 conditions and not in the price response program. Per the commenter (24), in New England, OP 4, Action 12 has rarely been declared. Further, the commenter (24) said, the emergency demand response program also includes cutting power to other devices at a facility, such as minimizing heating, ventilation and air conditioning (HVAC) and lighting loads shutting off factory machines. The commenter (24) added that over the last few years, the States of Connecticut, Massachusetts, Rhode Island, and New Hampshire have revised their emergency engine definitions to allow these engines to participate in the ISO-NE emergency demand response program. According to the commenter (24), the State of Vermont has implemented a policy allowing emergency engines to participate in ISO-NE emergency demand response programs and Maine permits engines on a case-by-case basis if engines exceed permit thresholds. The commenter (24) cited the definitions of emergency engines from several New England State regulations, highlighting language related to emergency demand response program provisions, adding that the States do not limit the hours of operation for engines participating in the ISO-NE emergency demand response program. The commenter (24) also discussed the RTO of much of the Mid-Atlantic and Midwest region of the country, namely PJM Interconnection who has an equivalent program called the Emergency Load Response Program (ELRP).

[12] Under Forward Capacity Market ("FCM") this Action is now known as Action 6 Real Time Emergency Generation ("RTEG").

According to the commenter (24), it is more advantageous to prevent a blackout by utilizing a group of emergency generators for a short time rather than losing the grid, in which case the commenter (24) said would mean that all emergency generators in the State would have to operate for several hours of perhaps days. Engines used under the ELRP will not be synched with the grid, commenter 24 said, but will only be turned on when the RTO declares an emergency on the ELRP, consequently reducing the demand on the grid. In addition, owners are asked to reduce their power by limiting their HVAC and light usage, for instance, the commenter (24) said. The ELRP is engaged under the provisions in the PJM Manual 13 Emergency Operations for a PJM Declared Emergency, a condition where the RTO alerts electric distributors that there is an emergency or that an emergency is expected and it is necessary to follow procedures under PJM Manual 13 Emergency Conditions. Again, the commenter (24) said that ELRP has seldom been declared and stressed that it is strictly in place for emergency situations, plus it is not associated with other PJM programs related to financial gain, e.g., economic response or peak shaving. Between the years 2003 and 2009, the ELRP has been called only five times where the event lasted between 3 and 5 hours. The commenter (24) referred to how emergency engines area treated in various States, such as Maryland, Pennsylvania, Virginia (allows a maximum of 60 hours for emergency engine operation under ELRP), Ohio, Illinois, West Virginia, Allegheny County (the division handles ELRP requested on a case-by-case basis and has so far approved permits with 60 hours as the limit), and Indiana, who include provisions for emergency demand response operation in their regulations, and once again noted that these States typically do not limit the hours allowed for operation during the ELRP. The Electric Reliability Council of Texas (ERCOT) has the Emergency Interruptible Load Service (EILS), a program developed as a last resort in order to prevent electric grid

failure, the commenter (24) said. The program is part of the Electrical Emergency Curtailment Plan (EECP) and is expected to be called during a Stage 3 emergency. At that point, everything else has been tried according to the commenter (24) and to prevent a rolling blackout, emergency generators are used to power facilities, reducing demand on the grid. The program is designed for a maximum number of six dispatches per year for a total of 24 hours per year at most, the commenter (24) said. In Texas, most emergency engines operate under a permit by rule and under this, operation in the ERCOT EILS Program is not restricted and there are no hour limits for such participation either.

The commenter (24) argued that EPA precedent exists for allowing emergency engines to operate in demand response programs without restrictions, e.g., in EPA's Mandatory Reporting of Greenhouse Gases rule, EPA exempted emergency engines from reporting greenhouse gases. EPA defined emergency generators as follows in that rule (74 FR 56387):

"[a]n emergency generator operates only during emergency situations, for training of personnel under simulated emergency conditions, as part of emergency DR procedures, or for standard performance testing procedures as required by law or by the generator manufacturer."

The commenter (24) said that EPA did not include any restrictions on the emergency demand response hours in that rule. The commenter (24) closed by emphasizing the importance of EPA not finalizing requirements that are inconsistent with how many regions of the country handle emergency demand response.

Response: EPA proposed to amend the definition for "emergency stationary internal combustion engine" and the allowances for maintenance/testing and non-emergency operation for such engines to be consistent with the provisions promulgated in the NESHAP for existing stationary

reciprocating internal combustion engines (RICE) at 40 CFR part 63, subpart ZZZZ. EPA is only finalizing a portion of the proposed revisions to the emergency engine definition. EPA is finalizing the provision allowing 50 hours of non-emergency service for stationary CI engines subject to the NSPS, in order to make the emergency engine provisions for new CI engines consistent with those for new SI engines and existing CI and SI engines. At this time, EPA is not finalizing the proposed provision allowing 15 hours for demand response operation for emergency stationary engines. EPA included a similar provision for emergency engines in the March 3, 2010, amendments to the stationary RICE NESHAP (75 FR 9648), and subsequently proposed to amend the stationary engine NSPS to be consistent with the stationary RICE NESHAP. EPA received two petitions for reconsideration of the 15-hour allowance for demand response in the stationary RICE NESHAP, and is currently reconsidering its decision to allow emergency engines to operate for 15 hours per year as part of an emergency demand response program. EPA is deferring taking final action on including this provision in the stationary ICE NSPS pending the resolution of the reconsideration process on the stationary RICE NESHAP. EPA will address this issue as it affects the CI and SI NSPS emergency engine provisions as part of that reconsideration process.

9.5.2 Comment: Two commenters (43 and 55) noted some concerns with the proposed definition of emergency engine. In order to prevent confusion, commenters 43 and 55 recommended that EPA remove the sentence in the proposed definition that reads "Stationary SI ICE used for peak shaving are not considered emergency stationary ICE," which the commenter (55) believes conflicts with the last sentence of the definition.

Response: As discussed in the response to comment 9.5.1, EPA is not finalizing the proposed definition for emergency stationary internal combustion engine at this time. Regardless, EPA disagrees with the commenters and does not believe the commenters' recommendation to remove the language as suggested is appropriate. Peak shaving is not the same as grid support and therefore EPA does not believe those two sentences conflict.

9.5.3 Comment: One commenter (37) agrees that it is appropriate to allow emergency engines to participate in demand response programs for a limited number of hours. The commenter (37) concurs that only a very limited amount of time should be allowed to demand response purposes and opposes an amount higher than what EPA proposed. The commenter (37) is of the opinion that if a generator is to be used for demand response, peak shaving or other non-emergency use, those engines should meet the standards applicable to non-emergency engines.

Response: No response is needed.

9.5.4 Comment: Two commenters (21 and 35) indicated that healthcare facilities have been significantly impacted by restrictions in the original CI NSPS. An increase in power interruptions due to utilities not having the infrastructure needed to manage increased loads during inclement weather and power anomalies has worsened the problem, according to the commenter (35). This presents a danger to healthcare facilities that have consequently entered into demand response agreements with utilities in order to deal with unreliable power, the commenter (35) said. Issues related to power will increase and according to the commenter (35) will likely exceed the 15 hours per year. Therefore, commenter 37 urged EPA to revise 40 CFR

60.4211(f)(4) to remove the 15 hours limitation and replace it with allowing any period of period under a demand response program. The commenter (35) also recommended the stipulation that the engine cannot be operated for more than 30 minutes prior to the time when the emergency condition is expected to occur be removed, specifically suggesting the following revisions:

"The engine may ~~not~~ be operated for ~~more than 30 minutes prior to the time when~~ a period of time that the emergency condition is expected to exist ~~occur~~, and then 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 not counted as part of the 50 hours of operation per year provided for non-emergency situations."

Two commenters (21 and 35) do not believe that incorporating these suggested changes into the final rule will detract from the intent of the proposed changes and indicated that these changes will provide an increased level of protection for healthcare facilities' patients and staff. The commenters (21 and 35) provided with its comment letter a publication[13] on diesel generators and noted how the report indicates how diesel generators may be a clean and cost effective solution to the power crisis.

Response: As discussed in the response to comment 9.5.1, EPA is not addressing the issue of emergency demand response, including the restriction on operation more than 30 minutes prior to an emergency, at this time. EPA is deferring taking final action on including this provision in the stationary ICE NSPS pending the resolution of the reconsideration process on the stationary RICE NESHAP.

[13]Backup Generators (BUGS):The Next Smart Grid Peak Resource.U.S. Department of Energy. 4/15/2010. http://www.netl.doe.gov/smartgrid/referenceshelf/whitepapers/BUGS_The%20Next%20Smart%20Grid%20Peak%20Resource%20(April%202010).pdf.

9.5.5 Comment: One commenter (33) indicated that it thinks that additional clarification and language is needed to adequately describe demand response operation and peak shaving. The commenter (33) said that how industry describes demand response operation does not appear to match how EPA has described it in the proposed amendments and the commenter (33) believes this can cause confusion as far as which engines are for emergencies and which are for peak shaving. Because the proposed rule allows emergency engines to participate in demand response programs, according to the commenter (33), sources may think their engines would be considered emergency engines. The commenter (33) pointed out however, that the demand response programs developed by the utility industry utilize these engines for non-emergency purposes to reduce the cost to provide power during high demand.[14] According to commenter 33, the only motivation for end-use customers to participate in demand response programs is for financial gain and participation does not provide additional stability for the end-use customer because it already has an emergency engine to provide power during a blackout. The commenter (33) said that there is additional confusion in the proposed amendments because the commenter (33) does not believe that EPA has adequately described the emergency conditions that qualify an engine to participate in demand response operation. The commenter (33) referred to the North American Electric Reliability Corporation's (NERC) Capacity and Energy Emergencies (Standard EOP-002-2) regarding energy emergency alerts, suggesting that this document[15] might be helpful to EPA in identifying emergency conditions that would allow the use of engines for emergency energy response operation, which states that an "Energy Emergency Alert is an emergency procedure, not a daily operating practice…" Subsequently, the commenter (33)

[14] http://pjm.com/markets-and-operations/demand-response.aspx, http://pjm.com/markets-and-operations/demand-response/~/media/markets-ops/dsr/20100707-dsr-hight-load-day-report.ashx, and http://pjm.com/markets-and-operations/demand-response/~/media/markets-ops/dsr/demand-response-fact-sheet.ashx.
[15] http://www.nerc.com/files/EOP-002-2.pdf.

recommended that Alert 2 status, as detailed in this document, be required prior to emergency engines being allowed to be utilized for demand response operation. In the commenter's (33) opinion, a copy of the Alert 2 report would be sufficient to demonstrate that the engine qualified demand response operation and the report is typically available online through NERC's website.

In terms of peak shaving, commenter 33 indicated that it understands this might be necessary during peak demand, but the commenter (33) said that such operation is not an emergency. The use of these engines during a non-emergency situation yields financial benefit without having to control emissions, the commenter (33) said. Even if each engine is allowed to operate for only 15 hours per year, PJM Interconnection, an RTO with an emergency demand reserve of 2,144 megawatt (MW), can result in a large influx of emissions in a very short time period, the commenter (33) said. For example, using AP-42 emission factors for stationary CI engines below 600 HP, the commenter (33) estimated that the 15 hours of operation within PJM's fleet would equate to about 668 tons per year (tpy) of NO_x emissions, 144 tpy of carbon monoxide (CO) emissions, 47 tpy of PM_{10} emissions and 53 tpy of total organic compounds. The commenter (33) believes that these engines should be subject to the same requirements that apply to non-emergency engines. At the very least, the commenter (33) recommended that EPA clarify the difference between peak shaving and demand response.

Response: As discussed in the response to comment 9.5.1, EPA is not addressing the issue of demand at this time. EPA is deferring taking final action on including this provision in the stationary ICE NSPS pending the resolution of the reconsideration process on the stationary RICE NESHAP. As noted in the response to comment 9.5.2., EPA agrees that there is a

significant difference between peak shaving and emergency demand response, and allowance of the latter for any amount of time does not imply allowance of the former.

9.5.6 Comment: Two commenters (24 and 34) said that EPA should change the reference from 60.4211(e) to 60.4211(f) in the definition of an emergency engine in 60.4219 in the proposed rule.

Response: EPA agrees that the proposed definition should have referenced 60.4211(f) in the proposed rule.

9.5.7 Comment: One commenter (28) noted significant concern with regards to EPA's proposal to allow emergency engines to participate in emergency demand response operation even for a limited amount of time. The commenter (28) believes that allowing emergency demand response operation could have detrimental effects on Delaware's ability to attain and maintain compliance with National Ambient Air Quality Standards (NAAQS) and strongly disagrees that demand response should be included as emergency use. The commenter (28) emphasized the importance of true emergency operation, as for example backup power at a hospital when the main electricity is unavailable or at chicken farms where heating or cooling is crucial to avoid deaths. On the other hand, the commenter (28) argued that emergency generators are being utilized for other reasons where electric utilities have created demand response programs that are, in the commenter's (28) opinion, contrary to the anticipated use of emergency power generation, which negatively impact air quality. These emergency units emit HAP and emit high levels of NO_x on a mass and rate basis, the commenter (28) said, arguing that the time when these engines operate

(i.e., during demand response) is during the worst conditions for developing ground-level ozone. The commenter (28) cited to an example where in Delaware, a demand response program consists of roughly 225 uncontrolled generators less than 300 KW. The owners of these engines are according to commenter 28 in agreement with the utility to provide power during peak demand scenarios and receive lower electric rates in return. Per commenter 28, these engines have typically operated on very hot sunny summer days and emit a substantial amount of HAP and above 1.6 tons of NO_x in a 3-hour period, the commenter (28) said. Finalizing the definition of emergency engine as proposed will lead to these engines directly impacting air quality with respect to ground-level ozone, the commenter (28) believes. If EPA allows this type of operation during peaking times, it would circumvent and undercut Delaware's efforts and progress in reducing emissions. The commenter (28) contended that if emergency generators in the entire Northeast are allowed to operate without controls in demand response programs, emissions would be substantial and have detrimental effects on ground level ozone. The commenter (28) pointed to a 2003 Northeast States for Coordinated Air Use Management (NESCAUM) report[16] on stationary diesel engines, which indicate that there are about 26,890 emergency diesel engines with the ability to generate 8,760 MW of emergency capacity in the NESCAUM region. The commenter (28) cited to a recent event where PJM activated the ELRP on July 7, 2010, where the event lasted 4 hours for most areas that participated. Using available information on the actual capacity utilized that day under ELRP, reasonable assumptions regarding the number of emergency generators that participated in the event, and the type of emissions controls installed on the generators, the commenter (28) estimated that the event could have generated close to 218 tons of NO_x. For comparison, the commenter (28) said that Delaware's entire statewide peak

[16] Stationary Diesel Engines in the Northeast: An Initial Assessment of the Regional Population, Control Technology Options and Air Quality Policy Issues. Northeast States for Coordinated Air Use Management.

ozone season daily NO_x emissions were 182 tons in 2005. The commenter (28) argued that using other assumptions in this estimation, e.g., by assuming that the generators were older and smaller, it is possible that the amount of NO_x emitted that day could have been on the order of 272 tons. However, the commenter (28) said that these are conservative estimates and it is likely that not all the load shed was due to emergency generators. In fact, information the commenter (28) was provided with showed that the NO_x emitted was 46 tons on July 7, 2010. Regardless what the figure is the commenter (28) said it is a substantial amount.

The commenter (28) indicated that it wished to model the emergency demand response using the CALGRID air quality model, but due to additional research necessary in order to complete the assessment, it was not feasible in the timeframe required to provide comments on the proposed rule to finish the modeling. Consequently, the commenter (28) asked that EPA conduct its own analysis to model the effects of July 7, 2010, to understand the impacts of emergency demand operation. The commenter (28) indicated that according to an inquiry conducted on EPA's AIRNow website, monitors in the Philadelphia non-attainment area on July 7, 2010, indicated that 15 ozone monitors exceeded the 75 parts per billion (ppb) 8-hour ozone NAAQS (based on preliminary data). Further, the commenter (28) claims that there would have been NAAQS exceedances on almost all of the days where the ELRP was in effect. The commenter (28) pointed to other events that it believes demonstrate the negative environmental effect of allowing emergency generators to operate.

The commenter (28) submitted additional information following its original comment letter to support claims that diesel generators directly cause or contribute to violations of EPA's 1-hour nitrogen dioxide (NO_2) NAAQS, which became effective in April 2010. These comments are represented as commenter 45. The commenter (45) submitted information on a

modeling analysis that indicate that diesel emergency and peak shaving engines cause and contribute to 1-hour NO_2 levels as high as 4 times the NAAQS. The commenter (45) reiterated its point that diesel engines that are aggregated for demand response purposes have substantial negative impacts on ozone levels (specifically in terms of NO_2) and should not be allowed to participate, in an uncontrolled fashion, in demand response programs.

Response: As discussed in the response to comment 9.5.1, EPA is not taking any action regarding emergency demand response at this time. EPA is deferring taking final action on including this provision in the stationary ICE NSPS pending the resolution of the reconsideration process on the stationary RICE NESHAP.

9.5.8 Comment: One commenter (52) provided additional comments (the commenter's original comments are reflected under commenter 30-see Table 1 of this document) in rebuttal to comments submitted by commenter 28. The commenter (52) thought that the concerns from commenter 28 are misguided in that commenter 28: 1) confuses emergency demand response with economic demand response; 2) confuses reserve margin with emergency conditions; 3) significantly overestimates emissions from emergency demand response; 4) misstates the Synapse Study; and 5) inappropriately uses emissions decrease during a blackout as a reason to prohibit emergency demand response. Regarding item 1), commenter 52 said that emergency demand response programs are only used for grid emergencies, whereas economic demand response are dispatched by the utilities or ISO in response to high prices or are self-selective by end users in response to prices. These two programs are substantially different, commenter 52 said and EPA should treat them as such. The commenter (52) does not believe that commenter

28 has made a distinction between these two types of programs; emergency demand response is operation as a last resort to avoid blackouts and economic demand response is operation such as peak shaving or other types of non-emergency operation. The commenter (52) reiterated that emergency demand response is tightly controlled under NERC regulations for the sole purpose of responding to grid emergencies. The examples provided by commenter 28, which the commenter (28) indicates is emergency demand response, is, in fact, economic demand response (see page 2, second paragraph, and page 3, first full paragraph of EPA-HQ-OAR-2010-0295-0028), and the language in EPA's NSPS and NESHAP regulations specifically exclude peak shaving and other economic gain while operating emergency generators. In response to item 2), commenter 52 said that contrary to what commenter 28 said, there is no buffer when the electric need is above the required reserve margin. According to commenter 52, the grid operator only calls emergency demand response when reserves are used up or close to be used up. In response to item 3), commenter 52 said that commenter 28 estimated that NO_x emissions were between 218 and 272 tons during the demand response event on July 7, 2010. However, the commenter (52) said, commenter 28 incorrectly assumed that all that emergency demand response was a result of emergency generator operation. In fact, 75 percent of the emergency demand response on that day was a result of curtailment (e.g., turning down lights, reducing HVAC needs, etc.) Assuming that 25 percent originated from emergency generators, NO_x emissions are estimated to be less than 46 tons that day and possibly even less. The Synapse Energy Economics Study[17], which commenter 52 submitted as part of its petition for reconsideration for the NESHAP and attached to the commenter's (52) comments on this proposed rulemaking, evaluated the impacts of demand response and energy efficiency programs in New England using an electric system

[17] Modeling Demand Response and Air Emissions in New England. Prepared by: Geoff Keith, Bruce Biewald, David White and Mike Drunsic. Synapse Energy Economics. Prepared for U.S. Environmental Protection Agency. August 2003. Revised: September 4, 2003. EPA-HQ-OAR-2010-0295-0030.3.

dispatch model. The conclusion of the study was that emergency demand response improves air quality. Commenter 52 disputed commenter 28's claim that the report assumed that the non-emergency generators were gas-fired, first by stating that the report also indicates that if all demand response operation is from diesel engines, there is still a net air quality benefit. The benefit increases if some of the fuel is assumed to be gas, the commenter (52) said). Secondly, the commenter (52) said that emission factors from eight different types of operation were used (gas-fired combined cycle, oil-fired combined cycle, gas-fired combustion turbine, oil-fired combustion turbine, and coal, gas, oil, and wood-fired steam plants). According to commenter 52, the Synapse Study concluded that "when the DR resource is used to meet reserve requirements, the result is more efficient unit commitment, reduce operation of oil- and gas-fired steam units and increased operation of combined-cycle units in New England.[18] The commenter (52) also cited the following additional conclusion from the study:

"New England has a small amount of quick-start capacity relative to the regional peak load compared to most other control areas. Many analysts have noted that this requires large power plants to operate more than they would otherwise have to in order to maintain sufficient operating reserves – capacity that can be provided quickly in response to unplanned losses of capacity. A key goal of this work for EPA was to verify that large units were indeed being operated more than necessary in New England to meet reserve requirements, to gauge the probable emission impacts of this dynamic, and to estimate potential emission reductions that additional DR could provide if it were used to meet operating reserve requirements.[19]"

Commenter 52 stated that according to the report, demand response is used for reserves there are substantial decreases of criteria pollutant emissions, even under the assumption that all

[18] Id. See page 2.
[19] Id. See page 4.

fuel used is diesel (NO_x decreased 23 tons, SO_2 decreased 216 tons, carbon dioxide decreased 31,400 tons, $PM_{2.5}$ decreased 12.5 tons, and PM decreased 21.2 tons.[20]

Regarding item 5), commenter 52 said that it is not realistic to sacrifice electricity for reduced emissions. Commenter 52 said that it is nonsensical to use as an argument that emissions actually go down during a blackout in order to support the preclusion of emergency demand response. Grid failure is a serious concern, which affects public health and safety and can also cause severe environmental damage.

Response: As discussed in the response to comment 9.5.1, EPA is not taking any action regarding emergency demand response at this time. EPA is deferring taking final action on including this provision in the stationary ICE NSPS pending the resolution of the reconsideration process on the stationary RICE NESHAP.

9.6 Freshly Manufactured Engines

9.6.1 Comment: Two commenters (37 and 40) believe that EPA should remove the reference to previously used parts in the definition of a freshly manufactured engine. The proposed definition reads as follows:

"Freshly manufactured engine means an engine that has not been placed into service. An engine becomes freshly manufactured when it is originally produced. Note that this includes an engine that is produced using some previously used parts if it does not retain its original identity."

[20] Id. See page 13.

One commenter (40) asserted that if the last sentence of the proposed definition is finalized as proposed, it will disproportionately impact stationary engine remanufacturing and would be inconsistent with section 202(a)(3)(D) of the CAA.

One commenter (37) opposes the inclusion of previously used engines in the definition, noting that it differs from the marine and nonroad engine definitions, and impacts the standards for previously used and remanufactured engines. In the commenter's (37) opinion, including used parts as part of freshly manufactured products is fundamentally wrong in that those parts have previously be in service. The commenter (37) expressed the importance of remanufactured engines and the value of the remanufacturing process to the industry. The proposed definition would eliminate the option of remanufacturing by applying a new date of manufacture to such engines requiring the remanufacturing process to meet the same requirements (including certification, where applicable) as the process where new engines are built on an assembly line using completely new parts, the commenter (37) said. The commenters (37 and 40) indicated that the definition does not take into consideration the technical or cost feasibility of updating existing components to meet the latest standards, as if they were new components. Used components are not new components and the commenter (37) consequently argued that remanufactured engines with used parts should not be considered new or freshly manufactured engines. According to the commenters (37 and 40), remanufactured engines are more similar to rebuilt or reconstructed engines (as opposed to new or replacement engines) and should be treated as such. Replacement engines are built entirely from new components according to certified methodologies, commenter 40 said, and it is therefore more appropriate to group newly manufactured engines and replacement engines together. Conversely, remanufactured, rebuilt and reconstructed engines are built from a combination of used and new components and should

therefore be grouped together, the commenter (40) asserted. According to commenter 40, this would be consistent with EPA's prior findings concerning remanufactured and rebuilt engines and with statutory obligations under section 202(a)(3)(D) of the CAA. Commenter 40 said that EPA is authorized to regulate "rebuilding practices" for heavy-duty engines, but EPA can only implement requirements for rebuilding practices if the Administrator does the following: 1) studies such practices, 2) finds, based on that study, that rebuilding practices "cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare taking costs into account," and 3) provides sufficient lead time for technology to develop to meet the new regulations. The commenter (40) cited an EPA study[21] conducted to investigate the rebuilding and remanufacturing industry under section 202 of the CAA and a broader industry characterization[22] conducted under EPA's direction, which the commenter (40) clearly indicated that remanufacturing is a form of "out-of-frame" overhaul or rebuild. Accordingly, the commenter (40) said, EPA's view is consistent with the commenter's (40), i.e., that remanufactured should be grouped with rebuilt and reconstructed engines.

The commenter (40) cited the following EPA conclusion from the section 202(a)(3)(D) study, which commenter 40 believes is clear and unequivocal:

"Based on the study findings, regulations to control rebuilding practices applicable to current technology heavy-duty engines *are not warranted to ensure that rebuilt engines meet the emission certification standards that applied to the engines when new*. [Emphasis added by commenter 40]. The study demonstrated that current technology rebuilt engines generally emit below the standards applicable when such engines were new. While rebuilding extends the

[21] See for example pages 6-7 of Industry Characterization: Nonroad Heavy Duty Diesel Engine Rebuilders. ICF Incorporated, 1997. EPA-HQ-OAR-2005-0119-0004.

[22] See for example Notice of Agency Completion of Study Regarding Heavy-Duty Engine Rebuilding Practices and Availability of Documents, 60 Fed. Reg. 42881, 42882 (Aug. 17, 1995).

actual life of engines, it does not appear that the emissions characteristics of current engines deteriorate as a result of rebuild. Furthermore, most emissions critical components are currently replaced or adjusted during a typical engine rebuild."

Again, the commenter (40) stressed that including the sentence at issue would necessitate certification of remanufactured engines to current standards and fundamentally change EPA's previous regulatory treatment of these engines. Further, finalizing the definition as proposed would reduce or remove the numerous benefits associated with remanufacturing in terms of including decreased use of natural resources, improved energy efficiency, decrease in carbon emissions, and minimizing landfill space, according to the commenter (40). This would also contravene EPA's prior findings regarding remanufactured engines and be inconsistent with section 202(a)(3)(D) of the CAA, commenter 40 said. If EPA determines that requirements are necessary for remanufactured engines, the commenter (40) stated that EPA should first reevaluate previous conclusions made and make a finding that a new approach is necessary. The commenter (40) recognizes that section 202 of the CAA applies to mobile sources and that previous conclusions made by EPA are related to mobile engines, however, the commenter (40) believes the same conclusions should be applicable to stationary engine rebuilding practices. The commenter (40) also made the point that EPA has previously adopted emission standards, test methods and other requirements for stationary engines where it modeled mobile source requirements for nonroad and marine engines.

Subsequently, two commenters (37 and 40) recommended that EPA remove the last sentence of the definition and incorporating the following definition in the final rule:

"Freshly Manufactured Engine means an engine that has not been placed into service. An engine becomes freshly manufactured when it is originally produced."

Commenter 40 argued similar points to commenter 37 (and also concurs with all comments submitted by commenter 37) stating that finalizing the definition as proposed would eliminate the positive benefits associated with remanufacturing. The last part of the proposed definition would subject the remanufacturing process to the same requirements that a new engine using entirely new parts is subject to, including certification, where applicable, the commenter (40) said. Consequently, the benefits associated with a remanufactured engine would be lost.

Response: EPA agrees that it is appropriate to not include the reference to previously used parts in the definition of freshly manufactured engine in the final rule. EPA does not wish to get newly manufactured engines mixed up with rebuilt and remanufactured engines. Consequently, EPA is finalizing the following definition in 40 CFR 60.4219 and 60.4248 of the final rule: "Freshly manufactured engine means an engine that has not been placed into service. An engine becomes freshly manufactured when it is originally produced."

10.0 Miscellaneous

10.1 Comment: Two commenters (43 and 55) said that EPA should resolve currently outstanding issues related to interpretation and implementation of 40 CFR part 60, subpart JJJJ, requirements in this final rulemaking. One commenter (55) said that it has previously submitted to EPA a list of questions and issues[1] that need to be resolved either in the rule itself or through guidance material. The list of questions and issues were based partly on workshops commenters 43 and 55 participated in, which were designed to help operators implement the rule requirements. The commenter (55) said that EPA needs to resolve these issues and referred back to the original March 10, 2010, letter for additional details on the issues. Commenter 43 stated

similarly that it has also submitted a list of issues to EPA over the last few years that need clarification, e.g., the commenter (43) submitted a letter to EPA in March 2008. The commenter (43) urged EPA to address these issues, acknowledging that some of them may be most appropriately covered in guidance material, but that others should be addressed in the rulemaking itself.

Response: The focus of the proposed amendments was on 40 CFR part 60, subpart IIII. EPA's intention was not to make substantive changes to 40 CFR part 60, subpart JJJJ at this time. However, EPA took the opportunity under these proposed amendments to propose minor clarifications and corrections to that subpart for consistency with 40 CFR part 60, subpart IIII. EPA is only promulgating non-substantive and miscellaneous minor changes to 40 CFR part 60, subpart JJJJ under this final rule. EPA is currently discussing other substantive changes to 40 CFR part 60, subpart JJJJ in a separate context.

10.2 Comment: Two commenters (43 and 55) said that the initial notification requirements in the SI NSPS need to be clarified, because current rules inadvertently imply that multiple notifications are necessary, which are burdensome to operators. According to the commenter (55), 60.4230 defines the date that construction commences as the date the engine is ordered, and 60.7(a)(1) requires notification of the date of construction within 30 days. This 30 day time period for initial notification is problematic, according to commenter 55, for engine orders where siting or engine delivery does not occur within this time period, given the definition in 60.4230. Additionally, the commenter (55) stated that operators may feel obligated to submit initial notifications to multiple agencies, since an ordered engine could possibly be sited in one of

several states. Thus, commenter 55 suggested that EPA clearly define expectations and regulatory intent for notifications for the various parties involved (owner, operator, lessee, etc).

Response: As EPA has previously indicated, the focus of the proposed amendments was on 40 CFR part 60, subpart IIII, and EPA does not intend to address substantive changes to 40 CFR part 60, subpart JJJJ, aside from those intended to retain consistency with subpart IIII, in this proceeding. EPA will address these issues separately.

10.3 Comment: Two commenters (43 and 55) said that EPA should include concentration-based limits for engines between 25 HP and 100 HP in the SI NSPS. According to the commenters (43 and 55), engines in this size range will need to be tested in some cases and having concentration-based limits would provide a less costly compliance options. The commenters (43 and 55) said that the concentration-based limits should correspond to the g/HP-hr limits in 60.4233(d). For example, the 2.8 g/HP-hr would equate to 230 ppm by volume, dry basis of NO_x at 15 percent oxygen based on the conversions used in Table 1 and 60.4233(f)(4) of the SI NSPS, the commenters (43 and 55) said.

Response: EPA agrees that it would be beneficial to include concentration-based alternatives for engines between 25 HP and 100 HP that are subject to the SI NSPS. However, EPA would have to propose to add ppm standards to the SI NSPS as alternatives to the g/HP-hr standards first. EPA plans to do this in a separate proceeding.

10.4 Comment: Two commenters (43 and 55) indicated that in Table 1 of 40 CFR part 60, subpart JJJJ, there are errors in the mathematical symbols for less than and greater than. For instance, "500≥HP<1,350" should be corrected to "500≤HP<1,350" and "25>HP<130" should be corrected to "25<HP<130." EPA should review and correct the symbols in Table 1 of 40 CFR part 60, subpart JJJJ, the commenters (43 and 55) said. These errors are important to fix, according to the commenter (55), because they result in duplicative requirements for several engine size categories.

Response: EPA agrees with the commenters and has corrected the errors in the mathematical symbols that were previously incorrect in the rule.

10.5 Comment: Two commenters (43 and 55) said that EPA needs to address the fact that engine exhaust flowrate measurement is not required when conducting a compliance test for concentration-based standards. However, determining the flowrate is a requirement in Table 2 of 40 CFR part 60, subpart JJJJ, and the commenters (43 and 55) recommended that EPA clarify that this determination is only necessary for engines complying with mass-based limits (i.e., g/HP-hr limits). The commenters (43 and 55) suggested that EPA revise Table 2, column 3, requirements (1)(a)(iii), (1)(b)(iii), and (1)(c)(iii) to read:

"If necessary (i.e., for compliance with mass-based emission standards, determine the exhaust flowrate of the stationary internal combustion engine exhaust." Failure to address this minor revision, according to the commenter (55), will result in implementing agencies requiring unnecessary tests and incurring associated costs.

Response: EPA agrees with the commenter that it is appropriate to make this correction because taking a flowrate measurement is not needed for sources that are complying with the concentration-based standards. EPA has made it clear in Table 2 of 40 CFR part 60, subpart JJJJ that determining the exhaust flowrate of the engine is not required when complying with the concentration-based standards for NO_x, CO and volatile organic compounds.

10.6 Comment: Two commenters (43 and 55) said that EPA should clarify in the final SI NSPS how sources should determine compliance with the NO_x + hydrocarbons (HC) limits. For natural gas engines between 25 HP and 100 HP the rule indicates that HC is assumed to be zero for performance tests for natural gas engines. The commenters (43 and 55) asked that EPA clarify that HC emissions can be assumed to be zero from natural gas emergency engines as well. If this is not the case, the commenters (43 and 55) said that EPA should clarify how HC is defined, i.e., which species should be included and which should be excluded.

Response: As EPA has previously indicated, the focus of the proposed amendments was on 40 CFR part 60, subpart IIII, and EPA did not intend to make substantive changes to 40 CFR part 60, subpart JJJJ.

10.7 Comment: Two commenters (43 and 55) asked that EPA make clarifications in the final SI NSPS with respect to standards and time constraints associated with import or initial installation of engines prior to 40 CFR part 60, subpart JJJJ applicability dates. Specifically, the commenters (43 and 55) thought that the language in 60.4236 is confusing where it uses "the previous model year" as opposed to "any previous model year" or "previous model years." Commenter 55 said that it appears that paragraphs 60.4236(a) through (d) are supposed to provide 2 years from the

initial applicability date for import or initial installation of an engine manufactured prior to the applicability date. However, the commenter (55) said, by using the language "the" previous year in section title, that literally means only engines that are imported or installed within the prior year from the dates provided in 60.4236(a) through (d), i.e., within a time period where the standard already applies. The commenter (55) also said the emission standard that applies is not clear and consequently recommended that EPA revise the title of 60.4236 to state that it applies to "previous model years" and in the text, it should be clarified that the Stage 1 standards are the standards that apply under this section.

Response: EPA agrees with the commenter that clarifying language related to the provisions limiting import and installation of engines past certain model years is appropriate. EPA understands that the title of 60.4236 of 40 CFR part 60, subpart JJJJ was confusing and has consequently modified the title of that section. In the final rule, the title of 40 CFR 60.4236 reads as follows: "What is the deadline for importing or installing stationary SI ICE produced in previous model years?"

10.8 Comment: Two commenters (43 and 55) said that the schedule for conducting initial compliance tests should be consistent with 40 CFR part 63, subpart ZZZZ requirements. Uncertified engines under the SI NSPS are required to conduct performance tests within 60 days after achieving the maximum production rate, and according to the commenter (55); this would typically be about 60 days after startup. Certified engines have up to 1 year to conduct the performance test under the SI NSPS and engines subject to testing under the NESHAP have 180 days to perform the test. The commenters (43 and 55) were of the opinion that EPA should

make the rules consistent and therefore recommended that the initial test for uncertified engines should be 180 days under the SI NSPS.

Response: EPA is not making substantive changes to 40 CFR part 60, subpart JJJJ at this time. Consequently, EPA will address the scheduling of performance test issue when other issues related to the SI NSPS are dealt with at a later date.

10.9 Comment: Two commenters (43 and 55) said that the SI NSPS requires engines above 500 HP to test every 8,760 hours of operation or every 3 years. For engines that operate constantly, this equates to a test once a year, the commenters (43 and 55) said. However, the rule does not provide for a scheduling allowance, that historically, according to the commenter (55), testing requirements often include, e.g., within 30 days of the "due date." The commenter (55) believes this adds complexity particularly for the engines that operate around the clock and said that the annual date for conducting the test would move progressively forward every year. Commenters 43 and 55 felt that it is reasonable to allow a test schedule that remains constant over time, e.g., the test could be scheduled within 30 days of the annual anniversary, in order to reduce the scheduling burden and to account for issues related to the ability to achieve "peak load," maintenance downtime, test contractor availability, and so on. The commenters (43 and 55) recommended that EPA allow the yearly test to be conducted a certain window (e.g., 30 days) of the deadline triggered by 8,760 operating hours.

Response: EPA is not making substantive changes to 40 CFR part 60, subpart JJJJ at this time. EPA will address the frequency and timing of performance testing at a later date when other issues related to the SI NSPS are addressed.

10.10 Comment: Two commenters (43 and 55) are of the opinion that the SI NSPS should include a burn-in period for new, modified, reconstructed and rebuilt engines, consistent with the NESHAP. The commenters (43 and 55) indicated that the 200 hour engine burn-in period can prevent damage to the catalyst, which is possible during the initial engine operating hours. Not having this provision could lead to damage and premature failure of the catalyst, according to the commenters (43 and 55). The commenters (43 and 55) also said that without this provision, equipment is run in a mode that can void emission guarantees, significantly increase control costs, increase waste streams from damaged catalyst, and lead to unnecessary emissions. Commenter 55 believes that it is not appropriate to compare stationary engines to mobile source engines in terms of an engine burn-in period and according to the commenter (55), catalyst vendor recommend including a burn-in period to guarantee proper catalyst performance and life. The commenters (43 and 55) urged EPA to include the same burn-in period allowance in the SI NSPS as was provided in the NESHAP because the same issues apply to units complying with either regulation. The commenters (43 and 55) recommended that the following specific language be added to the SI NSPS:

"For new, reconstructed, modified, 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."

Response: EPA will address burn-in period issues related to the initial hours of operation for new engines with catalytic aftertreatment when EPA other issues related to the SI NSPS are addressed.

10.11 Comment: Two commenters (43 and 55) said that EPA should define the terms "maximum engine power" and "peak load" in 40 CFR part 60, subpart JJJJ. The commenters (43 and 55) indicated that for engines less than 25 HP it is clear what the term "maximum engine power" means because the SI NSPS points to the definition of the term in 40 CFR 90.3. However, for engines above 25 HP, commenters 43 and 55 said that it is unclear what maximum engine power means. Based on conversations the commenters (43 and 55) have had with manufacturers and operators of engines, it seems that maximum engine rating should be the nameplate rating provided by the manufacturer, regardless of specific site conditions like elevation. However, the commenters (43 and 55) pointed out, the term "nameplating rating" does not have a clear definition either, and that term (or "engine rating") should be clarified in 40 CFR part 60, subpart JJJJ also.

Response: EPA will address what the terms "maximum engine power" and "peak load" mean when other substantive changes are made to 40 CFR part 60, subpart JJJJ. At this time, however, EPA is not making significant changes to the SI NSPS, but is only making minor corrections to the subpart while addressing substantive revisions to 40 CFR part 60, subpart IIII.

10.12 Comment: Two commenters (43 and 55) asked that EPA clarify what documentation is necessary under 60.4245(a)(3) of 40 CFR part 60, subpart JJJJ for certified engines. The

commenters (43 and 55) wanted to know what the operator is required to maintain in terms of documentation both where the certified engine is operated as certified and as non-certified.

Response: EPA will clarify the documentation requirements when other substantive changes are made to 40 CFR part 60, subpart JJJJ.

10.13 Comment: Two commenters (43 and 55) asked that EPA revise 60.4233(f)(4) of 40 CFR part 60, subpart JJJJ to specifically indicate the implementation dates and emission limits that apply to the 500 HP to 1,350 HP subcategory of engines. The commenters (43 and 55) said that there is confusion regarding these engines that were manufactured from July 1 to December 31, 2007, that are modified or reconstructed. The commenters (43 and 55) specifically recommended that EPA add a new paragraph (iv) as follows:

"(iv) Prior to January 1, 2008, for non-emergency lean burn natural gas and LPG engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP." In addition, the commenters (43 and 55) asked that EPA revise paragraph (i), which is for engines 500 HP and above, to exclude the engines that the commenters (43 and 55) are recommending be specifically addressed in a new paragraph (iv).

Response: EPA agrees with the commenters' suggestions and has included a fourth paragraph in 60.4233(f)(4) of the final rule as well as clarified in paragraph (i) that the engines addressed in 60.4233(f)(iv) are not included in 60.4233(f)(4)(i).

10.14 Comment: One commenter (55) indicated that it supports EPA proposed revisions to 60.4243 of 40 CFR part 60, subpart JJJJ, to more clearly identify the requirements that apply to certified engines and non-certified engines.

Response: No response is needed.

10.15 Comment: One commenter (55) expressed that it supports EPA posting a redline version of proposed changes to the rule in the docket.

Response: No response is needed.

10.16 Comment: One commenter (37) urged EPA to provide incentives for engines that are efficient under the CI NSPS. Specifically, the commenter (37) recommended that EPA follow other rules such as the NSPS for steam generator boilers and stationary combustion turbines, and allow increases in criteria pollutant emissions for engines that are energy efficient. The commenter (37) argued that providing such an incentive for engines would highlight the importance of energy efficiency and reducing fuel consumption and greenhouse gas emissions. In addition, this would level the playing field for engines that compete against boilers and turbines that currently can utilize energy efficiency provisions under their NSPS, the commenter (37) said.

Response: EPA encourages energy-efficient engines, but providing incentives for stationary CI engines that are efficient is beyond the scope of this rulemaking. The standards as promulgated

are feasible and EPA sees no reason to change the standards. EPA may consider making such accommodations for efficiency and lower greenhouse gas emissions in the future when EPA reviews the standard under 111(b)(1)(B) of the CAA.