

Implementation Question and Answer Document

for

National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

and

New Source Performance Standards for Stationary Compression Ignition and Spark Ignition Internal Combustion Engines

April 2, 2013

PURPOSE

This question and answer (Q&A) document is in response to several questions the EPA has received from delegated state and local agencies and the regulated community regarding the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (RICE), 40 CFR part 63 subpart ZZZZ, and the New Source Performance Standards (NSPS) for Stationary Compression Ignition (CI) and Spark Ignition (SI) Internal Combustion Engines, 40 CFR part 60, subparts IIII and JJJJ. The RICE NESHAP was originally promulgated on June 15, 2004, and has been amended multiple times since the original promulgation. In an effort to ensure national consistency in implementing subpart ZZZZ after it was originally promulgated in 2004, the EPA issued a Q&A document dated September 30, 2005 with responses to questions regarding the rule. The EPA issued an updated Q&A document dated July 17, 2012 to reflect amendments to subpart ZZZZ that were finalized in 2008 and 2010. Subpart ZZZZ was amended again on January 30, 2013, and the Q&A document has been updated to reflect the most recent amendments. This document supercedes and replaces the September 30, 2005 and July 17, 2012 Q&A documents. The EPA also promulgated NSPS for stationary CI and SI internal combustion engines in 2006 and 2008, respectively, and amended the NSPS in 2011. Questions regarding the NSPS for stationary internal combustion engines are also included in this Q&A document.

This document is not a regulation, nor is it designed to supercede the requirements specified in the RICE NESHAP and the NSPS for stationary CI and SI internal combustion engines. It does not impose legally binding requirements on the EPA, state/local agencies, or the regulated community. This Q&A document does not confer legal rights or impose legal obligations upon any member of the public. The responses provided in this document are not site-specific and may not apply in all circumstances. Also note that responses to general provision questions as they apply to the RICE NESHAP and the NSPS for stationary CI and SI internal combustion engines may not be applicable to other subparts of the NESHAP and NSPS program. As with all applicability determinations, site-specific information should be carefully reviewed before making a determination.

Any questions concerning this Q&A document should be directed to Melanie King of the Office of Air Quality Planning and Standards at (919) 541-2469 or king.melanie@epa.gov, or Sara Ayres of the Office of Compliance at (202) 564-5391 or ayres.sara@epa.gov. A list of EPA Regional Office RICE NESHAP contacts is available at: <http://www.epa.gov/ttn/atw/rice/EPARegionalRICEcontacts.pdf>.

Stationary RICE NESHAP (40 CFR part 63, subpart ZZZZ)

A. Affected Facility

1) Can an existing source take enforceable permit restrictions prior to the applicable compliance date to avoid the applicability of the major source requirements of subpart ZZZZ?

Yes. Under the current EPA policy commonly referred to as the once in, always in policy¹, facilities with the potential to emit above major source hazardous air pollutant (HAP) thresholds must obtain and comply with practically enforceable permit restrictions to reduce total HAP emissions from the facility below the major source threshold (i.e., below 10 tons for one HAP or 25 tons of total HAP) before the first compliance date for the facility's engines in subpart ZZZZ in order to be considered area sources of HAP emissions and no longer subject to the major HAP source requirements. Note that the engines at the facility would then be subject to the requirements in subpart ZZZZ for engines located at area sources of HAP. The permit restrictions must be approved by the delegated regulating agency prior to the compliance date for subpart ZZZZ. Otherwise, a source which is a major HAP source on the first compliance date remains major for purposes of subpart ZZZZ. Facilities should be directed to the appropriate delegated agency to obtain information on the specific process for obtaining such permit restrictions. The first compliance dates for existing engines at major sources of HAP are as follows:

- June 15, 2007 for RICE greater than 500 horsepower (HP) at major sources, except non-emergency CI RICE greater than 500 HP at major sources
- May 3, 2013 for CI RICE of 500 HP or less at major sources and non-emergency CI RICE greater than 500 HP at major sources
- October 19, 2013 for SI RICE of 500 HP or less at major sources

2) Is it necessary for sources to submit a follow-up notification under 40 CFR 63.9(j) stating that they are not subject to subpart ZZZZ when previous letters from the source indicated that they “may be covered”?

Yes. The delegated agency will consider a RICE to be an affected source if the owner/operator submits a notification indicating that they “may be covered.” If a source that originally indicated that they “may be covered” later determines that they are not covered, they should submit a follow-up letter within 15 calendar days of making the determination, as specified in 40 CFR 63.9(j).

3) If a stationary RICE with a site rating of more than 500 HP located at a major source of HAP was manufactured before December 19, 2002, would the unit be considered an “existing” source?

To be considered an “existing” source, the owner/operator must have commenced construction of the RICE with a site rating of more than 500 brake HP located at a major source of HAP before December 19, 2002. 40 CFR 63.2 defines *commenced* to mean:

[W]ith respect to construction or reconstruction of an affected source, that an owner or operator has undertaken a continuous program of construction or reconstruction or that an owner or

¹ See the May 16, 1995 Policy titled Potential to Emit for MACT Standards – Guidance on Timing Issues posted at <http://www.epa.gov/ttn/oarpg/t3/memoranda/pteguid.pdf>.

operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction or reconstruction.

Construction is defined in 40 CFR 63.2 to mean “the on-site fabrication, erection, or installation of an affected source . . .” (Emphasis added.) Therefore, if an owner/operator entered into a contractual obligation to undertake and complete, within a reasonable amount of time, a continuous program for the on-site fabrication, erection or installation of the RICE before December 19, 2002, the RICE would be considered an “existing” source.

Engines with a site rating less than or equal to 500 HP located at a major source of HAP and engines of any HP located at an area source of HAP are considered “existing” if the owner/operator commenced construction of the RICE before June 12, 2006.

Note that the stationary engine NSPS (40 CFR part 60, subparts IIII and JJJJ) define the date of construction differently than subpart ZZZZ. Subparts IIII and JJJJ use the date that the new engine is ordered from the manufacturer as the date of construction.

4) In some instances, the capacity of a RICE may be limited by the equipment that it is driving, e.g., a compressor that limits maximum revolutions per minute. Can these limitations be considered when defining the site-rated HP for the RICE?

No. The affected facility under subpart ZZZZ is “. . . any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions . . .” 40 CFR 63.6590(a). Equipment that is not part of the affected facility would not be considered in determining the site-rated capacity of the RICE.

5) Some companies maintain a fleet of RICE to cover overhaul needs. When a RICE replaces another RICE that is being overhauled, does the replacement RICE assume the compliance status of the RICE being overhauled, or is each RICE treated as a separate affected facility?

The definition of affected facility under subpart ZZZZ is “. . . any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions . . .” 40 CFR 63.6590(a). Based on this definition, each RICE is treated as a separate affected facility. The RICE replacement would not assume the compliance status of the RICE being overhauled.

6) In the applicability section of subpart ZZZZ (40 CFR 63.6585), it is stated that existing emergency engines at residential, commercial, and institutional area sources that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in 40 CFR 63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in 40 CFR 63.6640(f)(4)(ii) are not subject to subpart ZZZZ. How do you determine if an area source is classified as residential, commercial or institutional?

Existing emergency engines at residential, commercial, and institutional area sources are not regulated by subpart ZZZZ if they meet the definition of an emergency stationary RICE in 40 CFR 63.6675, which includes being operated per the provisions in 40 CFR 63.6640(f), and they do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in 40 CFR 63.6640(f)(2)(ii) and (iii) and they do not operate for the purpose specified in 40 CFR 63.6640(f)(4)(ii). Definitions for residential, commercial, and institutional emergency stationary

RICE are provided in subpart ZZZZ in 40 CFR 63.6675. The August 9, 2010, memo titled "Guidance Regarding Definition of Residential, Commercial, and Institutional Emergency Stationary RICE in the NESHAP for Stationary RICE" provides additional guidance regarding the types of facilities that would be classified as residential, commercial, or institutional. The guidance memo is available at: http://www.epa.gov/ttn/atw/rice/guidance_emergency_engine_def.pdf.

B. Relocation/Leasing

7) Would an affected RICE relocated from one major source facility to another major source facility be considered a “new” RICE upon relocation?

No. The definition of the term “construction” in 40 CFR 63.2 states, “Construction does not include the removal of all equipment comprising an affected source from an existing location and the reinstallation of such equipment at a new location” Since the definition of construction excludes the relocation of affected sources, a relocated affected RICE would not become a “new” RICE.

8) Would a RICE operating at an area source facility be considered a “new” RICE upon relocation to a major source facility?

No. A RICE located at an area source facility would qualify for the relocation provision provided in the definition of “construction” in 40 CFR 63.2 (see question #7 above) and therefore would not become a “new” source upon relocation to a major source facility. Although the definition of “construction” does not specifically address sources relocated from “area” source facilities to “major” source facilities, the Agency intended to apply the relocation exemption broadly to also include these sources. See *Background Information Document for the Promulgated General Provisions Regulations for 40 CFR Part 63*, EPA 450/3-91-019b, Section 2.3.1, February 1994. This document is available at: <http://www.epa.gov/ttn/atw/gp/gpbid94.pdf>. Existing RICE relocated from an “area” source facility to a “major” source facility would be subject to the applicable requirements for existing sources. See 40 CFR 63.6590.

9) Would an affected RICE relocated from a major source facility to an area source facility still be subject to subpart ZZZZ?

Yes. Subpart ZZZZ applies to “. . . stationary RICE at a major or area source of HAP emissions” 40 CFR 63.6585. After relocation from a major source facility to an area source facility, the RICE must meet the requirements applicable to an engine located at an area source.

10) Is the owner/operator of a facility responsible for ensuring that leased affected RICE are in compliance with subpart ZZZZ?

Yes. The owner/operator of the facility is responsible for all affected RICE operating at his/her facility regardless of whether the units are owned or leased. The owner/operator should obtain from the leasing company all relevant information pertaining to the affected RICE to ensure that the affected RICE is operating in compliance with subpart ZZZZ.

11) Is a temporary replacement stationary RICE subject to subpart ZZZZ?

Yes. Subpart ZZZZ does not provide an exemption for temporary stationary RICE.

C. Recordkeeping

12) Can the owner/operator keep records off-site if a facility does not have adequate storage capability such as at a remote location with no buildings?

Yes. Subpart ZZZZ states in 40 CFR 63.6660:

You must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, corrective action, report, or record, according to §63.10(b)(1).

Therefore, records must be readily accessible in hardcopy or electronic form, but they do not have to be kept on-site.

D. Continuous Monitoring

13) When must the owner/operator begin monthly pressure drop measurements?

The pressure drop across the catalyst must initially be measured during the initial performance test. Owners/operators must begin demonstrating continuous compliance with the monthly pressure drop measurements after the initial performance test is conducted. The deadlines for conducting the initial performance tests are provided in 40 CFR 63.6610, 63.6611, and 63.6612.

14) Does “monthly” mean “calendar month” with respect to monthly pressure drop measurements?

Table 6 of subpart ZZZZ states:

You must demonstrate continuous compliance by measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test. (Emphasis added.)

Although subpart ZZZZ does not specifically use the term “calendar month,” the EPA interprets this to be “calendar month.”

15) Should pressure drop be reported based on an average or an instantaneous measurement?

Table 6 of subpart ZZZZ states:

You must demonstrate continuous compliance by measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test. (Emphasis added.)

Thus, pressure drop across the catalyst is an instantaneous measurement, not an average.

16) Should monthly pressure drop measurements be taken at 100% load $\pm 10\%$?

Table 6 of subpart ZZZZ states:

You must demonstrate continuous compliance by measuring the pressure drop across the catalyst once per month and demonstrate that the pressure drop across the catalyst is within the operating limitation established during the performance test. (Emphasis added.)

For existing SI four-stroke rich burn (4SRB) non-emergency RICE above 500 HP at major sources of HAP, new SI four stroke lean burn (4SLB) engines 250-500 HP at a major source of HAP and new non-emergency RICE above 500 HP at major sources of HAP, compliance with the emission limitations and operating limitations is demonstrated at 100% load $\pm 10\%$, as required per Tables 1a and 2a of subpart ZZZZ. Therefore, for these engines, the monthly pressure drop measurements also must be taken at 100% load $\pm 10\%$ to ensure compliance on a continuous basis. Subpart ZZZZ does not require the monthly pressure drop measurement to be taken at 100% load $\pm 10\%$ for existing non-emergency CI engines above 500 HP at major and area sources of HAP that must measure the pressure drop.

17) How should an owner/operator conduct monthly pressure drop monitoring if a RICE does not operate during a calendar month?

If a RICE does not operate during a given calendar month, the owner/operator does not have to start up the RICE solely for the purpose of recording pressure drop. The owner/operator should record the pressure drop immediately upon the next startup of the RICE. The compliance report required in 40 CFR 63.6650 should identify the operational status of the RICE to substantiate the basis of any calendar month for which the pressure drop was not measured.

18) How should an owner/operator report monthly pressure drop monitoring if a RICE does not operate in the target window (100% $\pm 10\%$) during a given calendar month?

Owners/operators of RICE that operate below the target window (100% load $\pm 10\%$) for periods longer than a calendar month should seek an alternative monitoring method per 40 CFR 63.8(f) if they do not want to increase the load of the RICE to the target window (100% load $\pm 10\%$) solely to record the pressure drop to satisfy the monthly monitoring requirements. Requests for alternative monitoring methods should be submitted to the EPA Regional Office or delegated agency for approval. Subpart ZZZZ does not require the monthly pressure drop measurement to be taken at 100% load $\pm 10\%$ for existing non-emergency CI engines above 500 HP at major and area sources of HAP that must measure the pressure drop.

19) If a RICE operates only minimally during a month, and, as a result, the pressure drop measurement is not taken, how is the monitoring requirement addressed? For example, in month 1, monitoring is completed on day 30. In month 2, the RICE runs during week 1 only and thus is not operating on day 30. Does the EPA expect owners/operators to startup a RICE for the purpose of taking the monthly pressure drop measurement, if the RICE is not operating?

No. Owners/operators are expected to conduct monthly pressure drop monitoring as required by subpart ZZZZ. However, if the RICE has an unplanned shutdown, such that the owner/operator fails to record the monthly pressure drop and the unit is shutdown for the remainder of the month, the owner/operator is not expected to startup the RICE solely to record the pressure drop. The owner/operator should record the pressure drop immediately upon startup of the RICE. If the delegated agency believes that the owner/operator may be attempting to circumvent the required continuous monitoring provisions of subpart ZZZZ, the delegated agency may require that the owner/operator startup the RICE for the

purpose of ensuring compliance with the operating limits. The semi-annual or annual compliance report, required in 40 CFR 63.6650, should reflect the fact that the RICE did not operate during certain periods of a calendar month.

20) When must the owner/operator begin continuous temperature measurements?

The general provisions state:

All CMS shall be installed, operational, and the data verified as specified in the relevant standard either prior to or in conjunction with conducting performance tests under 63.7. (Emphasis added.)

40 CFR 63.8(c)(3)

Thus, continuous temperature measurements should begin before or at the time of the performance test.

21) The operating limit for temperature (Tables 1b and 2b of subpart ZZZZ) is based on a 4-hour average of the inlet temperature to either an oxidation catalyst or a non-selective catalytic reduction catalyst. Continuous monitoring systems will record a temperature value at least every 15 minutes. Should the instantaneous measurements (every 15 minutes or less) be averaged to an hourly value and then those hourly averages averaged to 4-hour averages?

Yes. The instantaneous measurements should be averaged to an hourly value and those hourly values averaged to 4-hour averages. The rule requires sources to provide monitoring data for all times that an engine operates. This means that an hourly average should be determined for every hour that an engine operates, even if the engine operates for a fraction of an hour. The 4-hour rolling average is comprised of these hourly averages. An engine that runs for 4 hours will have one 4-hour average. If the engine operates for less than 4 hours, then the 4-hour average would need to include data from the previous time the engine is operated, or the next time the engine is operated. For example, if the engine only operates for 3 hours, the owner/operator should not compute the 4-hour average from just those 3 hours of data; the owner/operator should compute the 4-hour average from those 3 hours plus the last hour average from the previous time the engine operated (or the next hour average if the engine had never operated before).

E. Catalyst Change

22) How long after the catalyst change does the owner/operator have to conduct a performance test?

Subpart ZZZZ does not provide a deadline for conducting a performance test following a catalyst change. However, the owner/operator should schedule a performance test as soon as possible following the catalyst change to demonstrate that the RICE is still in compliance with the standard. If the RICE fails the performance test after a catalyst change, the RICE will be considered to be out of compliance from the time the catalyst change was made. Owners/operators conducting performance tests following a catalyst change are required to notify the EPA Regional Office or delegated agency 60 days prior to conducting the test. 40 CFR 63.9(e). An owner/operator may seek an adjustment to the 60 day notification requirement from the EPA Regional Office or the delegated agency if they wish to conduct a performance test as soon as possible following the catalyst change. 40 CFR 63.9(i).

23) Can the owner/operator use a catalyst change performance test to satisfy the requirement for semi-annual/annual performance testing if the catalyst-change performance test is conducted at about the same time as the other test would have been?

Yes. The catalyst change performance test can be used to satisfy the semi-annual/annual performance testing if the test is conducted using the performance test methods and procedures specified in subpart ZZZZ and all of the required performance testing notifications and reports are submitted.

24) Does the owner/operator have to conduct a performance test if he/she reinstalls the same catalyst element, for example, after routine maintenance such as washing?

A performance test would be required if the initial performance test is no longer representative of the performance of the affected source. 40 CFR 63.7(e)(1). Routine washing of the catalyst is unlikely to cause the initial test to no longer be representative. However, a determination of whether a retest is required should be made by the delegated agency on a case-by-case basis.

25) Is the owner/operator required to conduct a performance test of a temporary “loaner” catalyst when the original catalyst is removed from the RICE for routine maintenance such as washing?

This issue needs to be addressed on a site-specific basis and would be dependent on additional information such as the type of “loaner” catalyst, the length of time the “loaner” catalyst is used, and the compliance history of the RICE.

26) Table 3 to subpart ZZZZ specifies that certain RICE must conduct subsequent performance testing semiannually, and that the frequency can be reduced to annually if compliance is demonstrated for two consecutive semiannual tests. An engine has satisfied this requirement and is testing annually. Does the facility have to start over and conduct the testing semiannually when the catalyst is changed on the engine, or can it continue with the annual testing?

If the facility demonstrated compliance through two consecutive semiannual tests and reduced its required testing frequency to annually, it would not have to resume semiannual testing after changing the catalyst on the engine, provided the initial test conducted after the catalyst changes shows that the engine is in compliance with the applicable emission standard.

F. Reconstruction

27) The discussion presented on page 33484 of the preamble of the original final subpart ZZZZ (69 FR 33747, June 15, 2004) suggests that equipment “required as part of the manufacturing or operating process” would be included in evaluating reconstruction costs. For the transmission industry, RICE are used to drive compressors to compress natural gas in the pipeline. To conduct the “process” of compressing natural gas, the compressor would be a required component. Would the compressor costs be included in the reconstruction costs under subpart ZZZZ?

No. The compressor costs would not be included in determining the reconstruction costs. The term “required as part of the manufacturing or operating process” relates only to the affected facility, in this case the RICE. Equipment that is part of the affected facility (e.g., air pollution control equipment), but is not part of the manufacturing or operating process would not be included in the cost of reconstruction for the affected facility.

28) How long does an owner/operator have to consider costs to determine if reconstruction is triggered? Does the owner/operator add together costs for all projects or does he/she consider stand-alone projects separately?

The length of time and the number of projects to include in a reconstruction determination will depend on site-specific information and should be addressed on a case-by-case basis.

G. Compliance Extension

29) What reasons must be submitted to gain a compliance extension for existing sources if more time is needed to install controls?

There are no specific reasons that must be submitted as part of the request for a compliance extension. The EPA or the delegated agency will review each request on a case-by-case basis. However, 40 CFR 63.6(i)(4)(i)(B) requires that a request for a compliance extension be made no later than 120 days prior to the affected source's compliance date. Therefore, at a minimum, a request for a compliance extension should address why the owner/operator would not be able to install the appropriate air pollution controls within this 120-day period. Circumstances that arose beyond the control of the owner/operator also should be included in the request. The request must include the information specified in 40 CFR 63.6(i)(6).

30) If an owner/operator installed controls on a RICE equivalent to Best Achievable Control Technology (BACT) or Lowest Achievable Emission Rate (LAER) for another purpose, such as controls installed for the State Implementation Plan (SIP) for the Houston Ozone Nonattainment Area, can a RICE receive a compliance extension even if there was no Prevention of Significant Deterioration (PSD) or New Source Review (NSR) permit issued?

This issue needs to be addressed on a case-by-case basis depending on the specific circumstances of the facility in question. A compliance extension request should be submitted to the EPA Regional Office or the delegated agency.

H. Performance Testing

31) Must the performance test be conducted at 100% load \pm 10%?

Subpart ZZZZ specifies that performance testing must be conducted at any load condition within plus or minus 10% of 100% load for existing 4SRB non-emergency engines above 500 HP at a major source of HAP, new non-emergency engines above 500 HP at a major source of HAP, and new SI 4SLB engines 250-500 HP at a major source of HAP. Subpart ZZZZ does not specify that performance testing must be conducted at 100% load \pm 10% for existing non-emergency engines of 500 HP or less at major sources of HAP, existing non-emergency CI engines above 500 HP at major sources of HAP, and existing non-emergency CI engines at area sources of HAP. However, for these engines, 40 CFR 63.7(e) requires performance tests to be conducted under such conditions as the EPA specifies to the owner or operator based on representative performance (i.e. performance based on normal operating conditions) of the affected source.

32) Can the owner/operator petition to conduct the performance test at load conditions other than 100% load \pm 10% (for those engines that are required to conduct performance tests at those conditions, see question # 31 above), specifically in cases where the RICE cannot physically operate at higher load conditions (limits on compressor cylinders)? Does the EPA delegate approval of alternative test methods to the states or should the petition be submitted to the EPA?

Alternative performance test methods are allowed under 40 CFR 63.7(f). For those engines that are required to conduct performance tests at those conditions (see question # 31 above), requests to conduct performance tests at load conditions other than 100% load \pm 10% must be submitted to and approved by the EPA Regional Office.

33) Must the owner/operator shut down the RICE for a failed performance test? What if the RICE deviates from the operating limits following the performance test?

No. The owner/operator is not required to shut down the RICE for a failed performance test. However, if the owner/operator continues to operate after a failed performance test, then the RICE will be operating out of compliance and may be subject to daily fines and penalties. (See Clean Air Act Stationary Civil Penalty Policy.) An owner/operator is not required to shut down the RICE if it deviates from the operating limits established in the performance test. A deviation from the operating limits must be reported per the reporting requirements in 40 CFR 63.6650. The delegated agency will determine if the deviation constitutes a violation of the standard, and whether an enforcement action is warranted.

34) Is the owner/operator required to use Method 1 every time the owner/operator conducts a performance test for formaldehyde, even if the RICE/exhaust configuration has not changed?

Yes. Use of Method 1 or 1A is required for each performance test as exhaust flows may differ at the time the performance test is conducted. See Table 4 of subpart ZZZZ. Alternative performance test methods are allowed under 40 CFR 63.7(f). Requests for alternative test methods must be submitted to and approved by the EPA Regional Office. Note that the EPA proposed amendments to remove the requirement to use Method 1 or 1A for sampling site and sampling point location under subpart ZZZZ on January 9, 2012 (77 FR 1130). The proposed amendments have not been finalized as of the date of this document.

35) When conducting a performance test, does the owner/operator measure concentrations and mass emission rates simultaneously or can they be measured back-to-back (i.e., three runs at exhaust, then three runs before the catalyst)? Is a control efficiency determination based solely on pollutant concentration or mass emission rate, or both?

The inlet and outlet emissions should be measured simultaneously for the catalyst control efficiency determination. The control efficiency determination is based on pollutant concentration.

36) Can an owner/operator obtain a waiver for a required performance test if a RICE is not operating during that period or operates infrequently?

Yes. Performance tests may be waived upon written application to the EPA Regional Office. Waiver requests are described in 40 CFR 63.7(h).

37) If an engine has two or more catalysts or stacks, how does the owner/operator determine compliance with the percent reduction requirement?

For determining compliance with the carbon monoxide (CO) or formaldehyde percent reduction standard, a facility would have to measure flow rate in each stack, and measure pollutant parts per million (ppm) levels in each stack before and after the catalyst. With these values, the facility would then determine a flow weighted pollutant ppm value (e.g., ppm of CO) before and after the catalyst. A flow weighted ppm value would be calculated for both pre- and post-catalyst as follows, for CO for example:

$$(\text{CO ppm stack 1} * \text{flow stack 1} + \text{CO ppm stack 2} * \text{flow stack 2}) / (\text{flow stack 1} + \text{flow stack 2}).$$

The facility then determines the CO percent reduction according to subpart ZZZZ, but using the flow weighted CO ppm values for pre-catalyst and post-catalyst CO. Note, when determining CO percent reduction, the measured CO ppm values are normalized to 15% oxygen (O₂).

Alternatively, if the stacks are equally sized (e.g., same length and diameter) and the pressure drops across each catalyst are about equal (e.g., within 10%) a facility could sample upstream and downstream of the catalyst by drawing emissions from each stack into a combined line for determining pre- and post-catalyst ppm values. A facility would do this by using a pair of flow meters leading to a “T” to ensure an equal draft is being pulled from the individual stacks both up and downstream of the catalyst. The upstream and downstream sampled emissions from the two stacks would be combined and the facility would record one ppm value for the engine pre-catalyst and one ppm value post-catalyst.

I. Other:

38) Under subpart ZZZZ, emergency RICE are allowed to operate a specified number of hours per year in certain non-emergency situations, and certain limited use RICE are allowed to operate 100 hours per year. Does “year” mean calendar year, 12-month block average, or fiscal year?

Although the term “year” is not defined in subpart ZZZZ in all cases, the EPA interprets “year” to mean “calendar year” because it is the most appropriate time frame for monitoring the operation of emergency and limited use RICE.

39) Is the “commissioning period” of the RICE considered the initial “startup” of the unit?

No. The EPA interprets the “commissioning period” to be the final phase of the construction process. Activities conducted during the commissioning period include: checking all mechanical, electrical, and control systems for the RICE and all related equipment; and confirming the performance measures specified in the purchase agreement. The EPA understands that the commissioning period may take up to 2 weeks to complete. The EPA does not consider the “commissioning period” as the initial startup of the unit as long as the RICE is not being used for its intended purpose or any other beneficial use at the facility during this time. Site-specific determinations of initial startup may be required for facilities that operate in a commissioning mode for excessive periods of time.

40) What requirements apply to a stationary SI RICE with a site rated HP and maximum engine power less than 500 HP that is located at an area source of HAP if construction commenced on or after June 12, 2006 and the engine was manufactured before July 1, 2008?

The only requirement in subpart ZZZZ for stationary SI RICE located at area sources of HAP that commence construction on or after June 12, 2006 is to meet the requirements of 40 CFR part 60, subpart JJJJ. However, 40 CFR 60.4230(a)(4)(iii) specifies that for engines with a maximum engine power less than 500 HP, subpart JJJJ only applies if the engine was manufactured on or after July 1, 2008, except as provided under 60.4230(a)(6). Since this engine was manufactured prior to July 1, 2008, it is not subject to subpart JJJJ, except as provided under 60.4230(a)(6). Therefore, the engine currently does not have to meet any requirements, except as provided under 60.4230(a)(6), since subpart ZZZZ only requires that it meet subpart JJJJ, but there are no applicable requirements under subpart JJJJ, except as provided under 60.4230(a)(6). The EPA may address the requirements for these engines through a future rulemaking.

41) Which requirements must be followed under subpart ZZZZ for a stationary lean burn RICE that was originally a rich burn RICE?

If a stationary rich burn RICE was converted to a lean burn RICE before December 19, 2002, the RICE is considered a lean burn RICE under subpart ZZZZ and must meet the requirements applicable to lean burn RICE. If the stationary rich burn RICE was converted to a lean burn RICE on or after December 19, 2002, it is still considered a rich burn RICE and has to meet the subpart ZZZZ requirements applicable to rich burn RICE.

42) May the owner/operator of an engine recategorize an engine from a non-emergency engine to an emergency engine prior to the applicable compliance date for the engine in subpart ZZZZ?

Yes, prior to the applicable compliance date for the engine in subpart ZZZZ, an owner or operator can recategorize an engine from a non-emergency engine to an emergency engine, or vice versa.

43) If an emergency RICE is used for more than the number of annual hours that is allowed for non-emergency purposes under the definition of emergency stationary RICE in subpart ZZZZ after the compliance date for the RICE, does the RICE then become a non-emergency engine that is subject to any applicable emission limits and other requirements under subpart ZZZZ?

Yes, once a RICE is used for more than any of the allowable annual non-emergency usage amounts specified in subpart ZZZZ after the compliance date for the RICE, the engine will not be considered an emergency engine under subpart ZZZZ and will need to meet all requirements for non-emergency engines at the time the engine changes its status to non-emergency. The RICE is then subject to any applicable emission limits, performance testing, and other requirements for a non-emergency RICE.

44) If a portable RICE is regularly moved around a plant site, but the RICE does not leave the site, is the RICE a stationary RICE subject to the RICE NESHAP?

Under the definition of nonroad engine in 40 CFR 1068.30, a portable engine is not a nonroad engine (and is therefore a stationary engine) if it 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. An engine located at a seasonal source is an engine that remains at a seasonal source during the full annual operating period of the seasonal source. A seasonal source is a stationary source that remains in a single location on a permanent basis (i.e., at least 2 years) and that operates at that single location approximately three months (or more) each year.

A location is defined as any single site at a building, structure, facility, or installation. The EPA has issued one site-specific applicability determination for a portable engine regularly moved throughout a mining facility (Control Number M090038). At this facility, a portable engine is regularly moved, approximately once per week, and is used to move electric rope shovels, electric power drills, and the electrically powered tailings basin dragline around a mine. In this site-specific determination, the EPA determined the portable engine was a nonroad engine and therefore the engine was not a stationary engine subject to the RICE NESHAP. A source may consult with its EPA Regional Office or request a site-specific applicability determination request if it is uncertain about whether it meets the criteria specified to be considered a nonroad or stationary engine. To view site-specific applicability determinations issued by the EPA, visit <http://cfpub.epa.gov/adi/>.

45) 40 CFR 63.6604(a) requires that existing non-emergency, non-black start stationary CI RICE with a site rating of more than 300 brake HP with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel. May an owner/operator of an existing non-emergency, non-black start stationary CI RICE continue to use any remaining inventory of fuel for the engine that does not meet the requirements of 40 CFR 80.510(b) for nonroad diesel fuel after the May 3, 2013, compliance date for the engine?

No. Per 40 CFR 63.6604(a), as of the compliance date for the engine, the fuel used for the engine must meet the requirements in 40 CFR 80.510(b) for nonroad diesel fuel.

Stationary SI Engine NSPS (40 CFR part 60, subpart JJJJ)

46) 40 CFR 60.4244(a) requires that “each performance test must be conducted within 10% of 100% peak (or the highest achievable) load.” If operating conditions change such that the highest achievable load is not within 10% of the load at which the performance test was conducted, does the engine have to be retested?

Yes. The test should be conducted within 10% of the highest achievable load for the engine at the engine’s site conditions. If operating conditions change such that the highest achievable load for the engine at the engine’s site conditions changes and the original test load is not within 10% of the new highest achievable load, then the engine must be retested.

47) Subpart JJJJ does not define the basis for determining engine load when performance tests are required for compliance with a mass emission rate [grams/HP-hour (g/HP-hr)]. Is the criteria for documenting test load in 40 CFR 63.6620(i) acceptable for engine load determinations for performance tests required by subpart JJJJ?

Yes. The approach for determining load in 40 CFR 63.6620(i) is acceptable for performance testing required by subpart JJJJ.

48) What basis must the flowrate and pollutant concentrations be in order to calculate emissions using Equations 1, 2, and 3 in 40 CFR 60.4244? If pollutant concentration is measured on a wet basis, must the concentration be corrected to dry basis to calculate emissions?

The pollutant concentration and the flow rate must be on the same moisture basis in order to calculate mass emissions in pounds per HP-hr. If the flow is reported on a dry basis, the pollutant concentration

must also be on a dry basis for the calculation. The two measurements could also both be on a wet basis (e.g., at stack moisture) for the calculation. The flow is often measured wet (with EPA Method 2) and must be corrected to dry basis, but the pollutant measurement (with EPA Methods 7E, 10, 25A) is more often measured dry (there is often a dryer in the sample line to the analyzer).

49) If an engine has two or more catalysts or stacks, how does the owner/operator determine compliance with output-based emission limits (g/HP-hr) in subpart JJJJ?

For determining compliance with the g/HP-hr emission limit, the facility would need to calculate the g/HP-hr emissions from each stack and add the values for each stack to determine the g/HP-hr for the engine.

Note: when determining the g/HP-hr, the measured pollutant concentrations in ppm are not normalized to 15% O₂.

50) If an engine has more than one stack, should the owner/operator measure the pollutant concentration and flow from each stack at the exact same time? Or can the owner/operator conduct the three 1-hour test runs on one stack and then move to the next stack?

The best approach would be simultaneous testing. As an alternative, the facility could monitor the flow (i.e., with a Method 2 pitot) in both stacks simultaneously while sampling for the pollutant concentration from one stack at a time. In this way, the tester could verify that the flow distribution remains within some narrow range.

All 3 regulations (RICE NESHAP, NSPS for stationary CI and SI Internal Combustion Engines)

51) Do the RICE NESHAP and the NSPS for stationary CI and SI internal combustion engines apply to nonroad engines?

No. Subparts IIII and JJJJ of 40 CFR part 60 and subpart ZZZZ of 40 CFR part 63 do not apply to nonroad engines, as defined in 40 CFR 1068.30. A nonroad engine that changes its status and becomes a stationary engine must comply with all the requirements for stationary engines of the same type at the time the status of the engine changes from nonroad to stationary.

52) Is there a HP rating below which 40 CFR part 60, subparts IIII and JJJJ, and 40 CFR part 63, subpart ZZZZ do not apply?

No, there is no minimum HP rating below which the regulations do not apply to stationary RICE.

53) Does the EPA post certification information for stationary engines?

Any available information on certification is posted at: <http://www.epa.gov/otaq/certdata.htm>.

54) What information should an owner/operator of a stationary engine include in a request for a national security exemption (NSE), as described in 40 CFR 60.4200(d), 40 CFR 60.4230(e), 40 CFR 63.6585(e), and 40 CFR 1068.225?

The request should include the following information:

1. The engine type (CI or SI), fuel type, HP, displacement in liters per cylinder, application (emergency or non-emergency), order date, manufacture date, and date of on-site installation for the stationary engine(s) for which the NSE is requested.
2. The location of the stationary engine(s);
3. The applicable stationary engine regulations for the engine(s); and
4. The justification for the national security exemption.

55) Do 40 CFR part 60, subparts IIII and JJJJ, and 40 CFR part 63, subpart ZZZZ apply to Outer Continental Shelf (OCS) sources?

Yes. Subparts IIII, JJJJ, and ZZZZ apply to sources operating on the OCS to the extent provided under the regulations for OCS sources. See 40 CFR part 55 and the following table.

| | |
|---|---|
| Location | Stationary Engine NESHAP and NSPS Applicability for OCS Sources, including vessels when they are OCS Sources [40 CFR 55.2]. |
| Within a state's seaward boundary (generally extends 3 miles offshore, for Texas/Florida it is 9 miles) | The NSPS and NESHAP apply the same as they would for any other source in the state. |
| Outside the state's seaward boundary and in the Gulf of Mexico west of longitude 87.5 degrees West or new OCS sources offshore the north slope of Alaska. | The Department of Interior's Bureau of Ocean Energy Management and Bureau of Safety and Environmental Enforcement have jurisdiction over OCS air emissions in the Gulf of Mexico west of 87.5 degrees West longitude (off the coasts of Texas, Louisiana, Mississippi, and Alabama) and new sources on the north slope of Alaska. |
| OCS within 25 miles of the state's seaward boundary, with the exception of OCS sources in the Gulf of Mexico west of longitude 87.5 degrees West and new OCS sources offshore the north slope of Alaska | NSPS apply in the same manner as in the Corresponding Onshore Area (COA) [40 CFR 55.3(c)]. NESHAP apply if rationally related to the attainment and maintenance of Federal or State ambient air quality standards or the requirements of part C of title I of the Act (PSD). [40 CFR 55.13(e)] |
| OCS beyond 25 miles from the state's seaward boundary, with the exception of OCS sources in the Gulf of Mexico west of longitude 87.5 degrees West and new OCS sources offshore the north slope of Alaska | NSPS apply [40 CFR 55.13(c)]. NESHAP apply if rationally related to the attainment and maintenance of Federal or State ambient air quality standards or the requirements of part C of title I of the Act (PSD). [40 CFR 55.13(e)] |