

March 30, 2010

Dutch Schuman Field Manager Kinder Morgan Energy Partners, L.P. - Fayetteville Express Pipeline LLC - Russell Compressor Station 201 Highway 167 Bald Knob, AR 72010

Dear Mr. Schuman:

The enclosed Permit No. 2205-AOP-R0 is issued pursuant to the Arkansas Operating Permit Program, Regulation # 26.

After considering the facts and requirements of A.C.A. §8-4-101 et seq., and implementing regulations, I have determined that Permit No. 2205-AOP-R0 for the construction, operation and maintenance of an air pollution control system for Kinder Morgan Energy Partners, L.P. - Fayetteville Express Pipeline LLC - Russell Compressor Station to be issued and effective on the date specified in the permit, unless a Commission review has been properly requested under Arkansas Department of Pollution Control & Ecology Commission's Administrative Procedures, Regulation 8.603, within thirty (30) days after service of this decision.

All persons submitting written comments during the thirty (30) day, and all other persons entitled to do so, may request an adjudicatory hearing and Commission review on whether the decision of the Director should be reversed or modified. Such a request shall be in the form and manner required by Regulation 8.603, including filing a written Request for Hearing with the APC&E Commission Secretary at 101 E. Capitol Ave., Suite 205, Little Rock, Arkansas 72201. If you have any questions about filing the request, please call the Commission at 501-682-7890.

Sincerely,

Mike Bates Chief, Air Division

RESPONSE TO COMMENTS

Fayetteville Express Pipeline (FEP) LLC -Russell Compressor Station 251 Curtis David Road Bald Knob, Arkansas 72010 Permit No.: 2205-AOP-R0 AFIN: 73-01084

On February 3, 2010 the Director of the Arkansas Department of Environmental Quality (ADEQ) gave notice of a draft permitting decision for the above referenced facility. During the comment period, the facility submitted written comments, data, views, or arguments on the draft permitting decision. The Department's response to these issues is as follows:

Comments were received on behalf of the facility via email on March 3, 2010 from Karen Nielsen, Air Quality Specialist, of Kinder-Morgan (K-M). A Public Hearing was held in Russell, Arkansas on March 9, 2010. No comment was received during the Hearing. Comments were received via email from an Arkansas Citizen on March 10, 2010. A conference call was held on March 11, 2010 with Karen Nielsen, Ron Brown, Lisa Carty and Tom Bach of K-M and Jeff Weiler and Tom Siguaw of Energy Transfer Company (ETC). Revisions to the original facility comments were received via email on March 16, 2010 from Karen Nielsen. Comments were received via email on February 22, 2010 from ADEQ Inspector Gary Bortz.

Comment #1 – from an Arkansas Citizen

After our meeting last night, I have a couple of questions regarding air quality and emissions. It is my understanding that when urea water solution is injected into the engine exhaust system, that Ammonia is produced by decomposition when urea reacts with the nitrogen oxide emissions and is converted into nitrogen and water with the catalytic converter.

- (1.) Is there an odor or emission of the ammonia gas produced, or is it contained in some manner?
- (2.) How is the nitrogen and water by-product of the catalyst disposed of? Can the liquid nitrogen be used to spray on crops as a fertilizer?
- (3.) In the event of a lightening strike, or other means of combustion of the urea and oil tanks, what is the plan to notify people in the path of the ensuing toxic plume?

Response #1

- (1.) There is not enough ammonia left over in the stack to create an odor outside the facility boundary.
- (2.) The nitrogen and water vapor go out the engine exhaust stack. Air is approximately 79% nitrogen naturally and water vapor is a common constituent

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of air. There is no liquid nitrogen byproduct or any other liquid that can exhaust from the stack.

(3.) ADEQ is not responsible for emergency planning. Emergency planning is a local government activity. Arkansas Department of Emergency Management (ADEM) is the state agency that oversees many emergency programs that deal directly with other state agencies, local government and first responders. One of ADEM's goal is to prepare for, coordinate, respond to, and help recover from any and all types of disasters, whether natural or man made. The contact number for the White county office of ADEM is (501) 268-4810.

All further Comments, except the one from Gary Bortz, ADEQ Inspector, were on behalf of the facility from Ms. Nielsen of K-M.

Comment #2

Section II: Introduction: Process Description: - Remove "Tunica" from description.

Response #2

Request agreed. The language of this section has been modified as requested.

Comment #3

<u>Specific Condition #6</u> – Add the following note: If the permittee is complying with the CO emission standards of 40 CFR Part 63, Subpart ZZZZ, they do not have to comply with the CO emission standards of Table 1. [§60.4230(a)(4)(i) §60.4233(e), Table 1 and footnote(b) to Table 1 of 40 CFR 60, Subpart JJJJ] §60.4230(a)(4)(i)

Response #3

Request denied. The citation referenced §60.4233(e) refers to *certified* engines. FEP-Russell does not have certified engines. The footnote (b) referenced is attached to nonemergency SI natural gas^b and non-emergency SI lean burn LPG^b with maximum engine power between $100 \le HP \ge 500$. FEP-Russell's engines SN-01 through SN-10, which SC #6 concerns, are outside this HP range. The <u>Table Heading of SC #6</u> has been modified to: "NSPS JJJJ Emission Limits Engine Manuf. Date after 07/01/2007 (g/hp-hr)" and applies to engines with manufacturing dates after 07/01/2007 and before 07/01/2010.

Comment #4

Specific Condition #8 - The permittee must conduct an initial performance test on each engine (SN-01 through SN-10) subject to testing under 60 Subpart JJJJ to demonstrate compliance with the applicable pollutant emission standards of Specific Conditions #5, #6 and #7. Subsequent performance testing must be conducted every 8,760 hours or every 3 years, whichever comes first thereafter to demonstrate compliance with Specific Conditions #6, #7 and #8. EPA Reference Method 7E . . . according to Plantwide Condition #3 and as specified in 40 CFR §60.8, §60.4244(a-g) and Table 2 of 40 CFR

60 Subpart JJJJ. the following procedures: [Regulation 19, §19.304 and 40 CFR Part 60, Appendix A, §60.8(a), Table 2 of 40 CFR 60 Subpart JJJJ, 40 CFR §60.4243(a)(2)(ii), and §60.4244(a-g)]

Response #4

Request partially agreed. The language of this SC has been modified as follows:

8. The permittee must conduct an initial performance test on each engine (SN-01 through SN-10) subject to testing under 60 Subpart JJJJ to demonstrate compliance with the applicable pollutant emission standards of Specific Conditions #5, #6 and #7. Subsequent performance testing must be conducted every 8,760 hours or every 3 years, whichever comes first. EPA Reference Method 7E . . . according to Plantwide Condition #3 and as specified in 40 CFR §60.8, §60.4244(a-g) and Table 2 of 40 CFR 60 Subpart JJJJ, summarized in (a) through (d) below: [Regulation 19, §19.304 and 40 CFR §60.4243(a)(2)(ii), and §60.4244(a-g)]

Comment #5

The following changes are the original facility Comments. The changes are grouped as one comment because (1) they all depended on whether or not CAM is applicable and (2) they were significantly revised by the facility after the March 11, 2010 conference call, including, withdrawing their request to delete the original SC #16 and #17 and adding new SC #16, #17, #18 and #19.

- (1.) Change Subtitle Compliance Assurance Monitoring (CAM)-Monitoring Requirements – Engines SN-08 through SN-10 (w/SCR)
- (2.) <u>Specific Condition #14</u> The compressor engines (SN-08 through SN-10) are subject to and shall comply with all applicable provisions of Regulation 19, §19.304, 40 CFR Part 52 Subpart E, and Part §64.6 for Compliance Assurance Monitoring. [Regulation 19, §19.304, 40 CFR Part 52 Subpart E, and Part §64.6]
- (3.) <u>Specific Condition #15</u> The permittee shall operate each SCR unit whenever its engine is operating, except during startup. The permittee shall record all startup events when the SCR is not operating and account for these uncontrolled NO_X emissions in the annual totals. The permittee shall maintain continuous totals of NO_X emissions to verify that the annual emission rate of Specific Condition #1 has not been exceeded. The short term limit does not apply during periods of start-up. [Regulation 19, §19.304, and 40 CFR 63.6605 40 CFR Part 52 Subpart E, and Part §64.6(c)(2) and (3)]
- (4.) Delete Original Specific Condition #16 The permittee shall continuously monitor NO from each SCR outlet, except during periods of startup when the SCR is not operating, by use of an electrochemical NO cell. The permittee shall maintain a NO concentration, as measured by this monitor, of 9 ppm at 15% O₂. These values shall be recorded, maintained on site,

made available to Department personnel upon request, and submitted to the Department under General Condition #7. [Regulation 19, §19.304, 40 CFR Part 52 Subpart E, and Part §64.6(c)(1)]

- (5.) <u>Delete original Specific Condition #17</u> During the compliance testing required by Specific Condition #8, the permittee shall test at a NO concentration of no more than 9 ppm at 15% O₂ as measured by the monitor in Specific Condition #16. [Regulation 19, §19.304, 40 CFR Part 52 Subpart E, and Part §64.6(c)(3)]
- (6.) Original Specific Condition #18 was renumbered as Specific Condition #20.
- (7.) <u>Add NEW Specific Condition #16</u> The permittee shall conduct compliance testing for NOx and CO emissions. Testing of NOx and CO in accordance with other applicable rules such as required by 40 CFR Part 60 and 63 may satisfy this condition. The test results shall be maintained on-site, be made available to Department personnel upon request, and submitted to the Department under General Condition #7. [Regulation 19, §19.304]
- (8.) <u>Add NEW Specific Condition #17</u> The permittee shall record the urea injection rate on a daily basis. These values shall be recorded, maintained onsite, and made available to the Department upon request. [Regulation 19, §19.304]
- (9.) Add NEW Specific Condition #18 The permittee shall conduct daily sampling of NH₃ using stain tubes for the first 60 days after startup of the units. If the sampling results indicate the NH₃ concentration is 10ppm or less, then the permittee may revert to weekly sampling as long as the sampling results are 9ppm or less. If sampling results are greater than 10ppm, then the permittee shall conduct daily sampling of NH3 until results show 10ppm or less for 60 consecutive sampling events.
- (10.) Add NEW Specific Condition #19 The permittee shall measure and record the exhaust temperature across the SCR catalysts on a daily basis.

Response #5

The above original comments were significantly revised by the facility after the March 11, 2010 discussion. Response to this comment is no longer applicable.

Comment #6

The following comment has been offered by the facility as a revision to the initial Comment #5 above.

<u>SCR Monitoring Requirements (Specific Conditions #16-18)</u> - While FEP does not believe continuous monitoring of NO is necessary to ensure the operation of the SCR equipment, discussions with Miratech indicate that urea injection monitoring cannot be correlated with a short term NOx limit. Therefore FEP agrees to the original draft permit conditions #16-18 with minor changes due to the specs provided by Miratech in the original permit application. Revised conditions #16-18 FEP will agree to, are included [below]. The rationale for the changes is based on: A.) The actual NO measurement that the SCR controller measures is not adjusted to $15\% O_2$.

B.) 10 ppmvd @ 15% O₂ is equal to 14 ppmvd at the 12.8% O₂ identified in the CAT spec sheet for its engine which was included in the permit application.

- (1.) Change Subtitle Compliance Assurance Monitoring (CAM) Monitoring Requirements – Engines SN-08 through SN-10 (w/SCR)
- (2.) <u>Specific Condition #14</u> The compressor engines (SN-08 through SN-10) are subject to and shall comply with all applicable provisions of Regulation 19, §19.304, 40 CFR Part 52 Subpart E, and Part §64.6 for Compliance Assurance Monitoring. [Regulation 19, §19.304, 40 CFR Part 52 Subpart E, and Part §64.6]
- (3.) <u>Specific Condition #15</u> The permittee shall operate each SCR unit whenever its engine is operating, except during startup. The permittee shall record all startup events when the SCR is not operating and account for these uncontrolled NO_X emissions in the annual totals. The permittee shall maintain continuous totals of NO_X emissions to verify that the annual emission rate of Specific Condition #1 has not been exceeded. The short term limit does not apply during periods of start-up. [Regulation 19, §19.304, and 40 CFR 63.6605 40 CFR Part 52 Subpart E, and Part §64.6(c)(2) and (3)]
- (4.) Specific Condition #16 The permittee shall eontinuously monitor NO from each SCR outlet, except during periods of startup when the SCR is not operating, by use of an electrochemical NO cell. The permittee shall maintain a NO concentration, as measured by this monitor, of 9 ppm at 15% O₂ 14 ppmvd for this engine condition. These values shall be recorded, maintained on site, made available to Department personnel upon request, and submitted to the Department under General Condition #7. In the event the NO monitor or associated equipment malfunctions, the permittee shall follow the SSM Plan developed per Specific Condition #18(c). [Regulation 19, §19.304 and 40 CFR Part 52 Subpart E, and Part §64.6(c)(1)]
- (5.) <u>Specific Condition #17</u> During the compliance testing required by Specific Condition #8, the permittee shall test at a NO concentration of no more than 9 10 ppm at 15% O₂ as measured by the monitor in Specific Condition #16. [Regulation 19, §19.304, 40 CFR Part 52 Subpart E, and Part §64.6(c)(3)]
- (6.) <u>Specific Condition #18</u> For each SCR unit at SN-08, SN-09 and SN-10, the permittee shall:
 - a. Maintain records that summarize the number, duration, and cause of excursions or exceedances of limits as well as corrective action taken. [40 CFR §64.9(a)(2)(i) and §64.9(b) Regulation 19,§19.304]
 - b. Maintain records that summarize the number, duration, and cause of monitoring equipment downtime incidents, other than routine downtime for calibration checks. [40 CFR §64.9(a)(2)(ii) and §64.9(b) Regulation 19,§19.304]
 - c. Maintain a QIP (quality improvement plan) threshold of no more than 5% excursions per six-month reporting period. Upon exceedance of this threshold, the permittee shall then develop a QIP.

[40 CFR §64.9(a)(2)(iii) and §64.9(b) Maintain a SSM (startup, shutdown, malfunction) Plan in accordance with 40 CFR 63 Subpart ZZZZ. The Plan shall include provisions identifying procedures in the event the NO monitor malfunctions. The Plan shall also include corrective actions in the event the threshold is exceeded. [Regulation 19,§19.304]

- d. Maintain records that describe the actions taken to implement a quality improvement plan (QIP), and upon completion of the QIP, SSM Plan.
 d-Documentation shall be maintained to confirm that the plan was completed and reduced the likelihood of similar excursions or exceedances. [40 CFR §64.9(a)(2)(iii) and §64.9(b)]
- e. Submit information pertaining to exceedances or excursions from permitted values in semi-annual reports in accordance with General Provision #7. [40 CFR §70.6(a)(3)(iii)(A)]

Response #6

Request mostly agreed. The modified <u>subtitle</u> and <u>Specific Conditions #14 through #19</u> are as follows:

- (1.) <u>Subtitle</u> Monitoring Requirements for Engines with Selective Catalytic Reduction SN-08 through SN-10
- (2.) Specific Condition #14 The compressor engines (SN-08 through SN-10) are subject to and shall comply with all applicable provisions of Regulation 19, §19.304, 40 CFR Part 52 Subpart E. [Regulation 19, §19.304, 40 CFR Part 52 Subpart E]
- (3.) Specific Condition #15 The permittee shall operate each SCR unit whenever its engine is operating, except during startup. The permittee shall record all startup events when the SCR is not operating and account for these uncontrolled NO_X emissions in the annual totals. The permittee shall maintain continuous totals of NO_X emissions to verify that the annual emission rate of Specific Condition #1 has not been exceeded. The short term limit does not apply during periods of start-up. [Regulation 19, §19.303, §19.304, 40 CFR Part 52 Subpart E and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
- (4.) <u>Specific Condition #16</u> The permittee shall install, maintain and operate an electrochemical NO cell with data logger or other recording device to measure, monitor and record NO from each SCR outlet, except during periods of startup when the SCR is not operating. The permittee shall maintain a NO concentration, as measured by this monitor, of 14 ppmvd at the 12.8% O₂ dry basis for this engine condition. The NO concentration shall be recorded once every 15 minutes. These values shall be recorded, maintained on site, made available to Department personnel upon request, and submitted to the Department under General Condition #7. In the event the NO monitor or associated equipment malfunctions, the permittee shall follow the SSM Plan developed per Specific Condition #18(c). [Regulation 19, §19.703, 40 CFR Part 52 Subpart E, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

- (5.) Specific Condition #17 During the compliance testing required by Specific Condition #8, the permittee shall test at an NO concentration of no more than 10 ppm at 15% O₂ as measured by the monitor in Specific Condition #16. The NO concentration of no more than 10 ppmvd at 15% O₂ is equal to 14 ppmvd at the 12.8% O₂ identified in the CAT spec sheet for its engine which was included in the permit application. [Regulation 19, §19.304, 40 CFR Part 52 Subpart E]
- (6.) <u>Specific Condition #18</u> For each SCR unit at SN-08, SN-09 and SN-10, the permittee shall:
 - a. Maintain records that summarize the number, duration, and cause of excursions or exceedances of limits as well as corrective action taken. [Regulation 19,§19.304]
 - b. Maintain records that summarize the number, duration, and cause of monitoring equipment downtime incidents, other than routine downtime for calibration checks. [Regulation 19,§19.304]
 - c. Maintain a SSM (startup, shutdown, malfunction) Plan in accordance with 40 CFR 63 Subpart ZZZZ. The Plan shall include provisions identifying procedures in the event the NO monitor malfunctions. The Plan shall also include corrective actions in the event the threshold is exceeded. [Regulation 19,§19.304]
 - d. Maintain records that describe the actions taken to implement a SSM Plan. Documentation shall be maintained to confirm that the plan was completed and reduced the likelihood of similar excursions or exceedances. [Regulation 19,§19.304]
 - e. Submit information pertaining to exceedances or excursions from permitted values in semi-annual reports in accordance with General Provision #7. [40 CFR §70.6(a)(3)(iii)(A)]

Comment #7

<u>Specific Condition #22</u> - Compliance with applicable 40 CFR 63, Subpart ZZZZ emission limitations and operating limitations must be achieved at all times for SN-01 through SN-10 specified for CO **and or** formaldehyde emissions in the table below, except during periods of startup, shutdown, and malfunction, **except as exempted in Specific Condition #20.** Emission limitations from Table 2a of Subpart ZZZZ that apply to 4SLB engines are listed below. [Regulation 19, §19.304, Table 2a to Subpart ZZZZ of Part 63, and 40 CFR §63.6605(a), Subpart ZZZZ]

Source No.	NESHAP ZZZZ Emission Limits
	Reduce CO emissions by 93% or more
01 - 10	or
	Limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less than at 15% O ₂ dry basis.

Response #7

Request partially agreed. The language of this SC has been modified as follows:

22. Compliance with applicable 40 CFR 63, Subpart ZZZZ emission limitations and operating limitations must be achieved at all times for SN-01 through SN-10 specified for CO or formaldehyde emissions in the table below, except during periods of startup, shutdown, and malfunction, except as exempted in 40 CFR Part §63.6640(d), Specific Condition #20. [Regulation 19, §19.304, Table 2a, Items 2a and 2b, to Subpart ZZZZ of Part 63 and 40 CFR §63.6605(a), Subpart ZZZZ]

Source No.	NESHAP ZZZZ Emission Limits for New and Reconstructed 4SLB Stationary RICE \geq 250 HP Located at a Major Source of HAP Emissions
	a. reduce CO emissions by 93% or more
01 - 10	or
	b. limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less than [at] 15% O_2 dry basis

Comment #8

Specific Condition #24 - Applicable initial performance tests for carbon monoxide (CO) and or formaldehyde must be conducted within 60 days after achieving the maximum production rate, but not later than 180 days after initial startup, using test methods, conditions and calculations as noted in demonstrate compliance with the applicable emissions limit (Items 2a and 2b) of Table 2a of 40 CFR 63, Subpart ZZZZ. [Regulation 19, §19.304, and 40 CFR Part 63, Subpart ZZZZ, §63.6610 and Tables 2a and 4, §63.66210, Subpart ZZZZ]

Response #8

Request agreed. The language of this condition has been modified as requested.

Comment #9

<u>Specific Condition #25</u> - The permittee shall conduct tests for carbon monoxide (CO) **and or** formaldehyde at the outlet of the control device of the compressor engines (SN-01 through SN-10). Subsequent tests for CO **and or** formaldehyde to demonstrate 40 CFR 63, Subpart ZZZZ compliance must be conducted semi-annually for SN-04 through SN-08 as specified in Table 3 of Part 63, Subpart ZZZZ. After the facility has demonstrated compliance for two consecutive semi-annual tests, it may, upon approval of the Department, reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICEs (SN-01 through SN-10) are not in compliance with the CO **and or** formaldehyde emission limitations **according to 40 CFR 63, Subpart ZZZZ Table 3**, or the test results deviate

from any of the permitted operating limitations, semiannual performance tests must be resumed for that unit. EPA Reference Method 10 for CO and EPA Reference Method 320 or 323 for formaldehyde shall be used as test methods, conditions, and ealculations as noted in 40 CFR Part 63, Subpart ZZZZ, Table 4, or an alternative method may be used as approved by the Department prior to testing. Measurements to determine O₂ must be made at the same time as the measurements for CO and formaldehyde concentrations. The permittee shall test each engine (SN-01 through SN-10) within 90% of its permitted capacity. If any engine does not test within this range, the permittee shall be limited to operating within 10% above the tested rate for that engine. If the tested emission rate for any pollutant of any engine is in excess of the permitted emission rate, that engine shall be retested for both pollutants within 60 days of receipt by the facility of the testing results. Each initial and subsequent performance tests must be conducted according to the requirements in 40 CFR Part 63.7(e)(1) and under the specific conditions specified in Table 4 of Part 63, Subpart ZZZZ, and Plantwide Condition #3. [Regulation 19, §19.702, 40 CFR §63.6620(a-e), Tables 3 and 4 of Part 63 Subpart ZZZZ, and 40 CFR Part 52, Subpart E]

Response #9

Request partially agreed. The "CO and formaldehyde" is changed to "CO or formaldehyde" in the permit. "according to 40 CFR 63, Subpart ZZZZ Table 3" and "the requirements in 40 CFR Part 63.7(e)(1) and under the specific conditions specified in Table 4 of Part 63, Subpart ZZZZ" have been added. The specific condition re-states the criteria from Tables 3 and 4 and remains.

Comment #10

Specific Condition #26 - The permittee must comply with applicable operating parameters for the oxidizing catalyst. For each 4SLB stationary Rice (SN-01 through SN-10) complying with the requirement to reduce CO and/or formaldehyde emissions and using an oxidation catalyst, the permittee must: [Regulation 19, §19.702 and Table 2b of Part 63 Subpart ZZZZ]

- a. Maintain the catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100% load plus or minus 10% from the pressure drop across the catalyst that was measured during the initial performance test; and
- b. Maintain the temperature of the stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to $550-450^{\circ}$ F and less than or equal to 1250 1350°F.

[Regulation 19, §19.304 and Table 2b of 40 CFR Part 63 Subpart ZZZZ]

Response #10

Request partially agreed. Revision of temperature range agreed to. Original citation is applicable.

Comment #11

Specific Condition #30 - The permittee shall not operate the emergency generator (SN-11) more than 500 hours in any consecutive twelve month period. The operating hours shall be automatically recorded by a non-resettable hourly operating meter on SN-11. [Regulation 19, §19.501, §60.4245(b), and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Specific Condition NEW #30 - The permittee may operate the emergency generator (SN-11) up to 100 hours per twelve-month consecutive period for non-emergency situations (maintenance, testing, etc). There is no time limit on the use of SN-11 for emergency situations. [Regulation 19, §19.304, and §60.4243(d)]

Response #11

Request denied. FEP has confirmed that maintaining the original language of SC #30 in the Draft Air Permit is suitable.

Comment #12

<u>Specific Condition #33</u> - The permittee must comply with applicable emission standards for SN-11 specified for NO_X, CO and VOC emissions in the table below. [Regulation 19, §19.501 et seq., and 40 CFR Part 52, Subpart E]

Response #12

Request denied. Original citation is applicable.

Comment #13

<u>Specific Condition #34</u> - The permittee must comply with applicable emission standards for SN-11 specified for NO_X, CO and VOC emissions in Table 1 of Subpart JJJJ of Part 60. [Regulation 19, §19.501 et seq., **and 40 CFR Part 52, Subpart E**]

Response #13

Request denied. Original citation is applicable.

Comment #14

Specific Condition #36 - The permittee must conduct an initial performance test on SN-11 for VOC, CO and NO_X according to Plantwide Condition #3 within 1 year of engine startup to demonstrate compliance with the applicable pollutant emissions of Specific Conditions #33, #34 and #35. Subsequent performance testing is required for SN-11 every five years or whenever it is rebuilt or undergoes major repair or maintenance, whichever comes first. A rebuilt stationary SI ICE means an engine that has been rebuilt as that term is defined in 40 CFR §94.11(a). Each performance test must be conducted

according to Plantwide Condition #3 and as specified in 40 CFR Part §60.4244(a-f) the following procedures: [Regulation 19, §19.304 and 40 CFR §60.8(a) and 40 CFR Part §60.4244(a-f) §60.4243(b)(2)(i)]

Response #14

Request agreed. The last sentence and citations are modified as requested. The condition revisions are as follows:

36. ... Each performance test must be conducted according to Plantwide Condition
#3 and as specified in 40 CFR Part §60.4244(a-f), summarized in (a) through
(c) below: [Regulation 19, §19.304, 40 CFR §60.8(a) and §60.4243(b)(2)(i)]

Comment #15

Specific Condition #40 - Within 1 year of completion of construction, the permittee must meet the following notification, reporting and recordkeeping requirements for SN-11. In addition, The permittee shall maintain a comprehensive report showing compliance with NSPS Subpart JJJJ for SN-11. The permittee shall submit to the Department according to General Provision #7, maintain a copy on-site and make available to Department personnel upon request, a comprehensive report showing compliance with NSPS Subpart JJJJ. The report submitted to the Department shall be sent to the address listed in General Provision #7. Included in the report shall be the following: The report must include the following information: [40 CFR §60.4245(a)(1,2,and 4)]

- a. All notifications submitted to comply with 40 CFR Part 60 Subpart JJJJ and all documentation supporting any notification;
- b. Maintenance conducted on each engine; and
- c. Documentation that each engine meets the emission standard.

Response #15

Request partially agreed. The second and last sentences are modified as requested. The modified condition is as follows:

40. Within 1 year of completion of construction, the permittee must meet the following notification, reporting and recordkeeping requirements for SN-11. The permittee shall maintain a comprehensive report showing compliance with NSPS Subpart JJJJ for SN-11. The permittee shall submit this report to the Department according to General Provision #7, maintain a copy on-site and make available to Department personnel upon request. The report must include the following information, (a) through (c) below: [40 CFR §60.4245(a)(1,2,4)]

Comment #16

<u>Specific Condition #41</u> - SN-11 is a 4-stroke, rich burn (4SRB) emergency-use engine, with a site rating of less than 500 bhp, that is subject to the provisions of 40 CFR Part 63, Subpart ZZZZ - *National Emission Standard for Hazardous Air Pollutants for Stationary*

Reciprocating Internal Combustion Engines (RICE) (Appendix B). As allowed by this regulation, Compliance shall be achieved via compliance with the applicable requirements of 40 CFR Part 60, Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (Appendix A) for spark ignition engines. No further 40 CFR Part 63, Subpart ZZZZ requirements apply for this engine. [Regulation 19, §19.304 and 40 CFR §63.6590(c), Subpart ZZZZ]

Response #16

Request partially agreed. The language "As allowed by this regulation" has been eliminated. The new last sentence was not added.

Comment #17

<u>Plantwide Condition #3</u> - The permittee must test any equipment scheduled for testing, unless otherwise stated in the Specific Conditions of this permit or by any federally regulated requirements, within the following time frames: (1) new equipment or newly modified equipment within thirty (30) sixty (60) days of achieving the maximum production rate, but no later than 180 days after initial start up of the permitted source or (2) operating equipment according to the time frames set forth by the Department or within 180 days of permit issuance if no date is specified. The permittee must notify the Department of the scheduled date of compliance testing at least fifteen (15) days in advance of such test. The permittee shall submit the compliance test results to the Department within thirty (30) sixty (60) after completing the testing. [Regulation 19, §19.702 and/or Regulation 18 §18.1002 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311; §60.4245(d), §63.6645(h)(2) and §63.10(d)(2)]

Response #17

Request is being considered. Plantwide Condition #3 applies to all Title V permits. More time is needed to research this condition before a definitive change can be proposed.

Comment #18

Plantwide Condition #13 - PERMIT SHIELD -

... The permit specifically identifies the following as applicable requirements based upon the information submitted by the permittee in an application dated **April 1, 2009 January 21, 2010**.

Applicable	Regulations	
Аррисаок	Regulations	

Source No.	Regulation	Description
	No changes	in table.

The permit specifically identifies the following as inapplicable based upon information submitted by the permittee in an application dated **April 1, 2009 January 21, 2010**.

Source No.	Regulation	Description	Discussion
Facility	40 CFR 64	Compliance Assurance Monitoring	CAM is only potentially applicable to engine CO emissions. However, the exemption at §64.2(b)(i) applies, as NSPS JJJJ limits promulgated pursuant to CAA Section 111 after November 15, 1990 apply to CO emissions from the engines.

Inapplicable Regulations

FEP maintains that CAM is not applicable for NOx because the potential uncontrolled emissions for each engine are less than 100 tons per year. In order for CAM to apply, each individual engine must have potential pre-controlled emissions equal to or greater than 100% of the amount required for a source to be classified as a major source under 40 CFR Part 70 and Part 71, which is 100 tons per year (40 CFR 64.2(a)(3)).

For other pollutants which CAM may be potentially applicable, the exemption at (64.2(b)(1)(i)) applies, as NSPS JJJJ limits promulgated pursuant to CAA Section 111 after November 15, 1990 apply to emissions from the engines.

FEP respectfully requests that all references to CAM be removed from the permit.

A revised permit shield [comment] is included in the enclosed document [follow-up to conference call, document dated March 16, 2010, below].

Source No.	Regulation	Description	Discussion
Facility	40 CFR 64	Compliance Assurance Monitoring	CAM is not applicable for NO _X because the potential uncontrolled emissions are less than100 tpy (major source threshold). For other pollutants which CAM may be potentially applicable, the exemption at §64.2(b)(i) applies, as NSPS JJJJ limits promulgated pursuant to CAA Section 111 after November 15, 1990 apply to CO emissions from the engines.

Response #18

Request partially agreed. The original application was received on April 1, 2009. A significantly revised application was received on January 21, 2010. Both dates will apply in the permit. All references to CAM have been removed from the permit. The following has been added to the Inapplicable Regulations of the Permit Shield.

Source No.	Regulation	Description	Discussion
Facility	40 CFR 64	Compliance Assurance Monitoring	CAM is not applicable for NO _X because the potential uncontrolled emissions are less than100 tpy (major source threshold). For other pollutants which CAM may be potentially applicable, the exemption at §64.2(b)(i) applies, as NSPS JJJJ limits promulgated pursuant to CAA Section 111 after November 15, 1990 apply to CO emissions from the engines.

Comment #19 from Gary Bortz, ADEQ Inspector

All questions refer to Specific Condition 18.c. as copied below:

- (1.) It looks like the facility has to 'maintain' a QIP until they need one, then 'develop' one. Kind of confusing.
- (2.) Should the '5% excursions' really be just '5'?
- (3.) Is the 'six month reporting period' the title V reporting period, or something different?

Specific Condition #18 - For each SCR unit at SN-08, SN-09 and SN-10, the permittee shall:

c. Maintain a QIP (quality improvement plan) threshold of no more than 5% excursions per six-month reporting period. Upon exceedance of this threshold, the permittee shall then develop a QIP. [40 CFR §64.9(a)(2)(iii) and §64.9(b)]

Response #19

SC #18c has changed and response to this comment is no longer applicable.

Comment #20

A few grammatical changes and citation changes were commented on.

Response #20

Appropriate grammatical, citation and numbering changes were accepted.

PC 03/23/2010

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ADEQ OPERATING AIR PERMIT

Pursuant to the Regulations of the Arkansas Operating Air Permit Program, Regulation 26:

Permit No.: 2205-AOP-R0

IS ISSUED TO:

Fayetteville Express Pipeline LLC - Russell Compressor Station 251 Curtis David Road Bald Knob, AR 72139 White County AFIN: 73-01084

THIS PERMIT AUTHORIZES THE ABOVE REFERENCED PERMITTEE TO INSTALL, OPERATE, AND MAINTAIN THE EQUIPMENT AND EMISSION UNITS DESCRIBED IN THE PERMIT APPLICATION AND ON THE FOLLOWING PAGES. THIS PERMIT IS VALID BETWEEN:

March 30, 2010

AND Marc

March 29, 2015

THE PERMITTEE IS SUBJECT TO ALL LIMITS AND CONDITIONS CONTAINED HEREIN.

Signed:

Mike Bates Chief, Air Division

March 30, 2010

Date

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List of Acronyms and Abbreviations

A.C.A.	Arkansas Code Annotated
AFIN	ADEQ Facility Identification Number
BCFD	billion cubic feet per day
BTU	British Thermal Unit
CAA	Clean Air Act
CFR	Code of Federal Regulations
CO	Carbon Monoxide
FLM	Federal Land Manager
g/bhp-hr	grams/break horsepower-hour
HAP	Hazardous Air Pollutant
hp	horsepower
ICE	Internal Combustion Engine
km	kilometer
LAER	Lowest Achievable Emission Rate
lb/hr	Pound Per Hour
mg	milligrams (10 ⁻³ grams)
MM	million
MP	mile post
MVAC	Motor Vehicle Air Conditioner
NAAQS	National Ambient Air Quality Standards
NO _X	Nitrogen Oxide
NSCR	Nonselective Catalytic Reduction
NSPS	New Source Performance Standards
NSR	New Source Review
PM	Particulate Matter
PM ₁₀	Particulate Matter Smaller than Ten Microns in diameter
ppm	parts per million
PTE	Potential to Emit
QIP	Quality Improvement Plan
RACT	Reasonably Available Control Technology
SCR	Selective Catalytic Reduction
SI	Spark Ignition
SIA	Significant Impact Area
SIL	Significant Impact Level
SN	Source Number
SNAP	Significant New Alternatives Program (SNAP)
SO_2	Sulfur Dioxide
SSM	Startup, Shutdown, and Malfunction Plan
tpy	Tons Per Year
UTM	Universal Transverse Mercator
VOC	Volatile Organic Compound
μg	microgram (10 ⁻⁶ grams)
4SLB	4-stroke lean burn
4SRB	4-stroke rich burn

.

SECTION I: FACILITY INFORMATION

PERMITTEE:	Fayetteville Express Pipeline LLC - Russell Compressor Station
AFIN:	73-01084
PERMIT NUMBER:	2205-AOP-R0
FACILITY ADDRESS:	251 Curtis David Road Bald Knob, AR 72139
MAILING ADDRESS 1:	Energy Transfer Company (ETC) 800 E. Sonterra Blvd., Suite 400 San Antonio, TX 78258
MAILING ADDRESS 2:	Kinder-Morgan (K-M) 370 Van Gordon Street P.O. Box 281304 Lakewood, CO 80228-8304
COUNTY:	White County
SITE CONTACT NAME:	Dutch Schuman
SITE CONTACT POSITION	J: Field Manager
SITE TELEPHONE:	501-724-2190
CONTACT NAME:	Lee Hanse, (ETC)
CONTACT POSITION:	Sr. VP of Commercial Optimization
TELEPHONE NUMBER:	210-403-6455
ENVIRONMENTAL CONT	ACT: Karen Nielsen, (K-M)
CONTACT POSITION:	Air Quality Specialist, Environmental Staff, K-M
TELEPHONE NUMBER:	303-914-7717
REVIEWING ENGINEER:	Patty Campbell, PE
UTM North South (Y): UTM East West (X):	Zone 15: - 3,912,278.62 m Zone 15: - 635,006.65 m

SECTION II: INTRODUCTION

Summary of Permit Activity

Fayetteville Express Pipeline LLC - Russell Compressor Station proposes to construct and operate a facility located at 251 Curtis David Road, Bald Knob, White County, AR 72139. FEP has submitted an initial application for a Title V Operating Air Permit for the new Russell Compressor Station. The primary emission sources will be:

- 1. SN-01 through SN-03 Three (3) Caterpillar Engines Model G3616;
- 2. SN-04 through SN-07 Four (4) Caterpillar Engines Model G16CM34;
- 3. SN-08 through SN-10 Three (3) Caterpillar Engines Model G16CM34 with Selective Catalytic Reduction (SCR); and
- 4. SN-11 One (1) Waukesha Emergency backup Engine Model F11GSIU with Non-Selective Catalytic Reduction (NSCR).

The engines shall be subject to and comply with 40 CFR 60, Subpart JJJJ and 40 CFR 63, Subpart ZZZZ. Several Insignificant Activity items are also included. Total permitted annual emission rates include: 1.1 tpy PM/PM₁₀, 1.8 tpy SO₂, 92.7 tpy VOC, 158.6 tpy CO, 249.5 tpy NO_x, 0.20 tpy 1,3-butadiene, 2.60 tpy acrolein, 33.03 tpy formaldehyde and 9.48 tpy ammonia.

Process Description

Fayetteville Express Pipeline LLC (FEP) is a joint-venture company between Energy Transfer Partners, L.P. and Kinder Morgan Energy Partners, L.P. FEP includes a new 185-mile, single 42-inch wide steel, interstate pipeline system, Russell Compressor Station and multiple receipt and delivery meter facilities. FEP will deliver 2 billion cubic feet per day (bcfd) of natural gas from the Fayetteville Shale area in northwest central Arkansas to markets in the Midwest, Southeast and Northeast through pipeline interconnections in Arkansas and Mississippi. Russell will be located on a 40-acre site in White County, Arkansas, approximately 1.5 miles southwest of Russell and 14 miles northeast of Searcy. The area is in attainment for all criteria pollutants. The pipeline will begin in Conway County, Arkansas and extend eastward through Faulkner, Cleburne, White, Woodruff, St. Francis, Lee and Phillips Counties, Arkansas; cross the Mississippi River just south of Helena, Arkansas; proceed through Coahoma and Quitman Counties, Mississippi; and terminate at an interconnect in Panola County, Mississippi. The pipeline will be buried underground and the right-of-way restored. The land with some minimal restrictions will be able to be returned to its current use. Russell Compressor Station is the only FEP facility that will require a Clean Air Act permit.

The potential emissions from the proposed compressor station will be greater than the major source thresholds established under the Federal operating permits program as part of Regulation #26 (Title V permits). Russell Compressor Station meets the definition of a major source for both criteria and HAP pollutants, and will therefore be required to obtain an operating permit under Regulation #26. The proposed compressor station will be a minor stationary source under New Source Review (NSR) program. Thus, a Prevention of Significant Deterioration (PSD) analysis is not required.

Russell Compressor Station will provide the needed motive force for gas flow for the FEP Project. The primary operation emission sources at Russell will be equipment used to provide natural gas compression: ten (10) stationary, natural gas-fired, 4-stroke lean burn (4SLB), reciprocating internal combustion engines (RICE) manufactured by Caterpillar. Three (3) engines will be Caterpillar G3616 (SN-01 through SN-03), each rated to deliver 4,735 horsepower (hp) at site conditions. Seven (7) engines will be Caterpillar G16CM34 (SN-04 through SN-10), each rated to deliver 8,180 hp at site conditions. FEP - Russell will total approximately 72,000 hp. All of the compressor engines will be equipped with low emission combustion (LEC) control technology integral to their design. LEC technology achieves low NO_x emissions by operating at high air-to-fuel ratios (AFR), thereby reducing the peak combustion temperature within each combustion cylinder. Three (3) Caterpillar G16CM34 engines will be equipped with Selective Catalytic Reduction systems to further reduce NO_x emissions. All compressor engine will be equipped with an oxidation catalyst system to reduce emissions of carbon monoxide (CO) and volatile organic compounds (VOCs), including formaldehyde. An oxidation catalyst system converts CO and VOC hydrocarbons in the engine exhaust into carbon dioxide (CO₂).

Auxiliary equipment at Russell will include one 250 hp, natural gas-fired Waukesha F11GSIU 4-stroke rich burn (4SRB) engine (SN-11) for backup emergency-use power for building lights and computers. The Waukesha emergency engine will be equipped with a non-selective catalytic reduction (NSCR) system, also referred to as 3-way control, for control of NO_X , CO and VOC emissions.

Natural gas will be the only fuel fired in any of the combustion sources. The ten compressor engines will be fully enclosed in an acoustical building that will reduce outdoor noise levels to a low 55 dBA. Combustion exhaust gases from each engine are routed through a silencer and then vented to the atmosphere. After compression, the natural gas is discharged through a 36-inch discharge header and continues to the 42-inch transmission pipeline.

The FEP – Russell facility will not have round the clock staffing on-site.

Nine tanks (three 4,200 gallon tanks, three 5,000 gallon urea tanks and three 12,600 gallon tanks) will also be installed, for storage of pipeline fluids, lube oil, skid wash water, engine coolant and urea. Emissions from equipment leaks and these tanks are also categorized as Insignificant Activities (IA).

The pipeline will be designed to accommodate in-line inspection tools (smart pigs) for periodic internal inspections of the pipeline during operations. A launching/receiving station will be installed at Russell. Pipeline fluids collected during the receiving process will be routed to one of the 12,600 gallon tanks, (IA).

Regulations

The following table contains the regulations applicable to this permit.

Source No.	Regulations
Facility	Arkansas Air Pollution Control Code, Regulation 18, effective January 25, 2009

Source No.	Regulations
Facility	Regulations of the Arkansas Plan of Implementation for Air Pollution Control, Regulation 19, effective July 18, 2009
Facility	Regulations of the Arkansas Operating Air Permit Program, Regulation 26, effective January 25, 2009
01 through 11	40 CFR Part 60, Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (SI ICE) (Appendix A)
01 through 11	40 CFR Part 63, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (Appendix B), as a major source of HAPs

Emission Summary

The following table is a summary of emissions from the facility. This table, in itself, is not an enforceable condition of the permit.

EMISSION SUMMARY				
Source	Description		Emissic	on Rates
Number	Description	Tonutant	lb/hr	tpy
Total Allowable Emissions		РМ	1.1	1.1
		PM ₁₀	1.1	1.1
		SO ₂	1.1	1.8
		VOC	21.6	92.7
		СО	38.6	158.6
		NO _X	58.8	249.5
HAPs		1,3-Butadiene* Acrolein* Formaldehyde*	0.10 0.65 7.33	0.20 2.60 33.03
Air Contaminates Ammonia** 2.10		2.16	9.48	

EMISSION SUMMARY					
Source	Description	Pollutont	Emission Rates		
Number	Description	Tonutant	lb/hr	tpy	
01	Caterpillar G3616, 4,735 bhp, natural gas-fired Compressor Engine with Oxidizing Catalyst (4SLB)	PM PM ₁₀ SO ₂ VOC CO NO _X 1,3-Butadiene* Acrolein* Formaldehyde*	$\begin{array}{c} 0.1 \\ 0.1 \\ 0.1 \\ 2.0 \\ 2.1 \\ 5.3 \\ 0.01 \\ 0.05 \\ 1.04 \end{array}$	$\begin{array}{c} 0.1 \\ 0.1 \\ 0.1 \\ 8.7 \\ 8.8 \\ 22.9 \\ 0.02 \\ 0.21 \\ 4.57 \end{array}$	
02	Caterpillar G3616, 4,735 bhp, natural gas-fired Compressor Engine with Oxidizing Catalyst (4SLB)	PM PM ₁₀ SO ₂ VOC CO NO _X 1,3-Butadiene* Acrolein* Formaldehyde*	$\begin{array}{c} 0.1 \\ 0.1 \\ 0.1 \\ 2.0 \\ 2.1 \\ 5.3 \\ 0.01 \\ 0.05 \\ 1.04 \end{array}$	$\begin{array}{c} 0.1 \\ 0.1 \\ 0.1 \\ 8.7 \\ 8.8 \\ 22.9 \\ 0.02 \\ 0.21 \\ 4.57 \end{array}$	
03	Caterpillar G3616, 4,735 bhp, natural gas-fired Compressor Engine with Oxidizing Catalyst (4SLB)	PM PM ₁₀ SO ₂ VOC CO NO _X 1,3-Butadiene* Acrolein* Formaldehyde*	$\begin{array}{c} 0.1 \\ 0.1 \\ 0.1 \\ 2.0 \\ 2.1 \\ 5.3 \\ 0.01 \\ 0.05 \\ 1.04 \end{array}$	0.1 0.1 0.1 8.7 8.8 22.9 0.02 0.21 4.57	
04	Caterpillar G16CM34, 8,180 bhp, natural gas-fired Compressor Engine with Oxidizing Catalyst (4SLB)	PM PM ₁₀ SO ₂ VOC CO NO _X 1,3-Butadiene* Acrolein* Formaldehyde*	0.1 0.1 0.1 2.2 4.3 9.1 0.01 0.07 0.64	0.1 0.1 0.2 9.5 18.8 39.5 0.02 0.28 2.76	

EMISSION SUMMARY				
Source	Description	Pollutant	Emissio	n Rates
Number	Description	Tonutant	lb/hr	tpy
05	Caterpillar G16CM34, 8,180 bhp, natural gas-fired Compressor Engine with Oxidizing Catalyst (4SLB)	PM PM ₁₀ SO ₂ VOC CO NO _X 1,3-Butadiene* Acrolein* Formaldehyde*	$\begin{array}{c} 0.1 \\ 0.1 \\ 0.1 \\ 2.2 \\ 4.3 \\ 9.1 \\ 0.01 \\ 0.07 \\ 0.64 \end{array}$	0.1 0.1 0.2 9.5 18.8 39.5 0.02 0.28 2.76
06	Caterpillar G16CM34, 8,180 bhp, natural gas-fired Compressor Engine with Oxidizing Catalyst (4SLB)	PM PM ₁₀ SO ₂ VOC CO NO _X 1,3-Butadiene* Acrolein* Formaldehyde*	$\begin{array}{c} 0.1 \\ 0.1 \\ 0.1 \\ 2.2 \\ 4.3 \\ 9.1 \\ 0.01 \\ 0.07 \\ 0.64 \end{array}$	0.1 0.1 0.2 9.5 18.8 39.5 0.02 0.28 2.76
07	Caterpillar G16CM34, 8,180 bhp, natural gas-fired Compressor Engine with Oxidizing Catalyst (4SLB)	PM PM ₁₀ SO ₂ VOC CO NO _X 1,3-Butadiene* Acrolein* Formaldehyde*	$\begin{array}{c} 0.1 \\ 0.1 \\ 0.1 \\ 2.2 \\ 4.3 \\ 9.1 \\ 0.01 \\ 0.07 \\ 0.64 \end{array}$	0.1 0.1 0.2 9.5 18.8 39.5 0.02 0.28 2.76

EMISSION SUMMARY					
Source	Description	Pollutant	Emissio	Emission Rates	
Number	Description	Tonutant	lb/hr	tpy	
08	Caterpillar G16CM34, 8,180 bhp, natural gas-fired Compressor Engine with Oxidizing Catalyst and Selective Catalytic Reduction (4SLB)	PM PM ₁₀ PM ₁₀ solution (4SLB) PM PM ₁₀ SO ₂ VOC VOC CO NO _X 1,3-Butadiene* Acrolein* Formaldehyde* Ammonia**		0.1 0.2 9.5 18.8 7.5 0.02 0.28 2.76 3.16	
09	Caterpillar G16CM34, 8,180 bhp, natural gas-fired Compressor Engine with Oxidizing Catalyst and Selective Catalytic Reduction (4SLB)	PM PM ₁₀ SO ₂ VOC CO NO _X 1,3-Butadiene* Acrolein* Formaldehyde* Ammonia**	$\begin{array}{c} 0.1 \\ 0.1 \\ 0.1 \\ 2.2 \\ 4.3 \\ 1.8 \\ 0.01 \\ 0.07 \\ 0.64 \\ 0.72 \end{array}$	$\begin{array}{c} 0.1 \\ 0.1 \\ 0.2 \\ 9.5 \\ 18.89 \\ 7.5 \\ 0.02 \\ 0.28 \\ 2.76 \\ 3.16 \end{array}$	
10	Caterpillar G16CM34, 8,180 bhp, natural gas-fired Compressor Engine with Oxidizing Catalyst and Selective Catalytic Reduction (4SLB)	PM PM ₁₀ SO ₂ VOC CO NO _X 1,3-Butadiene* Acrolein* Formaldehyde* Ammonia**	$\begin{array}{c} 0.1 \\ 0.1 \\ 0.1 \\ 2.2 \\ 4.3 \\ 1.8 \\ 0.01 \\ 0.07 \\ 0.64 \\ 0.72 \end{array}$	0.1 0.1 0.2 9.5 18.8 7.5 0.02 0.28 2.76 3.16	

EMISSION SUMMARY				
Source		Pollutont	Emission Rates	
Number	nber Description Po		lb/hr	tpy
11	Waukesha F11GSIU, 250 hp, natural gas-fired Emergency Generator with NSCR (4SRB)	PM PM ₁₀ SO ₂ VOC CO NO _X Acrolein*	0.1 0.1 0.1 0.2 2.2 1.1 0.01	0.1 0.1 0.1 0.6 0.3 0.01

*HAPs included in the VOC totals. Other HAPs are not included in any other totals unless specifically stated.

**Air Contaminants such as ammonia (NH₃), acetone, and certain halogenated solvents are not VOCs or HAPs.

SECTION III: PERMIT HISTORY

Permit #2205-AOP-R0 is the initial permit for Fayetteville Express Pipeline LLC (FEP) - Russell Compressor Station.

SECTION IV: SPECIFIC CONDITIONS

SN-01 through SN-10

Natural Gas-fired Compressor Engines

Source Description

The primary operation emission sources at Russell Compressor Station will be the equipment used to provide natural gas compression: ten (10) natural gas-fired, 4-stroke lean burn, reciprocating internal combustion engines (RICE) manufactured by Caterpillar (Cat). Three (3) engines (SN-01 through SN-03) will be Model G3616, each rated to deliver 4,735 horsepower (hp) at site conditions. Seven (7) engines (SN-04 through SN-10) are Model G16CM34, 8,180 hp at site conditions.

All of the compressor engines will be equipped with low emission combustion (LEC) control technology integral to their design. LEC technology achieves low NO_X emissions by operating at high air-to-fuel ratios (AFR), thereby reducing the peak combustion temperature within each combustion cylinder. Three (3) Caterpillar Model G16CM34 engines (SN-08 through SN-10) will be equipped with selective catalytic reduction (SCR) technology for additional NO_X reduction. SCR reduces NO_X via reaction with ammonia (NH₃), urea or other reagent over a catalyst. FEP – Russell has chosen to use urea.

Each compressor engine will also be equipped with an oxidation catalyst system to reduce emissions of CO and VOCs, including formaldehyde. An oxidation catalyst system converts CO and VOC hydrocarbons in the engine exhaust into carbon dioxide (CO_2).

Specific Conditions

The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Conditions #5 and #6, Plantwide Condition #7 (by burning pipeline quality natural gas as the only fuel), and by operating at or less than maximum capacity of the equipment. [Regulation 19, §19.501 et seq., and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
01	Caterpillar G3616, 4,735 bhp, natural gas-fired Compressor Engine with Oxidizing Catalyst (4SLB)	PM ₁₀ SO ₂ VOC CO NO _X	0.1 0.1 2.0 2.1 5.3	0.1 0.1 8.7 8.8 22.9
02	Caterpillar G3616, 4,735 bhp, natural gas-fired Compressor Engine with Oxidizing Catalyst (4SLB)	PM ₁₀ SO ₂ VOC CO NO _X	0.1 0.1 2.0 2.1 5.3	0.1 0.1 8.7 8.8 22.9

SN	Description	Pollutant	lb/hr	tpy
03	Caterpillar G3616, 4,735 bhp, natural gas-fired Compressor Engine with Oxidizing Catalyst (4SLB)	PM ₁₀ SO ₂ VOC CO NO _X	0.1 0.1 2.0 2.1 5.3	0.1 0.1 8.7 8.8 22.9
04	Caterpillar G16CM34, 8,180 bhp, natural gas-fired Compressor Engine with Oxidizing Catalyst (4SLB)	PM ₁₀ SO ₂ VOC CO NO _X	0.1 0.1 2.2 4.3 9.1	0.1 0.2 9.5 18.8 39.5
05	Caterpillar G16CM34, 8,180 bhp, natural gas-fired Compressor Engine with Oxidizing Catalyst (4SLB)	PM ₁₀ SO ₂ VOC CO NO _X	0.1 0.1 2.2 4.3 9.1	0.1 0.2 9.5 18.8 39.5
06	Caterpillar G16CM34, 8,180 bhp, natural gas-fired Compressor Engine with Oxidizing Catalyst (4SLB)	PM ₁₀ SO ₂ VOC CO NO _X	0.1 0.1 2.2 4.3 9.1	0.1 0.2 9.5 18.8 39.5
07	Caterpillar G16CM34, 8,180 bhp, natural gas-fired Compressor Engine with Oxidizing Catalyst (4SLB)	PM ₁₀ SO ₂ VOC CO NO _X	0.1 0.1 2.2 4.3 9.1	0.1 0.2 9.5 18.8 39.5
08	Caterpillar G16CM34, 8,180 bhp, natural gas-fired Compressor Engine with Oxidizing Catalyst and Selective Catalytic Reduction (4SLB)	PM ₁₀ SO ₂ VOC CO NO _X	0.1 0.1 2.2 4.3 1.8	0.1 0.2 9.5 18.8 7.5
09	Caterpillar G16CM34, 8,180 bhp, natural gas-fired Compressor Engine with Oxidizing Catalyst and Selective Catalytic Reduction (4SLB)	PM ₁₀ SO ₂ VOC CO NO _X	0.1 0.1 2.2 4.3 1.8	0.1 0.2 9.5 18.8 7.5

SN	Description	Pollutant	lb/hr	tpy
10	Caterpillar G16CM34, 8,180 bhp,	PM ₁₀	0.1	0.1
	natural gas-fired Compressor	SO ₂	0.1	0.2
	Engine with Oxidizing Catalyst	VOC	2.2	9.5
	and Selective Catalytic Reduction	CO	4.3	18.8
	(4SLB)	NO _X	1.8	7.5

2. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Plantwide Condition #7 (by burning pipeline quality natural gas as the only fuel), and by operating at or less than maximum capacity of the equipment. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
01	Caterpillar G3616, 4,735 bhp,	PM	0.1	0.1
	natural gas-fired Compressor	1,3-Butadiene	0.01	0.02
	Engine with Oxidizing Catalyst	Acrolein	0.05	0.21
	(4SLB)	Formaldehyde	1.04	4.57
02	Caterpillar G3616, 4,735 bhp,	PM	0.1	0.1
	natural gas-fired Compressor	1,3-Butadiene*	0.01	0.02
	Engine with Oxidizing Catalyst	Acrolein*	0.05	0.21
	(4SLB)	Formaldehyde*	1.04	4.57
03	Caterpillar G3616, 4,735 bhp,	PM	0.1	0.1
	natural gas-fired Compressor	1,3-Butadiene*	0.01	0.02
	Engine with Oxidizing Catalyst	Acrolein*	0.05	0.21
	(4SLB)	Formaldehyde*	1.04	4.57
04	Caterpillar G16CM34, 8,180 bhp,	PM	0.1	0.1
	natural gas-fired Compressor	1,3-Butadiene*	0.01	0.02
	Engine with Oxidizing Catalyst	Acrolein*	0.07	0.28
	(4SLB)	Formaldehyde*	0.64	2.76
05	Caterpillar G16CM34, 8,180 bhp,	PM	0.1	0.1
	natural gas-fired Compressor	1,3-Butadiene*	0.01	0.02
	Engine with Oxidizing Catalyst	Acrolein*	0.07	0.28
	(4SLB)	Formaldehyde*	0.64	2.76
06	Caterpillar G16CM34, 8,180 bhp,	PM	0.1	0.1
	natural gas-fired Compressor	1,3-Butadiene*	0.01	0.02
	Engine with Oxidizing Catalyst	Acrolein*	0.07	0.28
	(4SLB)	Formaldehyde*	0.64	2.76

SN	Description	Pollutant	lb/hr	tpy
07	Caterpillar G16CM34, 8,180 bhp,	PM	0.1	0.1
	natural gas-fired Compressor	1,3-Butadiene*	0.01	0.02
	Engine with Oxidizing Catalyst	Acrolein*	0.07	0.28
	(4SLB)	Formaldehyde*	0.64	2.76
08	Caterpillar G16CM34, 8,180 bhp,	PM	0.1	0.1
	natural gas-fired Compressor	1,3-Butadiene*	0.01	0.02
	Engine with Oxidizing Catalyst	Acrolein*	0.07	0.28
	and Selective Catalytic Reduction	Formaldehyde*	0.64	2.76
	(4SLB)	Ammonia**	0.72	3.16
09	Caterpillar G16CM34, 8,180 bhp,	PM	0.1	0.1
	natural gas-fired Compressor	1,3-Butadiene*	0.01	0.02
	Engine with Oxidizing Catalyst	Acrolein*	0.07	0.28
	and Selective Catalytic Reduction	Formaldehyde*	0.64	2.76
	(4SLB)	Ammonia**	0.72	3.16
10	Caterpillar G16CM34, 8,180 bhp,	PM	0.1	0.1
	natural gas-fired Compressor	1,3-Butadiene*	0.01	0.02
	Engine with Oxidizing Catalyst	Acrolein*	0.07	0.28
	and Selective Catalytic Reduction	Formaldehyde*	0.64	2.76
	(4SLB)	Ammonia**	0.72	3.16

3. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9. The permittee shall demonstrate compliance with this condition by burning only pipeline quality natural gas as fuel, as defined in Plantwide Condition #7.

SN	Limit	Regulatory Citation
01 through 10	5%	§18.501 and A.C.A.

NSPS Subpart JJJJ Conditions for SN-01 through SN-10

4. SN-01 through SN-10 are non-certified stationary spark ignition (SI) reciprocating internal combustion engines (RICE) ordered on June 10, 2008. They are subject to and shall comply with 40 CFR Part 60, Subpart JJJJ - *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines* (Appendix A). The engines were ordered after the applicability "commence construction" date of June 12, 2006. The manufacture date for all FEP - Russell engines is reasonably presumed to be after the applicability manufacture date of July 1, 2007. [Regulation 19, §19.304 and 40 CFR Part §60.4230(a)(4)(i), Subpart JJJJ]

5. The permittee must comply with applicable emission limitations and standards used to permit hourly and annual rates for SN-01 through SN-10, specified for NO_X, CO and VOC emissions based on control technology applied. The following table summarizes the not-to-exceed emission limits permitted for these sources. [Regulation 19, §19.501 et seq., and 40 CFR Part 52, Subpart E]

Source No.	Description	Pollutant	Control Technology	SIP Emission Limits (g/hp-hr)
	Three (3) Caterpillar G3616, 4,735 bhp,	NO _X	Low Emission Combustion (LEC)	0.50
01 - 03	01 - 03 natural gas-fired stationary SI RICE	СО	Ovidation Cataluct	0.19
(4SLB)	(4SLB)	VOC	Oxidation Catalyst	0.19
	Four (4) Caterpillar	NO _X	LEC	0.50
04 - 07	natural gas-fired stationary SI RICE (4SLB)	СО	Oxidation Catalyst	0.24
		VOC		0.12
Three (3) Caterpillar G16CM34, 8,180 bhp,		NO _X	LEC & Selective Catalytic Reduction	0.10
08 - 10	natural gas-fired stationary SI RICE	СО	Ovidation Catalust	0.24
	(4SLB)	VOC	Oxidation Catalyst	0.12

6. The permittee must comply with applicable NSPS JJJJ emission limitations and standards for SN-01 through SN-10 specified for NO_X, CO and VOC emissions in the table below, based on an engine manufacture date after July 1, 2007 and before July 1, 2010. [§60.4230(a)(4)(i), Table 1 of 40 CFR 60, Subpart JJJJ]

Source No.	Description	Pollutant	NSPS JJJJ Emission Limits Engine Manuf. Date after 07/01/2007 (g/hp-hr)
01 - 03	Three (3) Caterpillar G3616, 4,735 bhp, natural gas-fired stationary SI RICE (4SLB)	NO _X	2.0
		СО	4.0
		VOC	1.0

Source No.	Description	Pollutant	NSPS JJJJ Emission Limits Engine Manuf. Date after 07/01/2007 (g/hp-hr)
04 - 07	Four (4) Caterpillar G16CM34, 8,180 bhp, natural gas-fired stationary SI RICE (4SLB)	NO _X	2.0
		СО	4.0
		VOC	1.0
08 - 10	Three (3) Caterpillar G16CM34, 8,180 bhp, natural gas-fired stationary SI RICE (4SLB)	NO _X	2.0
		СО	4.0
		VOC	1.0

7. The permittee must operate and maintain all stationary SI ICE (SN-01 through SN-10) subject to 40 CFR Part 60, Subpart JJJJ in compliance with Specific Conditions #5 and #6 over the entire life of the engines. [Regulation 19, §19.304, 40 CFR §60.4233(e) and §60.4234]

- 8. The permittee must conduct an initial performance test on each engine (SN-01 through SN-10) subject to testing under 60 Subpart JJJJ to demonstrate compliance with the applicable pollutant emission standards of Specific Conditions #5, #6 and #7. Subsequent performance testing must be conducted every 8,760 hours or every 3 years, whichever comes first. EPA Reference Method 7E or 20 of 40 CFR Part 60 Appendix A shall be used to test for compliance with the NO_x emission rate; EPA Reference Method 10, 10A, or 10B of 40 CFR Part 60 Appendix A shall be used to test for compliance Method 18 or 25A of 40 CFR Part 60 Appendix A shall be used to test for compliance with the CO emission rate; and EPA Reference Method 18 or 25A of 40 CFR Part 60 Appendix A shall be used to test for compliance with the CO emission rate. Each performance test must be conducted according to Plantwide Condition #3 and as specified in 40 CFR §60.8, §60.4244(a-g) and Table 2 of 40 CFR 60 Subpart JJJJ, summarized in (a) through (d) below: [Regulation 19, §19.702 and 40 CFR Part 60, Appendix A, §60.8(a), Table 2 of 40 CFR 60, Subpart JJJJ, 40 CFR §60.4243(a)(2)(ii), and §60.4244(a-g)]
 - a. Each performance test must be conducted within 10 % of 100 % peak (or the highest achievable) load and must comply with the testing requirements listed in 40 CFR 60.8 and under the specific conditions that are specified by Table 2 of Subpart JJJJ of Part 60 *Requirements for Performance Tests*;
 - b. Performance tests may not be conducted during periods of startup, shutdown, or malfunction, as specified in 40 CFR §60.8(c). If any engine is non-operational when a performance test is due, the engine does not need to be started up just to test it, but will need to be tested immediately upon startup;

- c. Three separate test runs must be conducted for each engine performance test as specified by §60.8(f). Each test run must be conducted within 10 % of 100 % peak (or the highest achievable) load and be at least 1 hour in duration; and
- d. To determine compliance with the NO_X , CO and VOC mass per unit output emission limitations, the measured concentrations must be converted using the Equations 1, 2, and 3 or 4, respectively, outlined in §60.4244(d-g) of Subpart JJJJ.
- 9. The permittee shall post and maintain clearly visible labels at the engines, SN-01 through SN-10, which identifies each engine as a distinct and separate emission source. [Regulation 19, §19.304 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
- 10. Each engine, SN-01 through SN-10, must be equipped with a non-resettable hour meter. The facility must keep records of the hours of operation of the engines recorded through the non-resettable hour meter in order to comply with Specific Condition #8. [Regulation 19, §19.304 and §19.705]
- 11. The permittee must submit to the Department a copy of the initial and subsequent performance tests and operating hours of the engine as specified in Specific Condition #8, in accordance to Plantwide Condition #3, at the address in General Provision #7, maintain a copy on-site and make available to Department personnel upon request. [Regulation 19, §19.304, §19.705 and 40 CFR §60.4245(a-d)]
- 12. For all non-certified stationary SI ICEs subject to NSPS Subpart JJJJ greater than or equal to 500 hp (SN-01 through SN-10), the permittee must keep an operating and maintenance plan (O&M Plan) and records for each engine of conducted maintenance and must, to the extent practicable, maintain and operate each engine in a manner consistent with good air pollution control practice for minimizing emissions. [Regulation 19, §19.304 and 40 CFR §60.4243(b)(2)(ii)]
- 13. The permittee must meet the following notification, reporting and recordkeeping requirements SN-01 through SN-10, according to Plantwide Condition #3. In addition, the permittee shall submit to the Department according to General Provision #7, maintain a copy on-site and make available to Department personnel upon request, a comprehensive report showing compliance with NSPS Subpart JJJJ. The notification must include the following information:
 - a. All notifications submitted to comply with 40 CFR Part 60 Subpart JJJJ and all documentation supporting any notification;
 - b. Maintenance conducted on each engine;
 - c. Documentation that each engine meets the emission standard;
 - d. Name and address of the permittee;
 - e. The address of each affected source;
 - f. Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;
 - g. Emission control equipment; and
 - h. Fuel used.

[Regulation 19, §19.304 and 40 CFR §60.4245(a)(1,2,4) and (c)(1-5)]

Monitoring Requirements for Engines with Selective Catalytic Reduction SN-08 through SN-10

- 14. The compressor engines (SN-08 through SN-10) are subject to and shall comply with all applicable provisions of Regulation 19, §19.304, 40 CFR Part 52 Subpart E. [Regulation 19, §19.304, 40 CFR Part 52 Subpart E]
- 15. The permittee shall operate each SCR unit whenever its engine is operating, except during startup. The permittee shall record all startup events when the SCR is not operating and account for these uncontrolled NO_X emissions in the annual totals. The permittee shall maintain continuous totals of NO_X emissions to verify that the annual emission rate of Specific Condition #1 has not been exceeded. The short term limit does not apply during periods of start-up. [Regulation 19, §19.303, §19.304, 40 CFR Part 52 Subpart E and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
- 16. The permittee shall install, maintain and operate an electrochemical NO cell with data logger or other recording device to measure, monitor and record NO from each SCR outlet, except during periods of startup when the SCR is not operating. The permittee shall maintain a NO concentration, as measured by this monitor, of 14 ppmvd at the 12.8% O₂ dry basis for this engine condition. The NO concentration shall be recorded once every 15 minutes. These values shall be recorded, maintained on site, made available to Department personnel upon request, and submitted to the Department under General Condition #7. In the event the NO monitor or associated equipment malfunctions, the permittee shall follow the SSM Plan developed per Specific Condition #18(c). [Regulation 19, §19.703, 40 CFR Part 52 Subpart E, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
- 17. During the compliance testing required by Specific Condition #8, the permittee shall test at an NO concentration of no more than 10 ppm at 15% O₂ as measured by the monitor in Specific Condition #16. The NO concentration of no more than 10 ppmvd at 15% O₂ is equal to 14 ppmvd at the 12.8% O₂ identified in the CAT spec sheet for its engine which was included in the permit application. [Regulation 19, §19.304, 40 CFR Part 52 Subpart E]
- 18. For each SCR unit at SN-08, SN-09 and SN-10, the permittee shall:
 - a. Maintain records that summarize the number, duration, and cause of excursions or exceedances of limits as well as corrective action taken. [Regulation 19, §19.304]
 - b. Maintain records that summarize the number, duration, and cause of monitoring equipment downtime incidents, other than routine downtime for calibration checks. [Regulation 19, §19.304]
 - c. Maintain a SSM (startup, shutdown, malfunction) Plan in accordance with 40 CFR 63 Subpart ZZZZ. The Plan shall include provisions identifying procedures in the event the NO monitor malfunctions. The Plan shall also include corrective actions in the event the threshold is exceeded. [Regulation 19, §19.304]
 - d. Maintain records that describe the actions taken to implement a SSM Plan. Documentation shall be maintained to confirm that the plan was completed and reduced the likelihood of similar excursions or exceedances. [Regulation 19, §19.304]

e. Submit information pertaining to exceedances or excursions from permitted values in semi-annual reports in accordance with General Provision #7.
 [40 CFR §70.6(a)(3)(iii)(A)]

NESHAP Subpart ZZZZ Conditions for SN-01 through SN-10

- 19. SN-01 through SN-10 are 4SLB, stationary reciprocating internal combustion engines (RICE) located at FEP Russell, a facility that is a major source of HAP emissions. These engines are subject to and shall comply with the provisions of 40 CFR Part 63, Subpart ZZZZ National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE) (Appendix B). Compliance with applicable emission limitations and operating limitations of 40 CFR 63, Subpart ZZZZ must occur upon startup, except as exempted in Specific Condition #20. [Regulation 19, §19.304 and 40 CFR Part §63.6580, §63.6590(a)(2)(i) and §63.6595(a)(3)]
- 20. For new, reconstructed, and rebuilt stationary RICE (SN-01 through SN-10), deviations from the emission or operating limitations that occur during the first (initial) 200 hours of operation from engine startup (engine burn-in period) are not violations of emission or operating limitations and therefore are not deviations of this permit. [40 CFR Part §63.6640(d)]
- 21. The permittee must comply with applicable notification, reporting and recordkeeping requirements of 40 CFR 63, Subpart ZZZZ. The initial and subsequent reports shall be submitted semi-annually in accordance to Plantwide Condition #3, at the address in General Provision #7. The compliance report must contain the following information: [40 CFR §63.6650(c)(1-6)]
 - a. Company name and address.
 - b. Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.
 - c. Date of report and beginning and ending dates of the reporting period.
 - d. If the permittee had a startup, shutdown, or malfunction during the reporting period, the compliance report must include the information in §63.10(d)(5)(i) and §63.6650(d)(1-2):
 - i. The total operating time of the stationary RICE at which the deviation occurred during the reporting period.
 - ii. Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.
 - e. If there are no deviations from any emission or operating limitations that apply to the permittee, a statement there were no deviations from the emission or operating limitations during the reporting period.
- 22. Compliance with applicable 40 CFR 63, Subpart ZZZZ emission limitations and operating limitations must be achieved at all times for SN-01 through SN-10 specified for CO or formaldehyde emissions in the table below, except during periods of startup, shutdown, and malfunction, except as exempted in 40 CFR Part §63.6640(d), Specific Condition #20. [Regulation 19, §19.304, Table 2a, Items 2a and 2b, to Subpart ZZZZ of Part 63 and 40 CFR §63.6605(a), Subpart ZZZZ]
| Source
No. | NESHAP ZZZZ Emission Limits for New and Reconstructed
4SLB Stationary RICE ≥250 HP Located at a Major Source of
HAP Emissions | |
|---------------|---|--|
| | a. reduce CO emissions by 93% or more | |
| 01 - 10 | or | |
| | b. limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less than [at] 15% O_2 dry basis | |

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- 23. The permittee must operate and maintain the stationary RICEs (SN-01 through SN-10), including air pollution control and monitoring equipment, in a manner consistent with good air pollution control practices for minimizing emissions at all times, including during startup, shutdown and malfunction. [40 CFR §63.6605(b)]
- 24. Applicable initial performance tests for carbon monoxide (CO) or formaldehyde must be conducted within 60 days after achieving the maximum production rate, but not later than 180 days after initial startup, using test methods, conditions and calculations to demonstrate compliance with the emissions limits of Items 2a and 2b of Table 2a of 40 CFR 63, Subpart ZZZZ. [Regulation 19, §19.304, 40 CFR §63.6610 and §63.6620, Table 2a of 63 Subpart ZZZZ]
- 25. The permittee shall conduct tests for carbon monoxide (CO) or formaldehyde at the outlet of the control device of the compressor engines (SN-01 through SN-10). Subsequent tests for CO or formaldehyde to demonstrate 40 CFR 63, Subpart ZZZZ compliance must be conducted semi-annually for SN-04 through SN-08 as specified in Table 3 of Part 63. Subpart ZZZZ. After the facility has demonstrated compliance for two consecutive semiannual tests, the facility may, upon approval of the Department, reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICEs (SN-01 through SN-10) are not in compliance with the CO or formaldehyde emission limitations according to 40 CFR 63, Subpart ZZZZ Table 3, or the test results deviate from any of the permitted operating limitations, semiannual performance tests must be resumed for that engine. EPA Reference Method 10 for CO and EPA Reference Method 320 or 323 for formaldehyde shall be used as test methods, conditions, and calculations as noted in 40 CFR Part 63, Subpart ZZZZ, Table 4, or an alternative method may be used as approved by the Department prior to testing. Measurements to determine O₂ must be made at the same time as the measurements for CO or formaldehyde concentrations. The permittee shall test each engine (SN-01 through SN-10) within 90% of its permitted capacity. If any engine does not test within this range, the permittee shall be limited to operating within 10% above the tested rate for that engine. If the tested emission rate for any pollutant of any engine is in excess of the permitted emission rate, that engine shall be retested for both pollutants within 60 days of receipt by the facility of the testing results. Each initial and subsequent performance tests must be conducted according to the requirements in 40 CFR Part 63.7(e)(1) and under the specific conditions specified in Table 4 of Part 63,

Subpart ZZZZ and Plantwide Condition #3. [Regulation 19, §19.702, 40 CFR §63.6620(a-e), Tables 3 and 4 of Part 63 Subpart ZZZZ, and 40 CFR Part 52, Subpart E]

- 26. The permittee must comply with applicable operating parameters for the oxidizing catalyst. For each 4SLB stationary Rice (SN-01 through SN-10) complying with the requirement to reduce CO and/or formaldehyde emissions and using an oxidation catalyst, the permittee must: [Regulation 19, §19.702 and Table 2b, Items 1a and 1b of Part 63 Subpart ZZZZ]
 - a. Maintain the catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100% load plus or minus 10% from the pressure drop across the catalyst that was measured during the initial performance test; and
 - b. Maintain the temperature of the stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450°F and less than or equal to 1350°F.

SN-11

Emergency Generator

Source Description

Auxiliary equipment at the station will include one (1) 250 hp, natural gas-fired Waukesha F11GSIU 4-stroke rich burn (4SRB) engine for backup emergency power for building lights and computers. Part 60, Subpart JJJJ emission limits, which the emergency engine (SN-11) is subject to, require application of non-selective catalytic reduction system (NSCR; also referred to as three-way control) technology for control of NO_X, CO and VOC, Subpart JJJJ, §60.4243(g).

Specific Conditions

27. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Conditions #30, #33 and #34 and Plantwide Condition #7, by burning pipeline quality natural gas as fuel. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
11	Waukesha F11GSIU, 250 hp, 4SRB, natural gas-fired Emergency Generator with NSCR	PM ₁₀ SO ₂ VOC CO NO _X	0.1 0.1 0.2 2.2 1.1	0.1 0.1 0.1 0.6 0.3

28. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Condition #30 and Plantwide Condition #7, by burning pipeline quality natural gas as fuel. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
11	Waukesha F11GSIU, 250 hp, 4SRB, natural gas-fired Emergency Generator with NSCR	PM Acrolein	0.1 0.01	0.1 0.01

29. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9. The permittee shall demonstrate compliance with this condition by burning only pipeline quality natural gas as fuel, as defined in Plantwide Condition #7.

SN	Limit	Regulatory Citation
11	5%	§18.501 and A.C.A.

- 30. The permittee shall not operate the emergency generator (SN-11) more than 500 hours in any consecutive twelve month period. The operating hours shall be automatically recorded by a non-resettable hourly operating meter on SN-11. [Regulation 19, §19.705, A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, §60.4245(b) and 40 CFR 70.6]
- 31. The permittee shall maintain monthly records to demonstrate compliance with Specific Condition #30. The permittee must document how many hours are spent for emergency use; including what classified the operation as emergency and how many hours are spent for non-emergency operation. The permittee shall update the records by the fifteenth day of the month following the month to which the records pertain. A twelve month rolling total and each individual month's data shall be maintained on-site, made available to Department personnel upon request and submitted in accordance with General Provision #7. [Regulation 19, §19.705, and 40 CFR Part 52, Subpart E and §60.4245(b)]

NSPS Subpart JJJJ Conditions for SN-11

- 32. SN-11 is a non-certified, emergency-use stationary spark ignition (SI) internal combustion engines (ICE) with non-selective catalytic reduction (NSCR) device, not ordered as of June 10, 2008, that is subject to and shall comply with 40 CFR Part 60, Subpart JJJJ- Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (Appendix A). The engine was ordered after the applicability "commence construction" date of June 12, 2006. The manufacture date for this engine is reasonably presumed to be after the applicability manufacture date of January 1, 2009. [§19.304 of Regulation 19 and 40 CFR §60.4230(a)(4)(iv), Subpart JJJJ]
- 33. The permittee must comply with applicable emission standards for SN-11 specified for NO_X, CO and VOC emissions in the table below. [Regulation 19, §19.501 et seq., and 40 CFR Part 52, Subpart E]

Source No.	Description	Pollutant	Permit Emission Limits (g/hp-hr)
Waukesha F11GSIU, 250 hp,		NO _X	2.00
11 4SRB, natural gas-fired Emergency Generator	СО	4.00	
	w/NSCR	VOC	0.25

34. The permittee must comply with applicable emission standards for SN-11 specified for NO_X, CO and VOC emissions in Table 1 of Subpart JJJJ of Part 60. [Regulation 19, §19.501 et seq., and 40 CFR Part 52, Subpart E]

Source No.	Description	Pollutant	NSPS JJJJ Emission Limits (g/hp-hr)
	Waukesha F11GSIU, 250 hp, 4SRB, natural gas-fired Emergency Generator w/NSCR	NO _X	2.00
11		СО	4.00
		VOC	1.00

- 35. The permittee must operate and maintain emergency-use stationary spark ignition (SI) internal combustion engine SN-11 subject to 40 CFR Part 60 Subpart JJJJ in compliance Specific Conditions #33 and #34 over the entire life of the engine. [Regulation 19, §19.304 and 40 CFR §60.4234]
- 36. The permittee must conduct an initial performance test on SN-11 for VOC, CO and NO_X according to Plantwide Condition #3 within 1 year of engine startup to demonstrate compliance with the applicable pollutant emissions of Specific Conditions #33, #34 and #35. Subsequent performance testing is required for SN-11 every five years or whenever it is rebuilt or undergoes major repair or maintenance, whichever comes first. A rebuilt stationary SI ICE means an engine that has been rebuilt as that term is defined in 40 CFR §94.11(a). Each performance test must be conducted according to Plantwide Condition #3 and as specified in 40 CFR Part §60.4244(a-f), summarized in (a) through (c) below: [Regulation 19, §19.304, 40 CFR §60.8(a) and §60.4243(b)(2)(i)]
 - a. Each performance test must be conducted within 10 % of 100 % peak (or the highest achievable) load and must comply with the testing requirements listed in 40 CFR 60.8 and under the specific conditions that are specified by Table 2 of Subpart JJJJ of Part 60 Requirements for Performance Tests;
 - b. Performance tests may not be conducted during periods of startup, shutdown, or malfunction, as specified in 40 CFR 60.8(c). If the engine is non-operational when a performance test is due, the engine does not need to be started up just to test it, but will need to be tested immediately upon startup; and
 - c. To determine compliance with the NO_X , CO and VOC mass per unit output emission limitations, the measured concentrations must be converted using the Equations 1, 2, and 3 or 4, respectively, outlined in §60.4244 of Subpart JJJJ.
- 37. The permittee must submit to the Department a copy of the initial and subsequent performance tests, as specified in Specific Condition #36 in accordance to Plantwide Condition #3, at the address in General Provision #7, maintain a copy on-site and make available to Department personnel upon request. [Regulation 19, §19.304 and 40 CFR §60.4245(d)]
- 38. The permittee must keep a maintenance plan and records of conducted maintenance on SN-11 and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. [Regulation 19, §19.304 and 40 CFR §60.4243(b)(2)(i)]

- 39. The permittee shall use air-to-fuel ratio (AFR) controllers with the operation of three-way catalysts/non-selective catalytic reduction (SN-11). The AFR controller must be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times. [Regulation 19, §19.303, A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311 and 40 CFR §60.4243(g)]
- 40. Within 1 year of completion of construction, the permittee must meet the following notification, reporting and recordkeeping requirements for SN-11. The permittee shall maintain a comprehensive report showing compliance with NSPS Subpart JJJJ for SN-11. The permittee shall submit this report to the Department according to General Provision #7, maintain a copy on-site and make available to Department personnel upon request. The report must include the following information, (a) through (c) below: [40 CFR §60.4245(a)(1,2,4)]
 - a. All notifications submitted to comply with 40 CFR Part 60 Subpart JJJJ and all documentation supporting any notification;
 - b. Maintenance conducted on each engine; and
 - c. Documentation that each engine meets the emission standard.

NESHAP Subpart ZZZZ Conditions for SN-11

41. SN-11 is a 4-stroke, rich burn (4SRB) emergency-use engine, with a site rating of less than 500 bhp, that is subject to the provisions of 40 CFR Part 63, Subpart ZZZZ -*National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines* (RICE) (Appendix B). Compliance shall be achieved via compliance with the applicable requirements of 40 CFR Part 60, Subpart JJJJ - *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines* (Appendix A) for spark ignition engines. [Regulation 19, §19.304 and 40 CFR §63.6590(c), Subpart ZZZZ]

SECTION V: COMPLIANCE PLAN AND SCHEDULE

Fayetteville Express Pipeline LLC - Russell Compressor Station will operate in compliance with those identified regulatory provisions. As this facility is new, the facility will examine and analyze future regulations that may apply and determine their applicability with any necessary action taken on a timely basis.

SECTION VI: PLANTWIDE CONDITIONS

- The permittee shall notify the Director in writing within thirty (30) days after commencing construction, completing construction, first placing the equipment and/or facility in operation, and reaching the equipment and/or facility target production rate. [Regulation 19, §19.704, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
- 2. If the permittee fails to start construction within eighteen months or suspends construction for eighteen months or more, the Director may cancel all or part of this permit. [Regulation 19, §19.410(B) and 40 CFR Part 52, Subpart E]
- 3. The permittee must test any equipment scheduled for testing, unless otherwise stated in the Specific Conditions of this permit or by any federally regulated requirements, within the following time frames: (1) new equipment or newly modified equipment within sixty (60) days of achieving the maximum production rate, but no later than 180 days after initial start up of the permitted source or (2) operating equipment according to the time frames set forth by the Department or within 180 days of permit issuance if no date is specified. The permittee must notify the Department of the scheduled date of compliance testing at least fifteen (15) days in advance of such test. The permittee shall submit the compliance test results to the Department within thirty (30) days after completing the testing. [Regulation 19, §19.702 and/or Regulation 18 §18.1002 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
- 4. The permittee must provide:
 - a. Sampling ports adequate for applicable test methods;
 - b. Safe sampling platforms;
 - c. Safe access to sampling platforms; and
 - d. Utilities for sampling and testing equipment.

[Regulation 19, §19.702 and/or Regulation 18, §18.1002 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

- 5. The permittee must operate the equipment, control apparatus and emission monitoring equipment within the design limitations. The permittee shall maintain the equipment in good condition at all times. [Regulation 19, §19.303 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
- 6. This permit subsumes and incorporates all previously issued air permits for this facility. [Regulation 26 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
- 7. The permittee shall only use pipeline quality natural gas to fire the compressor engines (SN-01 through SN-10) and generator (SN-11) located at this facility. Pipeline quality gas is defined as gas which contains less than 0.5 grains total sulfur (S) per 100 standard cubic feet (scf) of natural gas or less (≤ 0.5 gr S/100 scf). Additionally, pipeline natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 950 and 1100 BTU per standard cubic foot. Compliance with this condition may be demonstrated by a valid gas tariff, purchase contract, fuel analysis, or other appropriate documentation, or periodic testing. [40 CFR 70.6 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Title VI Provisions

- 8. The permittee must comply with the standards for labeling of products using ozonedepleting substances. [40 CFR Part 82, Subpart E]
 - a. All containers containing a class I or class II substance stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced to interstate commerce pursuant to §82.106.
 - b. The placem ent of the required warning statement must comply with the requirements pursuant to §82.108.
 - c. The form of the label bearing the required warning must comply with the requirements pursuant to §82.110.
 - d. No person ma y modify, remove, or interfere with the required warning statement except as described in §82.112.
- 9. The permittee must comply with the standards for recycling and emissions reduction, except as provided for MVACs in Subpart B. [40 CFR Part 82, Subpart F]
 - a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to §82.156.
 - b. Equipment used during t he maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158.
 - c. Persons performing maintenance, service repair, or disposal of appliances must be certified by an approved technician certification program pursuant to §82.161.
 - d. Persons disposing of small appliances, MVACs, and MVAC like appliances must comply with record keeping requirements pursuant to §82.166. ("MVAC like appliance" as defined at §82.152)
 - e. Persons owning commercial or industrial process refrigeration equipment must comply with leak repair requirements pursuant to §82.156.
 - f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.
- 10. If the permittee manufactures, transforms, destroys, imports, or exports a class I or class II substance, the permittee is subject to all requirements as specified in 40 CFR Part 82, Subpart A, Production and Consumption Controls.
- 11. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.

The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air tight sealed refrigeration system used as refrigerated cargo, or the system used on passenger buses using HCFC 22 refrigerant.

12. The permittee can switch from any ozone depleting substance to any alternative listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR Part 82, Subpart G.

Permit Shield

13. Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements, as of the date of permit issuance, included in and specifically identified in the following table of this condition. The permit specifically identifies the following as applicable requirements based upon the information submitted by the permittee in an application dated April 1, 2009 and January 21, 2010.

Source No.	Regulation	Description
Facility	Arkansas Regulation 19	Regulations of the Arkansas Plan of Implementation for Air Pollution Control
Facility	Arkansas Regulation 26	Regulations of the Arkansas Operating Air Permit Program
01 through 11	40 CFR 60, Subpart JJJJ	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines
01 through 11	40 CFR 63, Subpart ZZZZ	National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Applicable Regulations

The permit specifically identifies the following as inapplicable based upon information submitted by the permittee in an application dated April 1, 2009 and January 21, 2010.

Inapplicable Regulations

Source No.	Regulation	Description	Discussion
Facility	40 CFR 60, Subpart K	Standards of Performance for Storage Vessels for Petroleum Liquids for which Construction, Reconstruction, or Modification Commenced after June 11, 1973 and prior to May 19, 1978	No storage vessels were constructed, reconstructed or modified after June 11, 1973 and prior to May 19, 1978

Source No.	Regulation	Description	Discussion
Facility	40 CFR 60, Subpart Ka	Standards of Performance for Storage Vessels for Petroleum Liquids for which Construction, Reconstruction, or Modification Commenced after May 18, 1978 and prior to July 23, 1984	No storage vessels were constructed, reconstructed or modified after May 18, 1978 and prior to July 23, 1984
Facility	40 CFR 60, Subpart Kb	Standards of Performance for Volatile Organic Liquid Storage Vessels for which Construction, Reconstruction, or Modification Commenced after July 23, 1984	No storage vessels with capacity equal to or greater than 19,815 gallon threshold.
Facility	40 CFR 63, Subpart HHH	National Emission Standards for Hazardous Air Pollutants from Natural Gas Transmission and Storage Facilities	A compressor station that transports natural gas prior to the point of custody transfer or to a natural gas processing plant (if present) is not considered a part of the natural gas transmission and storage source category. Additionally, there are no TEG Dehydrators.
Facility	40 CFR 64	Compliance Assurance Monitoring	CAM is not applicable for NO _X because the potential uncontrolled emissions are less than100 tpy (major source threshold). For other pollutants which CAM may be potentially applicable, the exemption at §64.2(b)(i) applies, as NSPS JJJJ limits promulgated pursuant to CAA Section 111 after November 15, 1990 apply to CO emissions from the engines.

Source No.	Regulation	Description	Discussion
Facility	40 CFR 68	Chemical Accident Prevention	Compressor stations regulated by the Dept of Transportation are excluded from the Part 68 definition of "stationary sources" and are instead regulated under 49 CFR Part 192.

SECTION VII: INSIGNIFICANT ACTIVITIES

The following sources are insignificant activities. Any activity that has a state or federal applicable requirement shall be considered a significant activity even if this activity meets the criteria of §26.304 of Regulation 26 or listed in the table below. Insignificant activity determinations rely upon the information submitted by the permittee in an application dated April 1, August 31, September 4, 2009 and January 7 and 26, 2010.

Description	Category
One Storage Tank - 4,200 gal Engine Cooling Water	A-3
One Storage Tank - 4,200 gal Used Cooling Water	A-3
One Storage Tank - 4,200 gal Used Lube Oil	A-3
One Storage Tank and Loadout Emissions - 12,600 gal Pipeline Fluids	A-13
One Storage Tank - 12,600 gal Lube Oil	A-13
One Storage Tank - 12,600 gal Waste Water with traces of oil	A-13
Three (3) Storage Tanks – 5,000 gal Urea, each	A-13
Fugitive Emissions - Equipment Leaks from valves, pumps, other and connectors	A-13

SECTION VIII: GENERAL PROVISIONS

- Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 et seq.) as the sole origin of and authority for the terms or conditions are not required under the Clean Air Act or any of its applicable requirements, and are not federally enforceable under the Clean Air Act. Arkansas Pollution Control & Ecology Commission Regulation 18 was adopted pursuant to the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 et seq.). Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 et seq.) as the origin of and authority for the terms or conditions are enforceable under this Arkansas statute. [40 CFR 70.6(b)(2)]
- 2. This permit shall be valid for a period of five (5) years beginning on the date this permit becomes effective and ending five (5) years later. [40 CFR 70.6(a)(2) and §26.701(B) of the Regulations of the Arkansas Operating Air Permit Program (Regulation 26)]
- 3. The permittee must submit a complete application for permit renewal at least six (6) months before permit expiration. Permit expiration terminates the permittee's right to operate unless the permittee submitted a complete renewal application at least six (6) months before permit expiration. If the permittee submits a complete application, the existing permit will remain in effect until the Department takes final action on the renewal application. The Department will not necessarily notify the permittee when the permit renewal application is due. [Regulation 26, §26.406]
- 4. Where an applicable requirement of the Clean Air Act, as amended, 42 U.S.C. 7401, et seq. (Act) is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, the permit incorporates both provisions into the permit, and the Director or the Administrator can enforce both provisions. [40 CFR 70.6(a)(1)(ii) and Regulation 26, §26.701(A)(2)]
- 5. The permittee must maintain the following records of monitoring information as required by this permit.
 - a. The date, place as defined in this permit, and time of sampling or measurements;
 - b. The date(s) analyses performed;
 - c. The company or entity performing the analyses;
 - d. The analytical techniques or methods used;
 - e. The results of such analyses; and
 - f. The operating conditions existing at the time of sampling or measurement.
 - [40 CFR 70.6(a)(3)(ii)(A) and Regulation 26, §26.701(C)(2)]
- 6. The permittee must retain the records of all required monitoring data and support information for at least five (5) years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. [40 CFR 70.6(a)(3)(ii)(B) and Regulation 26, §26.701(C)(2)(b)]

7. The permittee must submit reports of all required monitoring every six (6) months. If permit establishes no other reporting period, the reporting period shall end on the last day of the anniversary month of the initial Title V permit. The report is due within thirty (30) days of the end of the reporting period. Although the reports are due every six months, each report shall contain a full year of data. The report must clearly identify all instances of deviations from permit requirements. A responsible official as defined in Regulation No. 26, §26.2 must certify all required reports. The permittee will send the reports to the address below:

Arkansas Department of Environmental Quality Air Division
ATTN: Compliance Inspector Supervisor
5301 Northshore Drive North Little Rock, AR 72118-5317
[40 C.F.R. 70.6(a)(3)(iii)(A) and Regulation 26, §26.701(C)(3)(a)]

- 8. The permittee shall report to the Department all deviations from permit requirements, including those attributable to upset conditions as defined in the permit.
 - a. For all upset conditions (as defined in Regulation19, § 19.601), the permittee will make an initial report to the Department by the next business day after the discovery of the occurrence. The initial report may be made by telephone and shall include:
 - i. The facility name and location;
 - ii. The process unit or emission source deviating from the permit limit;
 - iii. The permit limit, including the identification of pollutants, from which deviation occurs;
 - iv. The date and time the deviation started;
 - v. The duration of the deviation;
 - vi. The average emissions during the deviation;
 - vii. The probable cause of such deviations;
 - viii. Any corrective actions or preventive measures taken or being taken to prevent such deviations in the future; and
 - ix. The name of the person submitting the report.

The permittee shall make a full report in writing to the Department within five (5) business days of discovery of the occurrence. The report must include, in addition to the information required by the initial report, a schedule of actions taken or planned to eliminate future occurrences and/or to minimize the amount the permit's limits were exceeded and to reduce the length of time the limits were exceeded. The permittee may submit a full report in writing (by facsimile, overnight courier, or other means) by the next business day after discovery of the occurrence, and the report will serve as both the initial report and full report.

b. For all deviations, the permittee shall report such events in semi-annual reporting and annual certifications required in this permit. This includes all upset conditions reported in 8a above. The semi-annual report must include all the information as required by the initial and full reports required in 8a.

[Regulation 19, §19.601 and §19.602, Regulation 26, §26.701(C)(3)(b), and 40 CFR 70.6(a)(3)(iii)(B)]

- 9. If any provision of the permit or the application thereof to any person or circumstance is held invalid, such invalidity will not affect other provisions or applications hereof which can be given effect without the invalid provision or application, and to this end, provisions of this Regulation are declared to be separable and severable. [40 CFR 70.6(a)(5), Regulation 26, §26.701(E), and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
- 10. The permittee must comply with all conditions of this Part 70 permit. Any permit noncompliance with applicable requirements as defined in Regulation 26 constitutes a violation of the Clean Air Act, as amended, 42 U.S.C. §7401, et seq. and is grounds for enforcement action; for permit termination, revocation and reissuance, for permit modification; or for denial of a permit renewal application. [40 CFR 70.6(a)(6)(i) and Regulation 26, §26.701(F)(1)]
- 11. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this permit. [40 CFR 70.6(a)(6)(ii) and Regulation 26, §26.701(F)(2)]
- 12. The Department may modify, revoke, reopen and reissue the permit or terminate the permit for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. [40 CFR 70.6(a)(6)(iii) and Regulation 26, §26.701(F)(3)]
- 13. This permit does not convey any property rights of any sort, or any exclusive privilege. [40 CFR 70.6(a)(6)(iv) and Regulation 26, §26.701(F)(4)]
- 14. The permittee must furnish to the Director, within the time specified by the Director, any information that the Director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee must also furnish to the Director copies of records required by the permit. For information the permittee claims confidentiality, the Department may require the permittee to furnish such records directly to the Director along with a claim of confidentiality. [40 CFR 70.6(a)(6)(v) and Regulation 26, §26.701(F)(5)]
- 15. The permittee must pay all permit fees in accordance with the procedures established in Regulation 9. [40 CFR 70.6(a)(7) and Regulation 26, §26.701(G)]
- 16. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes provided for elsewhere in this permit. [40 CFR 70.6(a)(8) and Regulation 26, §26.701(H)]
- 17. If the permit allows different operating scenarios, the permittee shall, contemporaneously with making a change from one operating scenario to another, record in a log at the

permitted facility a record of the operational scenario. [40 CFR 70.6(a)(9)(i) and Regulation 26, \$26.701(I)(1)]

- 18. The Administrator and citizens may enforce under the Act all terms and conditions in this permit, including any provisions designed to limit a source's potential to emit, unless the Department specifically designates terms and conditions of the permit as being federally unenforceable under the Act or under any of its applicable requirements. [40 CFR 70.6(b) and Regulation 26, §26.702(A) and (B)]
- 19. Any document (including reports) required by this permit must contain a certification by a responsible official as defined in Regulation 26, §26.2. [40 CFR 70.6(c)(1) and Regulation 26, §26.703(A)]
- 20. The permittee must allow an authorized representative of the Department, upon presentation of credentials, to perform the following: [40 CFR 70.6(c)(2) and Regulation 26, §26.703(B)]
 - a. Enter upon the permittee's premises where the permitted source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
 - b. Have access to and copy, at reasonable times, any records required under the conditions of this permit;
 - c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
 - d. As authorized by the Act, sample or monitor at reasonable times substances or parameters for assuring compliance with this permit or applicable requirements.
- 21. The permittee shall submit a compliance certification with the terms and conditions contained in the permit, including emission limitations, standards, or work practices. The permittee must submit the compliance certification annually within 30 days following the last day of the anniversary month of the initial Title V permit. The permittee must also submit the compliance certification to the Administrator as well as to the Department. All compliance certifications required by this permit must include the following: [40 CFR 70.6(c)(5) and Regulation 26, §26.703(E)(3)]
 - a. The identification of each term or condition of the permit that is the basis of the certification;
 - b. The compliance status;
 - c. Whether compliance was continuous or intermittent;
 - d. The method(s) used for determining the compliance status of the source, currently and over the reporting period established by the monitoring requirements of this permit; and
 - e. Such other facts as the Department may require elsewhere in this permit or by §114(a)(3) and §504(b) of the Act.
- 22. Nothing in this permit will alter or affect the following: [Regulation 26, §26.704(C)]
 - a. The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section;

- b. The liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance;
- c. The applicable requirements of the acid rain program, consistent with §408(a) of the Act; or
- d. The ability of EPA to obtain information from a source pursuant to §114 of the Act.
- 23. This permit authorizes only those pollutant emitting activities addressed in this permit. [A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
- 24. The permittee may request in writing and at least 15 days in advance of the deadline, an extension to any testing, compliance or other dates in this permit. No such extensions are authorized until the permittee receives written Department approval. The Department may grant such a request, at its discretion in the following circumstances:
 - a. Such an extension does not violate a federal requirement;
 - b. The permittee demonstrates the need for the extension; and
 - c. The permittee documents that all reasonable measures have been taken to meet the current deadline and documents reasons it cannot be met.

[Regulation 18, §18.314(A), Regulation 19, §19.416(A), Regulation 26, §26.1013(A), A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E]

- 25. The permittee may request in writing and at least 30 days in advance, temporary emissions and/or testing that would otherwise exceed an emission rate, throughput requirement, or other limit in this permit. No such activities are authorized until the permittee receives written Department approval. Any such emissions shall be included in the facility's total emissions and reported as such. The Department may grant such a request, at its discretion under the following conditions:
 - a. Such a request does not violate a federal requirement;
 - b. Such a request is temporary in nature;
 - c. Such a request will not result in a condition of air pollution;
 - d. The request contains such information necessary for the Department to evaluate the request, including but not limited to, quantification of such emissions and the date/time such emission will occur;
 - e. Such a request will result in increased emissions less than five tons of any individual criteria pollutant, one ton of any single HAP and 2.5 tons of total HAPs; and
 - f. The permittee maintains records of the dates and results of such temporary emissions/testing.

[Regulation 18, §18.314(B), Regulation 19, §19.416(B), Regulation 26, §26.1013(B), A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E]

26. The permittee may request in writing and at least 30 days in advance, an alternative to the specified monitoring in this permit. No such alternatives are authorized until the permittee receives written Department approval. The Department may grant such a request, at its discretion under the following conditions:

- a. The request does not violate a federal requirement;
- b. The request provides an equivalent or greater degree of actual monitoring to the current requirements; and
- c. Any such request, if approved, is incorporated in the next permit modification application by the permittee.

[Regulation 18, §18.314(C), Regulation 19, §19.416(C), Regulation 26, §26.1013(C), A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E]

APPENDIX A

40 CFR 60, Subpart JJJJ

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e-CFR Data is current as of October 22, 2009

Title 40: Protection of Environment

PART 60-STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

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Subpart JJJJ—Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

Source: 73 FR 3591, Jan. 18, 2008, unless otherwise noted.

What This Subpart Covers

§ 60.4230 Am I subject to this subpart?

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary spark ignition (SI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (5) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

(1) Manufacturers of stationary SI ICE with a maximum engine power less than or equal to 19 kilowatt (KW) (25 horsepower (HP)) that are manufactured on or after July 1, 2008.

(2) Manufacturers of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are gasoline fueled or that are rich burn engines fueled by liquefied petroleum gas (LPG), where the date of manufacture is:

(i) On or after July 1, 2008; or

(ii) On or after January 1, 2009, for emergency engines.

(3) Manufacturers of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are not gasoline fueled and are not rich burn engines fueled by LPG, where the manufacturer participates in the voluntary manufacturer certification program described in this subpart and where the date of manufacture is:

(i) On or after July 1, 2007, for engines with a maximum engine power greater than or equal to 500 HP (except lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP);

(ii) On or after January 1, 2008, for lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP;

(iii) On or after July 1, 2008, for engines with a maximum engine power less than 500 HP; or

(iv) On or after January 1, 2009, for emergency engines.

(4) Owners and operators of stationary SI ICE that commence construction after June 12, 2006, where the stationary SI ICE are manufactured:

(i) On or after July 1, 2007, for engines with a maximum engine power greater than or equal to 500 HP (except lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP);

(ii) on or after January 1, 2008, for lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP;

(iii) on or after July 1, 2008, for engines with a maximum engine power less than 500 HP; or

(iv) on or after January 1, 2009, for emergency engines with a maximum engine power greater than 19 KW (25 HP).

(5) Owners and operators of stationary SI ICE that commence modification or reconstruction after June 12, 2006.

(b) The provisions of this subpart are not applicable to stationary SI ICE being tested at an engine test cell/stand.

(c) If you are an owner or operator of an area source subject to this subpart, you are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart as applicable.

(d) For the purposes of this subpart, stationary SI ICE using alcohol-based fuels are considered gasoline engines.

(e) Stationary SI ICE may be eligible for exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C (or the exemptions described in 40 CFR parts 90 and 1048, for engines that would need to be certified to standards in those parts), except that owners and operators, as well as manufacturers, may be eligible to request an exemption for national security.

(f) Owners and operators of facilities with internal combustion engines that are acting as temporary replacement units and that are located at a stationary source for less than 1 year and that have been properly certified as meeting the standards that would be applicable to such engine under the appropriate nonroad engine provisions, are not required to meet any other provisions under this subpart with regard to such engines.

Emission Standards for Manufacturers

§ 60.4231 What emission standards must I meet if I am a manufacturer of stationary SI internal combustion engines or equipment containing such engines?

(a) Stationary SI internal combustion engine manufacturers must certify their stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP) manufactured on or after July 1, 2008 to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 1054, as follows:

If engine replacement is	and manufacturing dates are	the engine must meet emission standards and related requirements for nonhandheld engines under
(1) below 225 cc	July 1, 2008 to December 31, 2011	40 CFR part 90.
(2) below 225 cc	January 1, 2012 or later	40 CFR part 1054.
(3) at or above 225 cc	July 1, 2008 to December 31, 2010	40 CFR part 90.
(4) at or above 225 cc	January 1, 2011 or later	40 CFR part 1054.

(b) Stationary SI internal combustion engine manufacturers must certify their stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) (except emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) that use gasoline and that are manufactured on or after the applicable date in §60.4230(a)(2), or manufactured on or after the applicable date in §60.4230(a)(4) for emergency stationary ICE with a maximum engine power greater than or equal to 130 HP, to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 1048. Stationary SI internal combustion engine manufacturers must certify their emergency stationary SI ICE with a maximum engine power greater than 130 HP that are

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manufactured on or after the applicable date in §60.4230(a)(4) to the Phase 1 emission standards in 40 CFR 90.103, applicable to class II engines, and other requirements for new nonroad SI engines in 40 CFR part 90. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cubic centimeters (cc) to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 1054, as appropriate.

(c) Stationary SI internal combustion engine manufacturers must certify their stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) (except emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) that are rich burn engines that use LPG and that are manufactured on or after the applicable date in §60.4230(a)(2), or manufactured on or after the applicable date in §60.4230(a)(4) for emergency stationary ICE with a maximum engine power greater than or equal to 130 HP, to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 1048. Stationary SI internal combustion engine manufacturers must certify their emergency stationary SI ICE with a maximum engine power greater than 25 HP and less than 130 HP that are manufactured on or after the applicable date in §60.4230(a)(4) to the Phase 1 emission standards in 40 CFR part 90.103, applicable to class II engines, and other requirements for new nonroad SI engines in 40 CFR part 90. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power less than or equal to 30 KV (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power less than or equal to 30 KV (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90. Stationary SI engines in 40 CFR part 90 or 1054, as appropriate.

(d) Stationary SI internal combustion engine manufacturers who choose to certify their stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) (except gasoline and rich burn engines that use LPG and emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) under the voluntary manufacturer certification program described in this subpart must certify those engines to the certification emission standards for new nonroad SI engines in 40 CFR part 1048. Stationary SI internal combustion engine manufacturers who choose to certify their emergency stationary SI ICE greater than 25 HP and less than 130 HP, must certify those engines to the Phase 1 emission standards in 40 CFR 90.103, applicable to class II engines, for new nonroad SI engines in 40 CFR part 90. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards for new nonroad SI engines in 40 CFR part 90 or 1054, as appropriate. For stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) (except gasoline and rich burn engines that use LPG and emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) manufactured prior to January 1, 2011, manufacturers may choose to certify these engines to the standards in Table 1 to this subpart applicable to engines with a maximum engine power greater than or equal to 100 HP and less than 500 HP.

(e) Stationary SI internal combustion engine manufacturers who choose to certify their stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) under the voluntary manufacturer certification program described in this subpart must certify those engines to the emission standards in Table 1 to this subpart. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) that are lean burn engines that use LPG to the certification emission standards for new nonroad SI engines in 40 CFR part 1048. For stationary SI ICE with a maximum engine power greater than or equal to 100 HP (75 KW) and less than 500 HP (373 KW) manufactured prior to January 1, 2011, and for stationary SI ICE with a maximum engine power greater than or equal to 500 HP (373 KW) manufactured prior to July 1, 2010, manufacturers may choose to certify these engines to the certification emission standards for new nonroad SI engines in 40 CFR part 1048 applicable to engines in 40 CFR part 1048 applicable to engines to the certification emission standards for new nonroad SI engines in 40 TFR part 1048 applicable to engines in 40 CFR part

(f) Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, to the extent they apply to equipment manufacturers.

[73 FR 3591, Jan. 18, 2008, as amended by 73 FR 59175, Oct. 8, 2008]

§ 60.4232 How long must my engines meet the emission standards if I am a manufacturer of stationary SI internal combustion engines?

Engines manufactured by stationary SI internal combustion engine manufacturers must meet the emission standards as required in §60.4231 during the certified emissions life of the engines.

Emission Standards for Owners and Operators

§ 60.4233 What emission standards must I meet if I am an owner or operator of a stationary SI internal combustion engine?

(a) Owners and operators of stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP) manufactured on or after July 1, 2008, must comply with the emission standards in

§60.4231(a) for their stationary SI ICE.

(b) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) manufactured on or after the applicable date in §60.4230(a)(4) that use gasoline must comply with the emission standards in §60.4231(b) for their stationary SI ICE.

(c) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) manufactured on or after the applicable date in §60.4230(a)(4) that are rich burn engines that use LPG must comply with the emission standards in §60.4231(c) for their stationary SI ICE.

(d) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards for field testing in 40 CFR 1048.101(c) for their non-emergency stationary SI ICE and with the emission standards in Table 1 to this subpart for their emergency stationary SI ICE. Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) manufactured prior to January 1, 2011, that were certified to the standards in Table 1 to this subpart applicable to engines with a maximum engine power greater than or equal to 100 HP and less than 500 HP, may optionally choose to meet those standards.

(e) Owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards in Table 1 to this subpart for their stationary SI ICE. For owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 100 HP (except gasoline and rich burn engines that use LPG) manufactured prior to January 1, 2011 that were certified to the certification emission standards in 40 CFR part 1048 applicable to engines that are not severe duty engines, if such stationary SI ICE with e owners and operators may meet the CO certification (not field testing) standard for which the engine was certified.

(f) Owners and operators of any modified or reconstructed stationary SI ICE subject to this subpart must meet the requirements as specified in paragraphs (f)(1) through (5) of this section.

(1) Owners and operators of stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP), that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in paragraph (a) of this section.

(2) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that use gasoline engines, that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in paragraph (b) of this section.

(3) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are rich burn engines that use LPG, that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in paragraph (c) of this section.

(4) Owners and operators of stationary SI natural gas and lean burn LPG engines with a maximum engine power greater than 19 KW (25 HP), that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in paragraph (d) or (e) of this section, except that such owners and operators of non-emergency engines and emergency engines greater than or equal to 130 HP must meet a nitrogen oxides (NO_X) emission standard of 3.0 grams per HP-hour (g/HP-hr), a CO emission standard of 4.0 g/HP-hr (5.0 g/HP-hr for non-emergency engines less than 100 HP), and a volatile organic compounds (VOC) emission standard of 1.0 g/HP-hr, or a NO_X emission standard of 250 ppmvd at 15 percent oxygen (O₂), a CO emission standard 540 ppmvd at 15 percent O₂ (675 ppmvd at 15 percent O₂, where the date of manufacture of the engine is:

(i) Prior to July 1, 2007, for non-emergency engines with a maximum engine power greater than or equal to 500 HP;

(ii) Prior to July 1, 2008, for non-emergency engines with a maximum engine power less than 500 HP;

(iii) Prior to January 1, 2009, for emergency engines.

(5) Owners and operators of stationary SI landfill/digester gas ICE engines with a maximum engine power greater than 19 KW (25 HP), that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in paragraph (e) of this section for stationary landfill/digester gas engines.

(g) Owners and operators of stationary SI wellhead gas ICE engines may petition the Administrator for approval on a case-by-case basis to meet emission standards no less stringent than the emission

standards that apply to stationary emergency SI engines greater than 25 HP and less than 130 HP due to the presence of high sulfur levels in the fuel, as specified in Table 1 to this subpart. The request must, at a minimum, demonstrate that the fuel has high sulfur levels that prevent the use of aftertreatment controls and also that the owner has reasonably made all attempts possible to obtain an engine that will meet the standards without the use of aftertreatment controls. The petition must request the most stringent standards reasonably applicable to the engine using the fuel.

(h) Owners and operators of stationary SI ICE that are required to meet standards that reference 40 CFR 1048.101 must, if testing their engines in use, meet the standards in that section applicable to field testing, except as indicated in paragraph (e) of this section.

§ 60.4234 How long must I meet the emission standards if I am an owner or operator of a stationary SI internal combustion engine?

Owners and operators of stationary SI ICE must operate and maintain stationary SI ICE that achieve the emission standards as required in §60.4233 over the entire life of the engine.

Other Requirements for Owners and Operators

§ 60.4235 What fuel requirements must I meet if I am an owner or operator of a stationary SI gasoline fired internal combustion engine subject to this subpart?

Owners and operators of stationary SI ICE subject to this subpart that use gasoline must use gasoline that meets the per gallon sulfur limit in 40 CFR 80.195.

§ 60.4236 What is the deadline for importing or installing stationary SI ICE produced in the previous model year?

(a) After July 1, 2010, owners and operators may not install stationary SI ICE with a maximum engine power of less than 500 HP that do not meet the applicable requirements in §60.4233.

(b) After July 1, 2009, owners and operators may not install stationary SI ICE with a maximum engine power of greater than or equal to 500 HP that do not meet the applicable requirements in §60.4233, except that lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP that do not meet the applicable requirements in §60.4233 may not be installed after January 1, 2010.

(c) For emergency stationary SI ICE with a maximum engine power of greater than 19 KW (25 HP), owners and operators may not install engines that do not meet the applicable requirements in §60.4233 after January 1, 2011.

(d) In addition to the requirements specified in §§60.4231 and 60.4233, it is prohibited to import stationary SI ICE less than or equal to 19 KW (25 HP), stationary rich burn LPG SI ICE, and stationary gasoline SI ICE that do not meet the applicable requirements specified in paragraphs (a), (b), and (c) of this section, after the date specified in paragraph (a), (b), and (c) of this section.

(e) The requirements of this section do not apply to owners and operators of stationary SI ICE that have been modified or reconstructed, and they do not apply to engines that were removed from one existing location and reinstalled at a new location.

§ 60.4237 What are the monitoring requirements if I am an owner or operator of an emergency stationary SI internal combustion engine?

(a) Starting on July 1, 2010, if the emergency stationary SI internal combustion engine that is greater than or equal to 500 HP that was built on or after July 1, 2010, does not meet the standards applicable to non-emergency engines, the owner or operator must install a non-resettable hour meter.

(b) Starting on January 1, 2011, if the emergency stationary SI internal combustion engine that is greater than or equal to 130 HP and less than 500 HP that was built on or after January 1, 2011, does not meet the standards applicable to non-emergency engines, the owner or operator must install a non-resettable hour meter.

(c) If you are an owner or operator of an emergency stationary SI internal combustion engine that is less than 130 HP, was built on or after July 1, 2008, and does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter upon startup of your emergency engine.

Compliance Requirements for Manufacturers

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§ 60.4238 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines ≤19 KW (25 HP) or a manufacturer of equipment containing such engines?

Stationary SI internal combustion engine manufacturers who are subject to the emission standards specified in §60.4231(a) must certify their stationary SI ICE using the certification procedures required in 40 CFR part 90, subpart B, or 40 CFR part 1054, subpart C, as applicable, and must test their engines as specified in those parts. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, subpart C, to the extent they apply to equipment manufacturers.

[73 FR 59176, Oct. 8, 2008]

§ 60.4239 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines >19 KW (25 HP) that use gasoline or a manufacturer of equipment containing such engines?

Stationary SI internal combustion engine manufacturers who are subject to the emission standards specified in §60.4231(b) must certify their stationary SI ICE using the certification procedures required in 40 CFR part 1048, subpart C, and must test their engines as specified in that part. Stationary SI internal combustion engine manufacturers who certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 40 CFR part 1054, and manufacturers of stationary SI emergency engines that are greater than 25 HP and less than 130 HP who meet the Phase 1 emission standards in 40 CFR 90.103, applicable to class II engines, must certify their stationary SI ICE using the certification procedures required in 40 CFR part 90, subpart B, or 40 CFR part 1054, subpart C, as applicable, and must test their engines as specified in those parts. Manufacturers of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, subpart C, to the extent they apply to equipment manufacturers.

[73 FR 59176, Oct. 8, 2008]

§ 60.4240 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines >19 KW (25 HP) that are rich burn engines that use LPG or a manufacturer of equipment containing such engines?

Stationary SI internal combustion engine manufacturers who are subject to the emission standards specified in §60.4231(c) must certify their stationary SI ICE using the certification procedures required in 40 CFR part 1048, subpart C, and must test their engines as specified in that part. Stationary SI internal combustion engine manufacturers who certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 1054, and manufacturers of stationary SI emergency engines that are greater than 25 HP and less than 130 HP who meet the Phase 1 emission standards in 40 CFR 90.103, applicable to class II engines, must certify their stationary SI ICE using the certification procedures required in 40 CFR part 90, subpart B, or 40 CFR part 1054, subpart C, as applicable, and must test their engines as specified in those parts. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, subpart C, to the extent they apply to equipment manufacturers.

[73 FR 59176, Oct. 8, 2008]

§ 60.4241 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines participating in the voluntary certification program or a manufacturer of equipment containing such engines?

(a) Manufacturers of stationary SI internal combustion engines with a maximum engine power greater than 19 KW (25 HP) that do not use gasoline and are not rich burn engines that use LPG can choose to certify their engines to the emission standards in §60.4231(d) or (e), as applicable, under the voluntary certification program described in this subpart. Manufacturers who certify their engines under the voluntary certification program must meet the requirements as specified in paragraphs (b) through (g) of this section. In addition, manufacturers of stationary SI internal combustion engines who choose to certify their engines under the voluntary certification program, must also meet the requirements as specified in §60.4247.

(b) Manufacturers of engines other than those certified to standards in 40 CFR part 90 or 40 CFR part 1054 must certify their stationary SI ICE using the certification procedures required in 40 CFR part 1048, subpart C, and must follow the same test procedures that apply to large SI nonroad engines under 40 CFR part 1048, but must use the D–1 cycle of International Organization of Standardization 8178–4:

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1996(E) (incorporated by reference, see 40 CFR 60.17) or the test cycle requirements specified in Table 5 to 40 CFR 1048.505, except that Table 5 of 40 CFR 1048.505 applies to high load engines only. Stationary SI internal combustion engine manufacturers who certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 40 CFR part 1054, and manufacturers of emergency engines that are greater than 25 HP and less than 130 HP who meet the Phase 1 standards in 40 CFR 90.103, applicable to class II engines, must certify their stationary SI ICE using the certification procedures required in 40 CFR part 90, subpart B, or 40 CFR part 1054, subpart C, as applicable, and must test their engines as specified in those parts. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054, subpart C, as applicable, and must test their engines as specified in those parts. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, subpart C, to the extent they apply to equipment manufacturers.

(c) Certification of stationary SI ICE to the emission standards specified in §60.4231(d) or (e), as applicable, is voluntary, but manufacturers who decide to certify are subject to all of the requirements indicated in this subpart with regard to the engines included in their certification. Manufacturers must clearly label their stationary SI engines as certified or non-certified engines.

(d) Manufacturers of natural gas fired stationary SI ICE who conduct voluntary certification of stationary SI ICE to the emission standards specified in §60.4231(d) or (e), as applicable, must certify their engines for operation using fuel that meets the definition of pipeline-quality natural gas. The fuel used for certifying stationary SI natural gas engines must meet the definition of pipeline-quality natural gas as described in §60.4248. In addition, the manufacturer must provide information to the owner and operator of the certified stationary SI engine including the specifications of the pipeline-quality natural gas to which the engine is certified and what adjustments the owner or operator must make to the engine when installed in the field to ensure compliance with the emission standards.

(e) Manufacturers of stationary SI ICE that are lean burn engines fueled by LPG who conduct voluntary certification of stationary SI ICE to the emission standards specified in §60.4231(d) or (e), as applicable, must certify their engines for operation using fuel that meets the specifications in 40 CFR 1065.720.

(f) Manufacturers may certify their engines for operation using gaseous fuels in addition to pipelinequality natural gas; however, the manufacturer must specify the properties of that fuel and provide testing information showing that the engine will meet the emission standards specified in §60.4231(d) or (e), as applicable, when operating on that fuel. The manufacturer must also provide instructions for configuring the stationary engine to meet the emission standards on fuels that do not meet the pipelinequality natural gas definition. The manufacturer must also provide information to the owner and operator of the certified stationary SI engine regarding the configuration that is most conducive to reduced emissions where the engine will be operated on gaseous fuels with different quality than the fuel that it was certified to.

(g) A stationary SI engine manufacturer may certify an engine family solely to the standards applicable to landfill/digester gas engines as specified in §60.4231(d) or (e), as applicable, but must certify their engines for operation using landfill/digester gas and must add a permanent label stating that the engine is for use only in landfill/digester gas applications. The label must be added according to the labeling requirements specified in 40 CFR 1048.135(b).

(h) For purposes of this subpart, when calculating emissions of volatile organic compounds, emissions of formaldehyde should not be included.

(i) For engines being certified to the voluntary certification standards in Table 1 of this subpart, the VOC measurement shall be made by following the procedures in 40 CFR 1065.260 and 1065.265 in order to determine the total NMHC emissions by using a flame-ionization detector and non-methane cutter. As an alternative to the nonmethane cutter, manufacturers may use a gas chromatograph as allowed under 40 CFR 1065.267 and may measure ethane, as well as methane, for excluding such levels from the total VOC measurement.

[73 FR 3591, Jan. 18, 2008, as amended by 73 FR 59176, Oct. 8, 2008]

§ 60.4242 What other requirements must I meet if I am a manufacturer of stationary SI internal combustion engines or equipment containing stationary SI internal combustion engines or a manufacturer of equipment containing such engines?

(a) Stationary SI internal combustion engine manufacturers must meet the provisions of 40 CFR part 90, 40 CFR part 1048, or 40 CFR part 1054, as applicable, as well as 40 CFR part 1068 for engines that are certified to the emission standards in 40 CFR part 1048 or 1054, except that engines certified pursuant to the voluntary certification procedures in §60.4241 are subject only to the provisions indicated in §60.4247 and are permitted to provide instructions to owners and operators allowing for deviations from certified configurations, if such deviations are consistent with the provisions of paragraphs §60.4241(c) through (f). Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, as applicable. Labels on engines certified to 40 CFR part 1048 must refer to stationary engines, rather than or in addition to

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nonroad engines, as appropriate.

(b) An engine manufacturer certifying an engine family or families to standards under this subpart that are identical to standards applicable under 40 CFR part 90, 40 CFR part 1048, or 40 CFR part 1054 for that model year may certify any such family that contains both nonroad and stationary engines as a single engine family and/or may include any such family containing stationary engines in the averaging, banking and trading provisions applicable for such engines under those parts. This provision also applies to equipment or component manufacturers certifying to standards under 40 CFR part 1060.

(c) Manufacturers of engine families certified to 40 CFR part 1048 may meet the labeling requirements referred to in paragraph (a) of this section for stationary SI ICE by either adding a separate label containing the information required in paragraph (a) of this section or by adding the words "and stationary" after the word "nonroad" to the label.

(d) For all engines manufactured on or after January 1, 2011, and for all engines with a maximum engine power greater than 25 HP and less than 130 HP manufactured on or after July 1, 2008, a stationary SI engine manufacturer that certifies an engine family solely to the standards applicable to emergency engines must add a permanent label stating that the engines in that family are for emergency use only. The label must be added according to the labeling requirements specified in 40 CFR 1048.135(b).

(e) All stationary SI engines subject to mandatory certification that do not meet the requirements of this subpart must be labeled according to 40 CFR 1068.230 and must be exported under the provisions of 40 CFR 1068.230. Stationary SI engines subject to standards in 40 CFR part 90 may use the provisions in 40 CFR 90.909. Manufacturers of stationary engines with a maximum engine power greater than 25 HP that are not certified to standards and other requirements under 40 CFR part 1048 are subject to the labeling provisions of 40 CFR 1048.20 pertaining to excluded stationary engines.

(f) For manufacturers of gaseous-fueled stationary engines required to meet the warranty provisions in 40 CFR 90.1103 or 1054.120, we may establish an hour-based warranty period equal to at least the certified emissions life of the engines (in engine operating hours) if we determine that these engines are likely to operate for a number of hours greater than the applicable useful life within 24 months. We will not approve an alternate warranty under this paragraph (f) for nonroad engines. An alternate warranty period approved under this paragraph (f) will be the specified number of engine operating hours or two years, whichever comes first. The engine manufacturer shall request this alternate warranty period in its application for certification or in an earlier submission. We may approve an alternate warranty period for an engine family subject to the following conditions:

(1) The engines must be equipped with non-resettable hour meters.

(2) The engines must be designed to operate for a number of hours substantially greater than the applicable certified emissions life.

(3) The emission-related warranty for the engines may not be shorter than any published warranty offered by the manufacturer without charge for the engines. Similarly, the emission-related warranty for any component shall not be shorter than any published warranty offered by the manufacturer without charge for that component.

[73 FR 3591, Jan. 18, 2008, as amended by 73 FR 59177, Oct. 8, 2008]

Compliance Requirements for Owners and Operators

§ 60.4243 What are my compliance requirements if I am an owner or operator of a stationary SI internal combustion engine?

(a) If you are an owner or operator of a stationary SI internal combustion engine that is manufactured after July 1, 2008, and must comply with the emission standards specified in §60.4233(a) through (c), you must comply by purchasing an engine certified to the emission standards in §60.4231(a) through (c), as applicable, for the same engine class and maximum engine power. You must also meet the requirements as specified in 40 CFR part 1068, subparts A through D, as they apply to you. If you adjust engine settings according to and consistent with the manufacturer's instructions, your stationary SI internal combustion engine will not be considered out of compliance. In addition, you must meet one of the requirements specified in (a)(1) and (2) of this section.

(1) If you operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, you must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required if you are an owner or operator.

(2) If you do not operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, your engine will be

considered a non-certified engine, and you must demonstrate compliance according to (a)(2)(i) through (iii) of this section, as appropriate.

(i) If you are an owner or operator of a stationary SI internal combustion engine less than 100 HP, you must keep a maintenance plan and records of conducted maintenance to demonstrate compliance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions, but no performance testing is required if you are an owner or operator.

(ii) If you are an owner or operator of a stationary SI internal combustion engine greater than or equal to 100 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test within 1 year of engine startup to demonstrate compliance.

(iii) If you are an owner or operator of a stationary SI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test within 1 year of engine startup and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

(b) If you are an owner or operator of a stationary SI internal combustion engine and must comply with the emission standards specified in §60.4233(d) or (e), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) and (2) of this section.

(1) Purchasing an engine certified according to procedures specified in this subpart, for the same model year and demonstrating compliance according to one of the methods specified in paragraph (a) of this section.

(2) Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in §60.4233(d) or (e) and according to the requirements specified in §60.4244, as applicable, and according to paragraphs (b)(2)(i) and (ii) of this section.

(i) If you are an owner or operator of a stationary SI internal combustion engine greater than 25 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance.

(ii) If you are an owner or operator of a stationary SI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

(c) If you are an owner or operator of a stationary SI internal combustion engine that must comply with the emission standards specified in §60.4233(f), you must demonstrate compliance according paragraph (b)(2)(i) or (ii) of this section, except that if you comply according to paragraph (b)(2)(i) of this section, you demonstrate that your non-certified engine complies with the emission standards specified in §60.4233(f).

(d) Emergency stationary ICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintenance checks and readiness testing, but a petition standards require maintenance and testing of emergency ICE beyond 100 hours per year. Emergency stationary ICE may operate 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. For owners and operators of emergency engines, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as permitted in this section, is prohibited.

(e) Owners and operators of stationary SI natural gas fired engines may operate their engines using propane for a maximum of 100 hours per year as an alternative fuel solely during emergency operations, but must keep records of such use. If propane is used for more than 100 hours per year in an engine

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that is not certified to the emission standards when using propane, the owners and operators are required to conduct a performance test to demonstrate compliance with the emission standards of §60.4233.

(f) If you are an owner or operator of a stationary SI internal combustion engine that is less than or equal to 500 HP and you purchase a non-certified engine or you do not operate and maintain your certified stationary SI internal combustion engine and control device according to the manufacturer's written emission-related instructions, you are required to perform initial performance testing as indicated in this section, but you are not required to conduct subsequent performance testing unless the stationary engine is rebuilt or undergoes major repair or maintenance. A rebuilt stationary SI ICE means an engine that has been rebuilt as that term is defined in 40 CFR 94.11(a).

(g) It is expected that air-to-fuel ratio controllers will be used with the operation of three-way catalysts/non-selective catalytic reduction. The AFR controller must be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times.

(h) If you are an owner/operator of an stationary SI internal combustion engine with maximum engine power greater than or equal to 500 HP that is manufactured after July 1, 2007 and before July 1, 2008, and must comply with the emission standards specified in sections 60.4233(b) or (c), you must comply by one of the methods specified in paragraphs (h)(1) through (h)(4) of this section.

(1) Purchasing an engine certified according to 40 CFR part 1048. The engine must be installed and configured according to the manufacturer's specifications.

(2) Keeping records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in this subpart and these methods must have been followed correctly.

(3) Keeping records of engine manufacturer data indicating compliance with the standards.

(4) Keeping records of control device vendor data indicating compliance with the standards.

Testing Requirements for Owners and Operators

§ 60.4244 What test methods and other procedures must I use if I am an owner or operator of a stationary SI internal combustion engine?

Owners and operators of stationary SI ICE who conduct performance tests must follow the procedures in paragraphs (a) through (f) of this section.

(a) Each performance test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and according to the requirements in §60.8 and under the specific conditions that are specified by Table 2 to this subpart.

(b) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8(c). If your stationary SI internal combustion engine is non-operational, you do not need to startup the engine solely to conduct a performance test; however, you must conduct the performance test immediately upon startup of the engine.

(c) You must conduct three separate test runs for each performance test required in this section, as specified in §60.8(f). Each test run must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour.

(d) To determine compliance with the NO_X mass per unit output emission limitation, convert the concentration of NO_X in the engine exhaust using Equation 1 of this section:

$$ER = \frac{C_4 \times 1.912 \times 10^{-3} \times Q \times T}{HP - hr} \qquad (Eq. 1)$$

Where:

ER = Emission rate of NO_xin g/HP-hr.

C_d= Measured NO_x concentration in parts per million by volume (ppmv).

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 1.912×10^{-3} = Conversion constant for ppm NO_Xto grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, horsepower-hour (HP-hr).

(e) To determine compliance with the CO mass per unit output emission limitation, convert the concentration of CO in the engine exhaust using Equation 2 of this section:

$$ER = \frac{C_a \times 1.164 \times 10^{-3} \times Q \times T}{HP - hr} \qquad (Eq. 2)$$

Where:

ER = Emission rate of CO in g/HP-hr.

Cd= Measured CO concentration in ppmv.

 1.164×10^{-3} = Conversion constant for ppm CO to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

(f) For purposes of this subpart, when calculating emissions of VOC, emissions of formaldehyde should not be included. To determine compliance with the VOC mass per unit output emission limitation, convert the concentration of VOC in the engine exhaust using Equation 3 of this section:

$$ER = \frac{C_{a} \times 1.833 \times 10^{-3} \times Q \times T}{HP - hr}$$
 (Eq. 3)

Where:

ER = Emission rate of VOC in g/HP-hr.

Cd= VOC concentration measured as propane in ppmv.

 1.833×10^{-3} = Conversion constant for ppm VOC measured as propane, to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

(g) If the owner/operator chooses to measure VOC emissions using either Method 18 of 40 CFR part 60, appendix A, or Method 320 of 40 CFR part 63, appendix A, then it has the option of correcting the measured VOC emissions to account for the potential differences in measured values between these methods and Method 25A. The results from Method 18 and Method 320 can be corrected for response factor differences using Equations 4 and 5 of this section. The corrected VOC concentration can then be placed on a propane basis using Equation 6 of this section.

$$RF_{i} = \frac{C_{in}}{C_{Ai}} \qquad (Eq. 4)$$

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Where:

RFi= Response factor of compound i when measured with EPA Method 25A.

C_wi= Measured concentration of compound i in ppmv as carbon.

C₄i= True concentration of compound i in ppmv as carbon.

 $C_{im} = RF \times C_{ims}$ (Eq. 5)

Where:

Ci_{corr}= Concentration of compound i corrected to the value that would have been measured by EPA Method 25A, ppmv as carbon.

Ci_{meas}= Concentration of compound i measured by EPA Method 320, ppmv as carbon.

 $C_{\text{Res}} = 0.6098 \times C_{\text{isom}}$ (Eq. 6)

Where:

CPeq= Concentration of compound i in mg of propane equivalent per DSCM.

Notification, Reports, and Records for Owners and Operators

§ 60.4245 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary SI internal combustion engine?

Owners or operators of stationary SI ICE must meet the following notification, reporting and recordkeeping requirements.

(a) Owners and operators of all stationary SI ICE must keep records of the information in paragraphs (a) (1) through (4) of this section.

(1) All notifications submitted to comply with this subpart and all documentation supporting any notification.

(2) Maintenance conducted on the engine.

(3) If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90, 1048, 1054, and 1060, as applicable.

(4) If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to §60.4243(a)(2), documentation that the engine meets the emission standards.

(b) For all stationary SI emergency ICE greater than or equal to 500 HP manufactured on or after July 1, 2010, that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. For all stationary SI emergency ICE greater than or equal to 130 HP and less than 500 HP manufactured on or after July 1, 2011 that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. For all stationary SI emergency ICE greater than 25 HP and less than 130 HP manufactured on or after July 1, 2008, that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. For all stationary SI emergency ICE greater than 25 HP and less than 130 HP manufactured on or after July 1, 2008, that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation.

(c) Owners and operators of stationary SI ICE greater than or equal to 500 HP that have not been certified by an engine manufacturer to meet the emission standards in §60.4231 must submit an initial notification as required in §60.7(a)(1). The notification must include the information in paragraphs (c)(1)

through (5) of this section.

(1) Name and address of the owner or operator;

(2) The address of the affected source;

(3) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;

(4) Emission control equipment; and

(5) Fuel used.

(d) Owners and operators of stationary SI ICE that are subject to performance testing must submit a copy of each performance test as conducted in §60.4244 within 60 days after the test has been completed.

[73 FR 3591, Jan. 18, 2008, as amended by 73 FR 59177, Oct. 8, 2008]

General Provisions

§ 60.4246 What parts of the General Provisions apply to me?

Table 3 to this subpart shows which parts of the General Provisions in §§60.1 through 60.19 apply to you.

Mobile Source Provisions

§ 60.4247 What parts of the mobile source provisions apply to me if I am a manufacturer of stationary SI internal combustion engines or a manufacturer of equipment containing such engines?

(a) Manufacturers certifying to emission standards in 40 CFR part 90, including manufacturers certifying emergency engines below 130 HP, must meet the provisions of 40 CFR part 90. Manufacturers certifying to emission standards in 40 CFR part 1054 must meet the provisions of 40 CFR part 1054. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1054. The part 1054 must meet the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1054. The part 1054 must meet the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1050 to the extent they apply to equipment manufacturers.

(b) Manufacturers required to certify to emission standards in 40 CFR part 1048 must meet the provisions of 40 CFR part 1048. Manufacturers certifying to emission standards in 40 CFR part 1048 pursuant to the voluntary certification program must meet the requirements in Table 4 to this subpart as well as the standards in 40 CFR 1048.101.

(c) For manufacturers of stationary SI internal combustion engines participating in the voluntary certification program and certifying engines to Table 1 to this subpart, Table 4 to this subpart shows which parts of the mobile source provisions in 40 CFR parts 1048, 1065, and 1068 apply to you. Compliance with the deterioration factor provisions under 40 CFR 1048.205(n) and 1048.240 will be required for engines built new on and after January 1, 2010. Prior to January 1, 2010, manufacturers of stationary internal combustion engines participating in the voluntary certification program have the option to develop their own deterioration factors based on an engineering analysis.

[73 FR 3591, Jan. 18, 2008, as amended by 73 FR 59177, Oct. 8, 2008]

Definitions

§ 60.4248 What definitions apply to this subpart?

As used in this subpart, all terms not defined herein shall have the meaning given them in the CAA and in subpart A of this part.

Certified emissions life means the period during which the engine is designed to properly function in terms of reliability and fuel consumption, without being remanufactured, specified as a number of hours of operation or calendar years, whichever comes first. The values for certified emissions life for stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP) are given in 40 CFR 90.105, 40 CFR 1054.107, and 40 CFR 1060.101, as appropriate. The values for certified emissions life for stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) certified

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to 40 CFR part 1048 are given in 40 CFR 1048.101(g). The certified emissions life for stationary SI ICE with a maximum engine power greater than 75 KW (100 HP) certified under the voluntary manufacturer certification program of this subpart is 5,000 hours or 7 years, whichever comes first.

Certified stationary internal combustion engine means an engine that belongs to an engine family that has a certificate of conformity that complies with the emission standards and requirements in this part, or of 40 CFR part 90, 40 CFR part 1048, or 40 CFR part 1054, as appropriate.

Combustion turbine means all equipment, including but not limited to the turbine, the fuel, air, lubrication and exhaust gas systems, control systems (except emissions control equipment), and any ancillary components and sub-components comprising any simple cycle combustion turbine, any regenerative/recuperative cycle combustion turbine, the combustion turbine portion of any cogeneration cycle combustion system, or the combustion turbine portion of any combined cycle steam/electric generating system.

Compression ignition means relating to a type of stationary internal combustion engine that is not a spark ignition engine.

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is number 2 distillate oil.

Digester gas means any gaseous by-product of wastewater treatment typically formed through the anaerobic decomposition of organic waste materials and composed principally of methane and carbon dioxide (CO2).

Emergency stationary internal combustion engine means any stationary internal combustion engine whose operation is limited to emergency situations and required testing and maintenance. Examples include stationary ICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary ICE used to pump water in the case of fire or flood, etc. Stationary SI ICE used to supply power to an electric grid or that supply power as part of a financial arrangement with another entity are not considered to be emergency engines.

Engine manufacturer means the manufacturer of the engine. See the definition of "manufacturer" in this section.

Four-stroke engine means any type of engine which completes the power cycle in two crankshaft revolutions, with intake and compression strokes in the first revolution and power and exhaust strokes in the second revolution.

Gasoline means any fuel sold in any State for use in motor vehicles and motor vehicle engines, or nonroad or stationary engines, and commonly or commercially known or sold as gasoline.

Landfill gas means a gaseous by-product of the land application of municipal refuse typically formed through the anaerobic decomposition of waste materials and composed principally of methane and CO₂.

Lean burn engine means any two-stroke or four-stroke spark ignited engine that does not meet the definition of a rich burn engine.

Liquefied petroleum gas means any liquefied hydrocarbon gas obtained as a by-product in petroleum refining of natural gas production.

Manufacturer has the meaning given in section 216(1) of the Clean Air Act. In general, this term includes any person who manufactures a stationary engine for sale in the United States or otherwise introduces a new stationary engine into commerce in the United States. This includes importers who import stationary engines for resale.

Maximum engine power means maximum engine power as defined in 40 CFR 1048.801.

Model year means either: The calendar year in which the engine was originally produced, or the annual new model production period of the engine manufacturer if it is different than the calendar year. This must include January 1 of the calendar year for which the model year is named. It may not begin before January 2 of the previous calendar year, and it must end by December 31 of the named calendar year. For an engine that is converted to a stationary engine after being placed into service as a nonroad or other non-stationary engine, model year means the calendar year or new model production period in which the engine was originally produced.

Natural gas means a naturally occurring mixture of hydrocarbon and non-hydrocarbon gases found in

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geologic formations beneath the Earth's surface, of which the principal constituent is methane. Natural gas may be field or pipeline quality.

Other internal combustion engine means any internal combustion engine, except combustion turbines, which is not a reciprocating internal combustion engine or rotary internal combustion engine.

Pipeline-quality natural gas means a naturally occurring fluid mixture of hydrocarbons (e.g., methane, ethane, or propane) produced in geological formations beneath the Earth's surface that maintains a gaseous state at standard atmospheric temperature and pressure under ordinary conditions, and which is provided by a supplier through a pipeline. Pipeline-quality natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 950 and 1,100 British thermal units per standard cubic foot.

Rich burn engine means any four-stroke spark ignited engine where the manufacturer's recommended operating air/fuel ratio divided by the stoichiometric air/fuel ratio at full load conditions is less than or equal to 1.1. Engines originally manufactured as rich burn engines, but modified prior to June 12, 2006, with passive emission control technology for NO_X(such as pre-combustion chambers) will be considered lean burn engines. Also, existing engines where there are no manufacturer's recommendations regarding air/fuel ratio will be considered a rich burn engine if the excess oxygen content of the exhaust at full load conditions is less than or equal to 2 percent.

Rotary internal combustion engine means any internal combustion engine which uses rotary motion to convert heat energy into mechanical work.

Spark ignition means relating to either: a gasoline-fueled engine; or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for compression ignition and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

Stationary internal combustion engine means any internal combustion engine, except combustion turbines, that converts heat energy into mechanical work and is not mobile. Stationary ICE differ from mobile ICE in that a stationary internal combustion engine is not a nonroad engine as defined at 40 CFR 1068.30 (excluding paragraph (2)(ii) of that definition), and is not used to propel a motor vehicle or a vehicle used solely for competition. Stationary ICE include reciprocating ICE, rotary ICE, and other ICE, except combustion turbines.

Stationary internal combustion engine test cell/stand means an engine test cell/stand, as defined in subpart PPPPP of this part, that test stationary ICE.

Stoichiometric means the theoretical air-to-fuel ratio required for complete combustion.

Subpart means 40 CFR part 60, subpart JJJJ.

Two-stroke engine means a type of engine which completes the power cycle in single crankshaft revolution by combining the intake and compression operations into one stroke and the power and exhaust operations into a second stroke. This system requires auxiliary scavenging and inherently runs lean of stoichiometric.

Volatile organic compounds means volatile organic compounds as defined in 40 CFR 51.100(s).

Voluntary certification program means an optional engine certification program that manufacturers of stationary SI internal combustion engines with a maximum engine power greater than 19 KW (25 HP) that do not use gasoline and are not rich burn engines that use LPG can choose to participate in to certify their engines to the emission standards in §60.4231(d) or (e), as applicable.

[73 FR 3591, Jan. 18, 2008, as amended by 73 FR 59177, Oct. 8, 2008]

Table 1 to Subpart JJJJ of Part 60—NO_X, CO, and VOC Emission Standards for Stationary Non-Emergency SI Engines ≥100 HP (Except Gasoline and Rich Burn LPG), Stationary SI Landfill/Digester Gas Engines, and Stationary Emergency Engines >25 HP

Emission	Emission standards ^a				
a/HP-hr	ppmvd at 15% O ₂				
<u>9,</u>	_				

Engine type and fuel	Maximum engine power	Manufacture date	NOX	со	VOCd	NOX	со	VOCd
Non-Emergency SI Natural	100≤HP<500	7/1/2008 1/1/2011	2.0 1.0	4.0 2.0	1.0 0.7	160 82	540 270	86 60
Emergency SI Lean Burn LPG ^b								
Non-Emergency SI Lean Burn Natural Gas and LPG	500≥HP<1,350	1/1/2008 7/1/2010	2.0 1.0	4.0 2.0	1.0 0.7	160 82	540 270	86 60
Non-Emergency SI Natural Gas and Non- Emergency SI Lean Burn LPG (except lean burn 500=≥HP<1,350)	HP≥500 HP≥500	7/1/2007 7/1/2010	2.0 1.0	4.0 2.0	1.0 0.7	160 82	540 270	86 60
Landfill/Digester Gas (except lean burn 500≥HP<1,350)	HP<500	7/1/2008 1/1/2011	3.0 2.0	5.0 5.0	1.0 1.0	220 150	610 610	80 80
	HP≥500	7/1/2007 7/1/2010	3.0 2.0	5.0 5.0	1.0 1.0	220 150	610 610	80 80
Landfill/Digester Gas Lean Burn	500≥HP<1,350	1/1/2008 7/1/2010	3.0 2.0	5.0 5.0	1.0 1.0	220 150	610 610	80 80
Emergency	25>HP<130	1/1/2009	^c 10 2.0	387 4.0	N/A 1.0	N/A 160	N/A 540	N/A 86
	HP≥130							

^aOwners and operators of stationary non-certified SI engines may choose to comply with the emission standards in units of either g/HP-hr or ppmvd at 15 percent O2.

^bOwners and operators of new or reconstructed non-emergency lean burn SI stationary engines with a site rating of greater than or equal to 250 brake HP located at a major source that are meeting the requirements of 40 CFR part 63, subpart ZZZZ, Table 2A do not have to comply with the CO emission standards of Table 1 of this subpart.

 $^{\rm c}{\rm The}$ emission standards applicable to emergency engines between 25 HP and 130 HP are in terms of ${\rm NO}_{\rm X}{\rm ^{+}HC}.$

^dFor purposes of this subpart, when calculating emissions of volatile organic compounds, emissions of formaldehyde should not be included.

Table 2 to Subpart JJJJ of Part 60-Requirements for Performance Tests

[As stated in §60.4244, you must comply with the following requirements for performance tests within 10 percent of 100 percent peak (or the highest achievable) load]

For each	Complying with the requirement to	You must	Using	According to the following requirements
1. Stationary SI internal	a. limit the concentration of	i. Select the sampling	(1) Method 1 or 1A of 40 CFR part 60,	(a) If using a control
combustion engine demonstrating compliance according to §60.4244.	NO _X in the stationary SI internal combustion engine exhaust.	port location and the number of traverse points;	appendix A or ASTM Method D6522–00(2005) ^a .	device, the sampling site must be located at the outlet of the control device.
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	ii. Determine the O ₂ concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B ^b of 40 CFR part 60, appendix A or ASTM Method D6522–00 (2005) ^a .	(b) Measurements to determine O_2 concentration must be made at the same time as the measurements for NO_X concentration.	
	iii. Determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 19 of 40 CFR part 60.		
	iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03 (incorporated by reference, see §60.17).	(c) Measurements to determine moisture must be made at the same time as the measurement for NO _X concentration.	
	v. Measure NO _X at the exhaust of the stationary internal combustion engine.	(5) Method 7E of 40 CFR part 60, appendix A, Method D6522–00 (2005) ^a , Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03 (incorporated by reference, see §60.17).	(d) Results of this test consist of the average of the three 1-hour or longer runs.	
	b. limit the concentration of CO in the	i. Select the sampling port location	(1) Method 1 or 1A of 40 CFR part 60, appendix A.	(a) If using a control device, the

stationary SI internal combustion engine exhaust.	and the number of traverse points;		sampling site must be located at the outlet of the control device.
ii. Determine the O ₂ concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3Bb of 40 CFR part 60, appendix A or ASTM Method D6522–00 (2005) ^a .	(b) Measurements to determine O_2 concentration must be made at the same time as the measurements for CO concentration.	
iii. Determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 19 of 40 CFR part 60.		
iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03 (incorporated by reference, see §60.17).	(c) Measurements to determine moisture must be made at the same time as the measurement for CO concentration.	
v. Measure CO at the exhaust of the stationary internal combustion engine.	(5) Method 10 of 40 CFR part 60, appendix A, ASTM Method D6522–00 (2005) ^a , Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 (incorporated by reference, see §60.17).	(d) Results of this test consist of the average of the three 1-hour or longer runs.	
c. limit the concentration of VOC in the	i. Select the sampling port location	(1) Method 1 or 1A of 40 CFR part 60, appendix A.	(a) If using a control device, the

stationary SI internal combustion engine exhaust.	and the number of traverse points;		sampling site must be located at the outlet of the control device.
 ii. Determine the O₂concentration of the stationary internal combustion engine exhaust at the sampling port location; iii. Determine the exhaust 	 (2) Method 3, 3A, or 3B^bof 40 CFR part 60, appendix A or ASTM Method D6522–00 (2005)^a. (3) Method 2 or 19 of 40 	(b) Measurements to determine O ₂ concentration must be made at the same time as the measurements for VOC concentration.	
flowrate of the stationary internal combustion engine exhaust;	CFR part 60.		
iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03 (incorporated by reference, see §60.17).	(c) Measurements to determine moisture must be made at the same time as the measurement for VOC concentration.	
v. Measure VOC at the exhaust of the stationary internal combustion engine.	(5) Methods 25A and 18 of 40 CFR part 60, appendix A, Method 25A with the use of a methane cutter as described in 40 CFR 1065.265, Method 18 or 40 CFR part 60, appendix A, ^{cd} Method 320 of 40 CFR part 63, appendix A, or ASTM	(d) Results of this test consist of the average of the three 1-hour or longer runs.	

D6348-03	
(incorporated	
by reference,	
see §60.17).	

^aASTM D6522–00 is incorporated by reference; see 40 CFR 60.17. Also, you may petition the Administrator for approval to use alternative methods for portable analyzer.

^bYou may use ASME PTC 19.10–1981, Flue and Exhaust Gas Analyses, for measuring the O₂content of the exhaust gas as an alternative to EPA Method 3B.

^cYou may use EPA Method 18 of 40 CFR part 60, appendix A, provided that you conduct an adequate presurvey test prior to the emissions test, such as the one described in OTM 11 on EPA's Web site (*http://www.epa.gov/ttn/emc/prelim/otm11.pdf*).

^dYou may use ASTM D6420–99 (2004), Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography/Mass Spectrometry as an alternative to EPA Method 18 for measuring total nonmethane organic.

Table 3 to Subpart JJJJ of Part 60—Applicability of General Provisions to Subpart JJJJ

[As stated in §60.4246, you must comply with the following applicable General Provisions]

General		Applies	
citation	Subject of citation	subpart	Explanation
§60.1	General applicability of the General Provisions	Yes	
§60.2	Definitions	Yes	Additional terms defined in §60.4248.
§60.3	Units and abbreviations	Yes	
§60.4	Address	Yes	
§60.5	Determination of construction or modification	Yes	
§60.6	Review of plans	Yes	
§60.7	Notification and Recordkeeping	Yes	Except that §60.7 only applies as specified in §60.4245.
§60.8	Performance tests	Yes	Except that §60.8 only applies to owners and operators who are subject to performance testing in subpart JJJJ.
§60.9	Availability of information	Yes	
§60.10	State Authority	Yes	
§60.11	Compliance with standards and maintenance requirements	Yes	Requirements are specified in subpart JJJJ.
§60.12	Circumvention	Yes	
§60.13	Monitoring	No	

	requirements		
§60.14	Modification	Yes	
§60.15	Reconstruction	Yes	
§60.16	Priority list	Yes	
§60.17	Incorporations by reference	Yes	
§60.18	General control device requirements	No	
§60.19	General notification and reporting requirements	Yes	

 Table 4 to Subpart JJJJ of Part 60—Applicability of Mobile Source Provisions for

 Manufacturers Participating in the Voluntary Certification Program and Certifying

 Stationary SI ICE to Emission Standards in Table 1 of Subpart JJJJ

[As stated in §60.4247, you must comply with the following applicable mobile source provisions if you are a manufacturer participating in the voluntary certification program and certifying stationary SI ICE to emission standards in Table 1 of subpart JJJJ]

Mobile source		Applies	
citation	Subject of citation	subpart	Explanation
1048 subpart A	Overview and Applicability	Yes	•••••
1048 subpart B	Emission Standards and Related Requirements	Yes	Except for the specific sections below.
1048.101	Exhaust Emission Standards	No	
1048.105	Evaporative Emission Standards	No	
1048.110	Diagnosing Malfunctions	No	
1048.140	Certifying Blue Sky Series Engines	No	
1048.145	Interim Provisions	No	
1048 subpart C	Certifying Engine Families	Yes	Except for the specific sections below.
1048.205(b)	AECD reporting	Yes	
1048.205(c)	OBD Requirements	No	
1048.205(n)	Deterioration Factors	Yes	Except as indicated in 60.4247(c).
1048.205(p)(1)	Deterioration Factor Discussion	Yes	
1048.205(p)(2)	Liquid Fuels as they require	No	
1048.240(b)(c) (d)	Deterioration Factors	Yes	
1048 subpart D	Testing Production-Line Engines	Yes	
1048 subpart E	Testing In-Use Engines	No	
1048 subpart F	Test Procedures	Yes	
1065.5(a)(4)	Raw sampling (refers reader	Yes	

	back to the specific emissions regulation for guidance)		
1048 subpart G	Compliance Provisions	Yes	
1048 subpart H	Reserved		
1048 subpart l	Definitions and Other Reference Information	Yes	
1048 appendix I and II	Yes		
1065 (all subparts)	Engine Testing Procedures	Yes	Except for the specific section below.
1065.715	Test Fuel Specifications for Natural Gas	No	
1068 (all subparts)	General Compliance Provisions for Nonroad Programs	Yes	Except for the specific sections below.
1068.245	Hardship Provisions for Unusual Circumstances	No	
1068.250	Hardship Provisions for Small- Volume Manufacturers	No	
1068.255	Hardship Provisions for Equipment Manufacturers and Secondary Engine Manufacturers	No	

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APPENDIX B

40 CFR 63, Subpart ZZZZ

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Title 40: Protection of Environment

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

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Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Source: 69 FR 33506, June 15, 2004, unless otherwise noted.

What This Subpart Covers

§ 63.6580 What is the purpose of subpart ZZZZ?

Subpart ZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations.

[73 FR 3603, Jan. 18, 2008]

§ 63.6585 Am I subject to this subpart?

You are subject to this subpart if you own or operate a stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand.

(a) A stationary RICE is any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

(b) A major source of HAP emissions is a plant site that emits or has the potential to emit any single HAP at a rate of 10 tons (9.07 megagrams) or more per year or any combination of HAP at a rate of 25 tons (22.68 megagrams) or more per year, except that for oil and gas production facilities, a major source of HAP emissions is determined for each surface site.

(c) An area source of HAP emissions is a source that is not a major source.

(d) If you are an owner or operator of an area source subject to this subpart, your status as an entity subject to a standard or other requirements under this subpart does not subject you to the obligation to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart as applicable.

(e) If you are an owner or operator of a stationary RICE used for national security purposes, you may be eligible to request an exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3603, Jan. 18, 2008]

§ 63.6590 What parts of my plant does this subpart cover?

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This subpart applies to each affected source.

(a) Affected source. An affected source is any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand.

(1) Existing stationary RICE.

(i) For stationary RICE with a site rating of more than 500 brake horsepower (HP) located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before December 19, 2002.

(ii) For stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iii) For stationary RICE located at an area source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iv) A change in ownership of an existing stationary RICE does not make that stationary RICE a new or reconstructed stationary RICE.

(2) New stationary RICE. (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(3) Reconstructed stationary RICE. (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after June 12, 2006.

(b) Stationary RICE subject to limited requirements. (1) An affected source which meets either of the criteria in paragraph (b)(1)(i) through (ii) of this section does not have to meet the requirements of this subpart and of subpart A of this part except for the initial notification requirements of §63.6645(h).

(i) The stationary RICE is a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions; or

(ii) The stationary RICE is a new or reconstructed limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(2) A new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis must meet the initial notification requirements of §63.6645(h) and the requirements of §§63.6625(c), 63.6650(g), and 63.6655(c). These stationary RICE do not have to meet the emission limitations and operating limitations of this subpart.

(3) A stationary RICE which is an existing spark ignition 4 stroke rich burn (4SRB) stationary RICE located at an area source, an existing spark ignition 4SRB stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source, an existing spark ignition 2 stroke lean burn (2SLB) stationary RICE, an existing spark ignition 4 stroke lean burn (4SLB) stationary RICE, an existing compression ignition (CI) stationary RICE, an existing gmergency stationary RICE, or an existing stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, does not have to meet the requirements of this subpart and of subpart A of this part. No initial notification is necessary.

(c) Stationary RICE subject to Regulations under 40 CFR Part 60. An affected source that is a new or

reconstructed stationary RICE located at an area source, or is a new or reconstructed stationary RICE located at a major source of HAP emissions and is a spark ignition 2 stroke lean burn (2SLB) stationary RICE with a site rating of less than 500 brake HP, a spark ignition 4 stroke lean burn (4SLB) stationary RICE with a site rating of less than 250 brake HP, or a 4 stroke rich burn (4SRB) stationary RICE with a site rating of less than 250 brake HP, a stationary RICE with a site rating of less than or equal to 500 brake HP, a stationary RICE with a site rating of less than or equal to 500 brake HP, a stationary RICE with a site rating of less than or equal to 500 brake HP, or a compression ignition (1) stationary RICE with a site rating of less than or equal to 500 brake HP, or a compression ignition (2) stationary RICE with a site rating of less than or equal to 500 brake HP, or a compression ignition engines or 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008]

§ 63.6595 When do I have to comply with this subpart?

(a) Affected Sources. (1) If you have an existing stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than June 15, 2007.

(2) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart no later than August 16, 2004.

(3) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions after August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(4) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(5) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(6) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(7) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(b) Area sources that become major sources. If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, the compliance dates in paragraphs (b) (1) and (2) of this section apply to you.

(1) Any stationary RICE for which construction or reconstruction is commenced after the date when your area source becomes a major source of HAP must be in compliance with this subpart upon startup of your affected source.

(2) Any stationary RICE for which construction or reconstruction is commenced before your area source becomes a major source of HAP must be in compliance with the provisions of this subpart that are applicable to RICE located at major sources within 3 years after your area source becomes a major source of HAP.

(c) If you own or operate an affected source, you must meet the applicable notification requirements in §63.6645 and in 40 CFR part 63, subpart A.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008]

Emission and Operating Limitations

§ 63.6600 What emission limitations and operating limitations must I meet if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a

major source of HAP emissions?

(a) If you own or operate an existing, new, or reconstructed spark ignition 4SRB stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 1a to this subpart and the operating limitations in Table 1b to this subpart which apply to you.

(b) If you own or operate a new or reconstructed 2SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, a new or reconstructed 4SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, or a new or reconstructed CI stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

(c) If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the emission limitations in Tables 1a and 2a to this subpart or operating limitations in Tables 1b and 2b to this subpart: an existing 2SLB stationary RICE, an existing 4SLB stationary RICE, or an existing CI stationary RICE; a stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis; an emergency stationary RICE; or a limited use stationary RICE.

[73 FR 3605, Jan. 18, 2008]

§ 63.6601 What emission limitations must I meet if I own or operate a 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP and less than 500 brake HP located at a major source of HAP emissions?

If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at major source of HAP emissions manufactured on or after January 1, 2008, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008]

General Compliance Requirements

§ 63.6605 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limitations and operating limitations in this subpart that apply to you at all times, except during periods of startup, shutdown, and malfunction.

(b) If you must comply with emission limitations and operating limitations, you must operate and maintain your stationary RICE, including air pollution control and monitoring equipment, in a manner consistent with good air pollution control practices for minimizing emissions at all times, including during startup, shutdown, and malfunction.

Testing and Initial Compliance Requirements

§ 63.6610 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

If you own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct the initial performance test or other initial compliance demonstrations in Table 4 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions in §63.7(a)(2).

(b) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must demonstrate initial compliance with either the proposed emission limitations or the promulgated emission limitations no later than February 10, 2005 or no later than 180 days after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

(c) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, and you chose to comply with the proposed emission limitations when

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demonstrating initial compliance, you must conduct a second performance test to demonstrate compliance with the promulgated emission limitations by December 13, 2007 or after startup of the source, whichever is later, according to $\S63.7(a)(2)(ix)$.

(d) An owner or operator is not required to conduct an initial performance test on units for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (d)(1) through (5) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

(5) The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3605, Jan. 18, 2008]

§ 63.6611 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a 4SLB SI stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions?

If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must conduct an initial performance test within 240 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions specified in Table 4 to this subpart, as appropriate.

[73 FR 3605, Jan. 18, 2008]

§ 63.6615 When must I conduct subsequent performance tests?

If you must comply with the emission limitations and operating limitations, you must conduct subsequent performance tests as specified in Table 3 of this subpart.

§ 63.6620 What performance tests and other procedures must l use?

(a) You must conduct each performance test in Tables 3 and 4 of this subpart that applies to you.

(b) Each performance test must be conducted according to the requirements in §63.7(e)(1) and under the specific conditions that this subpart specifies in Table 4. The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load.

(c) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §63.7(e)(1).

(d) You must conduct three separate test runs for each performance test required in this section, as specified in §63.7(e)(3). Each test run must last at least 1 hour.

(e)(1) You must use Equation 1 of this section to determine compliance with the percent reduction requirement:

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$$\frac{C_i - C_{\rho}}{C_i} \times 100 = R \qquad \text{(Eq. 1)}$$

Where:

C = concentration of CO or formaldehyde at the control device inlet,

C_a= concentration of CO or formaldehyde at the control device outlet, and

R = percent reduction of CO or formaldehyde emissions.

(2) You must normalize the carbon monoxide (CO) or formaldehyde concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent carbon dioxide (CO_2) . If pollutant concentrations are to be corrected to 15 percent oxygen and CO_2 concentration is measured in lieu of oxygen concentration measurement, a CO_2 correction factor is needed. Calculate the CO_2 correction factor as described in paragraphs (e)(2)(i) through (iii) of this section.

(i) Calculate the fuel-specific F_{o} value for the fuel burned during the test using values obtained from Method 19, section 5.2, and the following equation:

$$F_{o} = \frac{0.209 F_{d}}{F_{c}}$$
 (Eq. 2)

Where:

 F_o = Fuel factor based on the ratio of oxygen volume to the ultimate CO₂volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is oxygen, percent/100.

 F_d = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm³ /J (dscf/10⁶ Btu).

 F_c = Ratio of the volume of CO₂produced to the gross calorific value of the fuel from Method 19, dsm³ /J (dscf/10⁶ Btu).

(ii) Calculate the CO₂correction factor for correcting measurement data to 15 percent oxygen, as follows:

$$X_{co_2} = \frac{5.9}{F_o}$$
 (Eq. 3)

Where:

X_{co2}= CO₂correction factor, percent.

5.9 = 20.9 percent O₂-15 percent O₂, the defined O₂ correction value, percent.

(iii) Calculate the NO_x and SO₂gas concentrations adjusted to 15 percent O₂using CO₂as follows:

$$C_{adj} = C_d \frac{X_{con}}{\% CO_2} \qquad (\text{Eq. 4})$$

Where:

%CO₂= Measured CO₂concentration measured, dry basis, percent.

(f) If you comply with the emission limitation to reduce CO and you are not using an oxidation catalyst, if you comply with the emission limitation to reduce formaldehyde and you are not using NSCR, or if you comply with the emission limitation to limit the concentration of formaldehyde in the stationary RICE exhaust and you are not using an oxidation catalyst or NSCR, you must petition the Administrator for operating limitations to be established during the initial performance test and continuously monitored thereafter; or for approval of no operating limitations. You must not conduct the initial performance test until after the petition has been approved by the Administrator.

(g) If you petition the Administrator for approval of operating limitations, your petition must include the

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information described in paragraphs (g)(1) through (5) of this section.

(1) Identification of the specific parameters you propose to use as operating limitations;

(2) A discussion of the relationship between these parameters and HAP emissions, identifying how HAP emissions change with changes in these parameters, and how limitations on these parameters will serve to limit HAP emissions;

(3) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;

(4) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

(5) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

(h) If you petition the Administrator for approval of no operating limitations, your petition must include the information described in paragraphs (h)(1) through (7) of this section.

(1) Identification of the parameters associated with operation of the stationary RICE and any emission control device which could change intentionally (*e.g.*, operator adjustment, automatic controller adjustment, etc.) or unintentionally (*e.g.*, wear and tear, error, etc.) on a routine basis or over time;

(2) A discussion of the relationship, if any, between changes in the parameters and changes in HAP emissions;

(3) For the parameters which could change in such a way as to increase HAP emissions, a discussion of whether establishing limitations on the parameters would serve to limit HAP emissions;

(4) For the parameters which could change in such a way as to increase HAP emissions, a discussion of how you could establish upper and/or lower values for the parameters which would establish limits on the parameters in operating limitations;

(5) For the parameters, a discussion identifying the methods you could use to measure them and the instruments you could use to monitor them, as well as the relative accuracy and precision of the methods and instruments;

(6) For the parameters, a discussion identifying the frequency and methods for recalibrating the instruments you could use to monitor them; and

(7) A discussion of why, from your point of view, it is infeasible or unreasonable to adopt the parameters as operating limitations.

(i) The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided.

§ 63.6625 What are my monitoring, installation, operation, and maintenance requirements?

(a) If you elect to install a CEMS as specified in Table 5 of this subpart, you must install, operate, and maintain a CEMS to monitor CO and either oxygen or CO_2 at both the inlet and the outlet of the control device according to the requirements in paragraphs (a)(1) through (4) of this section.

(1) Each CEMS must be installed, operated, and maintained according to the applicable performance specifications of 40 CFR part 60, appendix B.

(2) You must conduct an initial performance evaluation and an annual relative accuracy test audit (RATA) of each CEMS according to the requirements in §63.8 and according to the applicable

performance specifications of 40 CFR part 60, appendix B as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.

(3) As specified in §63.8(c)(4)(ii), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. You must have at least two data points, with each representing a different 15-minute period, to have a valid hour of data.

(4) The CEMS data must be reduced as specified in §63.8(g)(2) and recorded in parts per million or parts per billion (as appropriate for the applicable limitation) at 15 percent oxygen or the equivalent CO₂concentration.

(b) If you are required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of this subpart, you must install, operate, and maintain each CPMS according to the requirements in §63.8.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must monitor and record your fuel usage daily with separate fuel meters to measure the volumetric flow rate of each fuel. In addition, you must operate your stationary RICE in a manner which reasonably minimizes HAP emissions.

(d) If you are operating a new or reconstructed emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must install a non-resettable hour meter prior to the startup of the engine.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3606, Jan. 18, 2008]

§ 63.6630 How do I demonstrate initial compliance with the emission limitations and operating limitations?

(a) You must demonstrate initial compliance with each emission and operating limitation that applies to you according to Table 5 of this subpart.

(b) During the initial performance test, you must establish each operating limitation in Tables 1b and 2b of this subpart that applies to you.

(c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.6645.

Continuous Compliance Requirements

§ 63.6635 How do I monitor and collect data to demonstrate continuous compliance?

(a) If you must comply with emission and operating limitations, you must monitor and collect data according to this section.

(b) Except for monitor malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), you must monitor continuously at all times that the stationary RICE is operating.

(c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must, however, use all the valid data collected during all other periods.

§ 63.6640 How do I demonstrate continuous compliance with the emission limitations and operating limitations?

(a) You must demonstrate continuous compliance with each emission limitation and operating limitation in Tables 1a and 1b and Tables 2a and 2b of this subpart that apply to you according to methods specified in Table 6 of this subpart.

(b) You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b and Tables 2a and 2b of this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in §63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.

(c) [Reserved]

(d) Consistent with §§63.6(e) and 63.7(e)(1), deviations from the emission or operating limitations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with §63.6(e)(1). For new, reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period) are not violations.

Rebuilt stationary RICE means a stationary RICE that has been rebuilt as that term is defined in 40 CFR §94.11(a).

(e) You must also report each instance in which you did not meet the requirements in Table 8 to this subpart that apply to you. If you own or operate any stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing CI stationary RICE, or an existing emergency stationary RICE, an existing stationary RICE with a site rating of more than 500 percent or more of the gross heat input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 not need to comply with the requirements in Table 8 to this subpart. An existing attionary RICE with a site rating of more than 500 brake HP located at a major source of the gross heat input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency stationary RICE is a complexed at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency station

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3606, Jan. 18, 2008]

Notifications, Reports, and Records

§ 63.6645 What notifications must I submit and when?

(a) If you own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions or a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 HP located at a major source of HAP emissions, you must submit all of the notifications in \S 63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply to you by the dates specified.

(b) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart, you must submit an Initial Notification not later than December 13, 2004.

(c) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions on or after August 16, 2004, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(d) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart and you are required to submit an initial notification, you must submit an Initial Notification not later than July 16, 2008.

(e) If you start up your new or reconstructed stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions on or after March 18, 2008 and you are required to submit an initial notification, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(f) If you are required to submit an Initial Notification but are otherwise not affected by the requirements of this subpart, in accordance with §63.6590(b), your notification should include the information in §63.9 (b)(2)(i) through (v), and a statement that your stationary RICE has no additional requirements and explain the basis of the exclusion (for example, that it operates exclusively as an emergency stationary RICE if it has a site rating of more than 500 brake HP located at a major source of HAP emissions).

(g) If you are required to conduct a performance test, you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in §63.7(b)(1).

(h) If you are required to conduct a performance test or other initial compliance demonstration as specified in Tables 4 and 5 to this subpart, you must submit a Notification of Compliance Status

according to §63.9(h)(2)(ii).

(1) For each initial compliance demonstration required in Table 5 to this subpart that does not include a performance test, you must submit the Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.

(2) For each initial compliance demonstration required in Table 5 to this subpart that includes a performance test conducted according to the requirements in Table 3 to this subpart, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to §63.10(d)(2).

[73 FR 3606, Jan. 18, 2008]

§ 63.6650 What reports must I submit and when?

(a) You must submit each report in Table 7 of this subpart that applies to you.

(b) Unless the Administrator has approved a different schedule for submission of reports under §63.10 (a), you must submit each report by the date in Table 7 of this subpart and according to the requirements in paragraphs (b)(1) through (5) of this section.

(1) The first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in §63.6595.

(2) The first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in §63.6595.

(3) Each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) Each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(5) For each stationary RICE that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6 (a)(3)(iii)(A), you may submit the first and subsequent Compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (4) of this section.

(c) The Compliance report must contain the information in paragraphs (c)(1) through (6) of this section.

(1) Company name and address.

(2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.

(3) Date of report and beginning and ending dates of the reporting period.

(4) If you had a startup, shutdown, or malfunction during the reporting period, the compliance report must include the information in §63.10(d)(5)(i).

(5) If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period.

(6) If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.

(d) For each deviation from an emission or operating limitation that occurs for a stationary RICE where you are not using a CMS to comply with the emission or operating limitations in this subpart, the Compliance report must contain the information in paragraphs (c)(1) through (4) of this section and the information in paragraphs (d)(1) and (2) of this section.

(1) The total operating time of the stationary RICE at which the deviation occurred during the reporting period.

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(e) For each deviation from an emission or operating limitation occurring for a stationary RICE where you are using a CMS to comply with the emission and operating limitations in this subpart, you must include information in paragraphs (c)(1) through (4) and (e)(1) through (12) of this section.

(1) The date and time that each malfunction started and stopped.

(2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and highlevel checks.

(3) The date, time, and duration that each CMS was out-of-control, including the information in §63.8(c) (8).

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

(5) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

(7) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.

(8) An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE.

(9) A brief description of the stationary RICE.

(10) A brief description of the CMS.

(11) The date of the latest CMS certification or audit.

(12) A description of any changes in CMS, processes, or controls since the last reporting period.

(f) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to Table 7 of this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.

(g) If you are operating as a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must submit an annual report according to Table 7 of this subpart by the date specified unless the Administrator has approved a different schedule, according to the information described in paragraphs (b)(1) through (b)(5) of this section. You must report the data specified in (g)(1) through (g)(3) of this section.

(1) Fuel flow rate of each fuel and the heating values that were used in your calculations. You must also demonstrate that the percentage of heat input provided by landfill gas or digester gas is equivalent to 10 percent or more of the total fuel consumption on an annual basis.

(2) The operating limits provided in your federally enforceable permit, and any deviations from these limits.

(3) Any problems or errors suspected with the meters.

§ 63.6655 What records must I keep?

(a) If you must comply with the emission and operating limitations, you must keep the records described

in paragraphs (a)(1) through (a)(3), (b)(1) through (b)(3) and (c) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in §63.10(b)(2)(xiv).

(2) The records in §63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.

(3) Records of performance tests and performance evaluations as required in §63.10(b)(2)(viii).

(b) For each CEMS or CPMS, you must keep the records listed in paragraphs (b)(1) through (3) of this section.

(1) Records described in §63.10(b)(2)(vi) through (xi).

(2) Previous (i.e., superseded) versions of the performance evaluation plan as required in §63.8(d)(3).

(3) Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in §63.8(f)(6) (i), if applicable.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must keep the records of your daily fuel usage monitors.

(d) You must keep the records required in Table 6 of this subpart to show continuous compliance with each emission or operating limitation that applies to you.

§ 63.6660 In what form and how long must I keep my records?

(a) Your records must be in a form suitable and readily available for expeditious review according to §63.10(b)(1).

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record readily accessible in hard copy or electronic form on-site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). You can keep the records off-site for the remaining 3 years.

Other Requirements and Information

§ 63.6665 What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you. If you own or operate any stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with any of the requirements of the General Provisions: An existing 2SLB RICE, an existing 4SLB stationary RICE, an existing CI stationary RICE, an existing gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, an existing emergency stationary RICE, or an existing limited use stationary RICE. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements of the gross heat input on an annual basis, an existing emergency stationary RICE, or an existing limited use stationary RICE. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in the General Provisions except for the initial notification requirements: A new stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new emergency stationary RICE, or a new limited use stationary RICE

[73 FR 3606, Jan. 18, 2008]

§ 63.6670 Who implements and enforces this subpart?

(a) This subpart is implemented and enforced by the U.S. EPA, or a delegated authority such as your State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as the U.S. EPA) has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out whether this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are:

(1) Approval of alternatives to the non-opacity emission limitations and operating limitations in §63.6600 under §63.6(g).

(2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f) and as defined in §63.90.

(3) Approval of major alternatives to monitoring under §63.8(f) and as defined in §63.90.

(4) Approval of major alternatives to recordkeeping and reporting under §63.10(f) and as defined in §63.90.

(5) Approval of a performance test which was conducted prior to the effective date of the rule, as specified in §63.6610(b).

§ 63.6675 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act (CAA); in 40 CFR 63.2, the General Provisions of this part; and in this section as follows:

Area source means any stationary source of HAP that is not a major source as defined in part 63.

Associated equipment as used in this subpart and as referred to in section 112(n)(4) of the CAA, means equipment associated with an oil or natural gas exploration or production well, and includes all equipment from the well bore to the point of custody transfer, except glycol dehydration units, storage vessels with potential for flash emissions, combustion turbines, and stationary RICE.

CAA means the Clean Air Act (42 U.S.C. 7401 *et seq.*, as amended by Public Law 101–549, 104 Stat. 2399).

Compression ignition means relating to a type of stationary internal combustion engine that is not a spark ignition engine.

Custody transfer means the transfer of hydrocarbon liquids or natural gas: After processing and/or treatment in the producing operations, or from storage vessels or automatic transfer facilities or other such equipment, including product loading racks, to pipelines or any other forms of transportation. For the purposes of this subpart, the point at which such liquids or natural gas enters a natural gas processing plant is a point of custody transfer.

Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation or operating limitation;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limitation or operating limitation in this subpart during malfunction, regardless or whether or not such failure is permitted by this subpart.

(4) Fails to satisfy the general duty to minimize emissions established by §63.6(e)(1)(i).

Diesel engine means any stationary RICE in which a high boiling point liquid fuel injected into the combustion chamber ignites when the air charge has been compressed to a temperature sufficiently high for auto-ignition. This process is also known as compression ignition.

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is fuel oil number 2.

Digester gas means any gaseous by-product of wastewater treatment typically formed through the anaerobic decomposition of organic waste materials and composed principally of methane and CO₂.

Dual-fuel engine means any stationary RICE in which a liquid fuel (typically diesel fuel) is used for compression ignition and gaseous fuel (typically natural gas) is used as the primary fuel.

Emergency stationary RICE means any stationary RICE whose operation is limited to emergency situations and required testing and maintenance. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, etc. Stationary RICE used for peak shaving are not considered emergency stationary RICE. Stationary ICE used to supply power to an electric grid or that supply power as part of a financial arrangement with another entity are not considered to be emergency engines. Emergency stationary RICE with a site-rating of more than 500 brake HP located at a major source of HAP emissions that were installed prior to June 12, 2006, may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by the manufacturer, the vendor, or the insurance company associated with the engine. Required testing of such units should be minimized, but there is no time limit on the use of emergency stationary RICE in emergency situations and for routine testing and maintenance. Emergency stationary RICE with a site-rating of more than 500 brake HP located at a major source of HAP emissions that were installed prior to June 12, 2006, may also operate an additional 50 hours per year in non-emergency situations. Emergency stationary RICE with a site-rating of more than 500 brake HP located at a major source of HAP emissions that were installed on or after June 12, 2006, must comply with requirements specified in 40 CFR 60.4243(d).

Four-stroke engine means any type of engine which completes the power cycle in two crankshaft revolutions, with intake and compression strokes in the first revolution and power and exhaust strokes in the second revolution.

Gaseous fuel means a material used for combustion which is in the gaseous state at standard atmospheric temperature and pressure conditions.

Gasoline means any fuel sold in any State for use in motor vehicles and motor vehicle engines, or nonroad or stationary engines, and commonly or commercially known or sold as gasoline.

Glycol dehydration unit means a device in which a liquid glycol (including, but not limited to, ethylene glycol, or triethylene glycol) absorbent directly contacts a natural gas stream and absorbs water in a contact tower or absorption column (absorber). The glycol contacts and absorbs water vapor and other gas stream constituents from the natural gas and becomes "rich" glycol. This glycol is then regenerated in the glycol dehydration unit reboiler. The "lean" glycol is then recycled.

Hazardous air pollutants (HAP) means any air pollutants listed in or pursuant to section 112(b) of the CAA.

ISO standard day conditions means 288 degrees Kelvin (15 degrees Celsius), 60 percent relative humidity and 101.3 kilopascals pressure.

Landfill gas means a gaseous by-product of the land application of municipal refuse typically formed through the anaerobic decomposition of waste materials and composed principally of methane and CO₂.

Lean burn engine means any two-stroke or four-stroke spark ignited engine that does not meet the definition of a rich burn engine.

Limited use stationary RICE means any stationary RICE that operates less than 100 hours per year.

Liquefied petroleum gas means any liquefied hydrocarbon gas obtained as a by-product in petroleum refining of natural gas production.

Liquid fuel means any fuel in liquid form at standard temperature and pressure, including but not limited to diesel, residual/crude oil, kerosene/naphtha (jet fuel), and gasoline.

Major Source, as used in this subpart, shall have the same meaning as in §63.2, except that:

(1) Emissions from any oil or gas exploration or production well (with its associated equipment (as defined in this section)) and emissions from any pipeline compressor station or pump station shall not be aggregated with emissions from other similar units, to determine whether such emission points or stations are major sources, even when emission points are in a contiguous area or under common control;

(2) For oil and gas production facilities, emissions from processes, operations, or equipment that are not part of the same oil and gas production facility, as defined in §63.1271 of subpart HHH of this part, shall not be aggregated;

(3) For production field facilities, only HAP emissions from glycol dehydration units, storage vessel with the potential for flash emissions, combustion turbines and reciprocating internal combustion engines shall be aggregated for a major source determination; and

(4) Emissions from processes, operations, and equipment that are not part of the same natural gas transmission and storage facility, as defined in §63.1271 of subpart HHH of this part, shall not be aggregated.

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

Natural gas means a naturally occurring mixture of hydrocarbon and non-hydrocarbon gases found in geologic formations beneath the Earth's surface, of which the principal constituent is methane. Natural gas may be field or pipeline quality.

Non-selective catalytic reduction (NSCR) means an add-on catalytic nitrogen oxides (NO_X) control device for rich burn engines that, in a two-step reaction, promotes the conversion of excess oxygen, NO_X, CO, and volatile organic compounds (VOC) into CO₂, nitrogen, and water.

Oil and gas production facility as used in this subpart means any grouping of equipment where hydrocarbon liquids are processed, upgraded (*i.e.*, remove impurities or other constituents to meet contract specifications), or stored prior to the point of custody transfer, or where natural gas is processed, upgraded, or stored prior to entering the natural gas transmission and storage source category. For purposes of a major source determination, facility (including a building, structure, or installation) means oil and natural gas production and processing equipment that is located within the boundaries of an individual surface site as defined in this section. Equipment that is part of a facility will typically be located within close proximity to other equipment located at the same facility. Pieces of production equipment or groupings of equipment located on different oil and gas leases, mineral fee tracts, lease tracts, subsurface or surface unit areas, surface fee tracts, surface lease tracts, or separate surface sites, whether or not connected by a road, waterway, power line or pipeline, shall not be considered part of the same facility. Examples of facilities in the oil and natural gas production source category include, but are not limited to, well sites, satellite tank batteries, central tank batteries, a compressor station that transports natural gas to a natural gas processing plant, and natural gas processing plants.

Oxidation catalyst means an add-on catalytic control device that controls CO and VOC by oxidation.

Peaking unit or engine means any standby engine intended for use during periods of high demand that are not emergencies.

Percent load means the fractional power of an engine compared to its maximum manufacturer's design capacity at engine site conditions. Percent load may range between 0 percent to above 100 percent.

Potential to emit means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the stationary source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. For oil and natural gas production facilities subject to subpart HH of this part, the potential to emit provisions in §63.760(a) may be used. For natural gas throughput for storage facilities may be determined according to §63.1270(a)(1) and the maximum annual throughput for transmission facilities may be determined according to §63.1270(a)(2).

Production field facility means those oil and gas production facilities located prior to the point of custody transfer.

Production well means any hole drilled in the earth from which crude oil, condensate, or field natural gas is extracted.

 $\it Propane$ means a colorless gas derived from petroleum and natural gas, with the molecular structure $\rm C_3H_8.$

Responsible official means responsible official as defined in 40 CFR 70.2.

Rich burn engine means any four-stroke spark ignited engine where the manufacturer's recommended operating air/fuel ratio divided by the stoichiometric air/fuel ratio at full load conditions is less than or equal to 1.1. Engines originally manufactured as rich burn engines, but modified prior to December 19,

2002 with passive emission control technology for NO_X(such as pre-combustion chambers) will be considered lean burn engines. Also, existing engines where there are no manufacturer's recommendations regarding air/fuel ratio will be considered a rich burn engine if the excess oxygen content of the exhaust at full load conditions is less than or equal to 2 percent.

Site-rated HP means the maximum manufacturer's design capacity at engine site conditions.

Spark ignition means relating to either: A gasoline-fueled engine; or any other type of engine a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for CI and gaseous fuel (typically natural gas) is used as the primary fuel at a nanual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

Stationary reciprocating internal combustion engine (*RICE*) means any reciprocating internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

Stationary RICE test cell/stand means an engine test cell/stand, as defined in subpart PPPPP of this part, that tests stationary RICE.

Stoichiometric means the theoretical air-to-fuel ratio required for complete combustion.

Storage vessel with the potential for flash emissions means any storage vessel that contains a hydrocarbon liquid with a stock tank gas-to-oil ratio equal to or greater than 0.31 cubic meters per liter and an American Petroleum Institute gravity equal to or greater than 40 degrees and an actual annual average hydrocarbon liquid throughput equal to or greater than 79,500 liters per day. Flash emissions occur when dissolved hydrocarbons in the fluid evolve from solution when the fluid pressure is reduced.

Subpart means 40 CFR part 63, subpart ZZZZ.

Surface site means any combination of one or more graded pad sites, gravel pad sites, foundations, platforms, or the immediate physical location upon which equipment is physically affixed.

Two-stroke engine means a type of engine which completes the power cycle in single crankshaft revolution by combining the intake and compression operations into one stroke and the power and exhaust operations into a second stroke. This system requires auxiliary scavenging and inherently runs lean of stoichiometric.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3607, Jan. 18, 2008]

Table1ato Subpart ZZZZ of Part 63—Emission Limitations for Existing, New, and Reconstructed Spark Ignition, 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions

[As stated in §63.6600, you must comply with the following emission limitations for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions at 100 percent load plus or minus 10 percent]

For each	You must meet the following emission limitations
1. 4SRB stationary RICE	a. reduce formaldehyde emissions by 76 percent or more. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may reduce formaldehyde emissions by 75 percent or more until June 15, 2007;
	or
	b. limit the concentration of formaldehyde in the stationary RICE exhaust 350 ppbvd or less at 15 percent O ₂ .

[73 FR 3607, Jan. 18, 2008]

Table1bto Subpart ZZZZ of Part 63—Operating Limitations for Existing, New, and

Reconstructed Spark Ignition, 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions

[As stated in §§63.6600, 63.6630 and 63.6640, you must comply with the following operating emission limitations for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions]

For each	You must meet the following operating limitation
1. 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and using NSCR; or	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst measured during the initial performance test; and
4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O_2 and using NSCR.	b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 750 °F and less than or equal to 1250 °F.
2. 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and not using NSCR; or	Comply with any operating limitations approved by the Administrator.
4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O ₂ and not using NSCR.	

[73 FR 3607, Jan. 18, 2008]

Table2ato Subpart ZZZZ of Part 63—Emission Limitations for New and Reconstructed 2SLB and Compression Ignition Stationary RICE >500 HP and 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions

[As stated in §§63.6600 and 63.6601, you must comply with the following emission limitations for new and reconstructed lean burn and new and reconstructed compression ignition stationary RICE at 100 percent load plus or minus 10 percent]

For each	You must meet the following emission limitation
1. 2SLB stationary RICE	a. reduce CO emissions by 58 percent or more;
	or
	b. limit concentration of formaldehyde in the stationary RICE exhaust to 12 ppmvd or less at 15 percent O_2 . If you
	commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may limit concentration of formaldehyde to 17 ppmvd or less at 15 percent O ₂ until June

	15, 2007.
2. 4SLB stationary RICE	a. reduce CO emissions by 93 percent or more;
	or
	b. limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15 percent O ₂ .
3. CI stationary RICE	a. reduce CO emissions by 70 percent or more;
	or
	b. limit concentration of formaldehyde in the stationary RICE exhaust to 580 ppbvd or less at 15 percent O ₂ .

[73 FR 3608, Jan. 18, 2008]

Table2bto Subpart ZZZZ of Part 63—Operating Limitations for New and Reconstructed 2SLB and Compression Ignition Stationary RICE >500 HP and 4SLB Burn Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions

[As stated in §§63.6600, 63.6601, 63.6630, and 63.6640, you must comply with the following operating limitations for new and reconstructed lean burn and new and reconstructed compression ignition stationary]

For each	You must meet the following operating limitation
1. 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to reduce CO emissions and using an oxidation catalyst; or 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and using an oxidation catalyst	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst that was measured during the initial performance test; and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.
2. 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to reduce CO emissions and not using an oxidation catalyst; or 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and not using an oxidation catalyst	Comply with any operating limitations approved by the Administrator.

[73 FR 3608, Jan. 18, 2008]

Table 3 to Subpart ZZZZ of Part 63—Subsequent Performance Tests

For each	Complying with the requirement to	You must
1. 2SLB and 4SLB stationary RICE and CI stationary RICE	Reduce CO emissions and not using a CEMS	Conduct subsequent performance tests semiannually. ¹
2. 4SRB stationary RICE with a brake horsepower ≥5,000	Reduce formaldehyde emissions	Conduct subsequent performance tests semiannually. ¹
3. Stationary RICE (all stationary RICE subcategories and all brake horsepower ratings)	Limit the concentration of formaldehyde in the stationary RICE exhaust	Conduct subsequent performance tests semiannually. ¹

[As stated in §§63.6615 and 63.6620, you must comply with the following subsequent performance test requirements]

¹After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

Table 4 to Subpart ZZZZ of Part 63—Requirements for Performance Tests

For each .	Complying with the requirement to	You must	Using	According to the following requirements
1. 2SLB, 4SLB, and CI stationary RICE	a. Reduce CO emissions	i. Measure the O ₂ at the inlet and outlet of the control device; and	(1) Portable CO and O ₂ analyzer	(a) Using ASTM D6522–00 (2005) ^a (incorporated by reference, see §63.14). Measurements to determine O2 must be made at the same time as the measurements for CO concentration.
		ii. Measure the CO at the inlet and the outlet of the control device	(1) Portable CO and O ₂ analyzer	(a) Using ASTM D652200 (2005) ^a (incorporated by reference, see §63.14) or Method 10 of 40 CFR, appendix A. The CO concentration must be at 15 percent O2, dry basis.
2. 4SRB stationary RICE	a. Reduce formaldehyde emissions	i. Select the sampling port location and	(1) Method 1 or 1A of 40 CFR part 60,	(a) Sampling sites must be located at the inlet and outlet

[As stated in §§63.6610, 63.6611, 63.6620, and 63.6640, you must comply with the following requirements for performance tests for stationary RICE]

		the number of traverse points: and	appendix A §63.7(d)(1)(i)	of the control device.
		ii. Measure O2 at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522–00 (2005).	(a) Measurements to determine O2 concentration must be made at the same time as the measurements for formaldehyde concentration.
		iii. Measure moisture content at the inlet and outlet of the control device; and	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348– 03	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde concentration.
		iv. Measure formaldehyde at the inlet and the outlet of the control device	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348– 03 ^b , provided in ASTM D6348–03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde concentration must be at 15 percent O2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
3. Stationary RICE	a. Limit the concentration of formaldehyde in the stationary RICE exhaust	i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A §63.7(d)(1)(i)	(a) If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O2 concentration of the stationary RICE exhaust at the sampling port location; and iii. Measure	 (1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522–00 (2005) (1) Method 4 of 	 (a) Measurements to determine O2 concentration must be made at the same time and location as the measurements for formaldehyde concentration. (a) Measurements

moisture content of the stationary RICE exhaust at the sampling port location; and	40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348– 03	to determine moisture content must be made at the same time and location as the measurements for formaldehyde concentration.
iv. Measure formaldehyde at the exhaust of the stationary RICE	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348– 03 ^b , provided in ASTM D6348–03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde concentration must be at 15 percent O2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

^aYou may also use Methods 3A and 10 as options to ASTM–D6522–00 (2005). You may obtain a copy of ASTM–D6522–00 (2005) from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

^bYou may obtain a copy of ASTM–D6348–03 from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

[73 FR 3609, Jan. 18, 2008]

 Table 5 to Subpart ZZZZ of Part 63—Initial Compliance With Emission Limitations and

 Operating Limitations

[As stated in §§63.6625 and 63.6630, you must initially comply with the emission and operating limitations as required by the following]

For each	Complying with the requirement to	You have demonstrated initial compliance if
1. 2SLB and 4SLB stationary RICE and CI stationary RICE	a. Reduce CO emissions and using oxidation catalyst, and using a CPMS	i. the average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet

		temperature during the initial performance test.
2. 2SLB and 4SLB stationary RICE and CI stationary RICE	a. Reduce CO emissions and not using oxidation catalyst	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and
		ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
3. 2SLB and 4SLB stationary RICE and CI	a. Reduce CO emissions, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O_2 or CO ₂ at both the inlet and outlet of the ovidation catalyst according to the
stationary RICE		requirements in §63.6625(a); and
		ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and
		iii. The average reduction of CO calculated using §63.6620 equals or exceeds the required percent reduction. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average percent reduction achieved during the 4-hour period.
4. 4SRB stationary RICE	a. Reduce formaldehyde emissions and using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction; and
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
5. 4SRB stationary RICE	a. Reduce formaldehyde emissions and not using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction; and
		ii. You have installed a CPMS to

		continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
6. Stationary RICE	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O_2 , dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
7. Stationary RICE	a. Limit the concentration of formaldehyde in the	i. The average formaldehyde concentration, corrected to 15 percent O ₂ , dry basis, from the three test runs
	stationary RICE exhaust and not using oxidation catalyst or NSCR	is less than or equal to the formaldehyde emission limitation; and
		ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.

 Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations

 and Operating Limitations

[As stated in §63.6640, you must continuously comply with the emissions and operating limitations as required by the following]

For each	Complying with the requirement to	You must demonstrate continuous compliance by
1. 2SLB and 4SLB stationary RICE and CI stationary RICE	a. Reduce CO emissions and using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved ¹ ; and
		ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour

		rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
2. 2SLB and 4SLB stationary RICE and CI stationary RICE	a. Reduce CO emissions and not using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved ¹ ; and
		ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
3. 2SLB and 4SLB stationary RICE and CI stationary RICE	a. Reduce CO emissions and using a CEMS	i. Collecting the monitoring data according to §63.6625(a), reducing the measurements to 1-hour averages, calculating the percent reduction of CO emissions according to §63.6620; and
		ii. Demonstrating that the catalyst achieves the required percent reduction of CO emissions over the 4-hour averaging period; and
		iii. Conducting an annual RATA of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B, as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.
4. 4SRB stationary RICE	a. Reduce formaldehyde emissions and using NSCR	i. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and

.

		iv. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
5. 4SRB stationary RICE	a. Reduce formaldehyde emissions and not using NSCR	i. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		ii. reducing these data to 4-hour rolling averages;
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
6. 4SRB stationary RICE with a brake horsepower ≥5,000	Reduce formaldehyde emissions	Conducting semiannual performance tests for formaldehyde to demonstrate that the required formaldehyde percent reduction is achieved ¹ .
7. Stationary RICE	Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit ¹ ; and
		ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
8. Stationary RICE	Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit ¹ ; and
		ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and

ii. Reducing these data to 4-hour rolling averages; and
iii. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.

¹After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

Table 7 to Subpart ZZZZ of Part 63—Requirements for Reports

You must submit a	The report must contain	You must submit
1. Compliance report	a. If there are no deviations from any emission limitations or operating limitations that apply to you, a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were not periods during which the CMS was out-of-control during the reporting period; or	i. Semiannually according to the requirements in §63.6650(b).
	b. If you had a deviation from any emission limitation or operating limitation during the reporting period, the information in §63.6650(d). If there were periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), the information in §63.6650(e); or	i. Semiannually according to the requirements in §63.6650(b).
	c. If you had a startup, shutdown or malfunction during the reporting period, the information in §63.10(d)(5)(i)	i. Semiannually according to the requirements in §63.6650(b).
2. An immediate startup, shutdown, and malfunction report if actions addressing the startup, shutdown, or malfunction were inconsistent with	a. Actions taken for the event; and	i. By fax or telephone within 2 working days after starting actions inconsistent with the plan.

[As stated in §63.6650, you must comply with the following requirements for reports]

your startup, shutdown, or malfunction plan during the reporting period		
	b. The information in §63.10(d)(5) (ii).	i. By letter within 7 working days after the end of the event unless you have made alternative arrangements with the permitting authorities. (§63.10 (d)(5)(ii))
3. Report	a. The fuel flow rate of each fuel and the heating values that were used in your calculations, and you must demonstrate that the percentage of heat input provided by landfill gas or digester gas, is equivalent to 10 percent or more of the gross heat input on an annual basis; and	i. Annually, according to the requirements in §63.6650.
	 b. The operating limits provided in your federally enforceable permit, and any deviations from these limits; and 	i. See item 3.a.i.
	c. Any problems or errors suspected with the meters	i. See item 3.a.i.

Table 8 to Subpart ZZZZ of Part 63—Applicability of General Provisions to Subpart ZZZZ

[As stated in §63.6665, you must comply with the following applicable general provisions]

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.1	General applicability of the General Provisions	Yes	
§63.2	Definitions	Yes	Additional terms defined in §63.6675.
§63.3	Units and abbreviations	Yes	
§63.4	Prohibited activities and circumvention	Yes	
§63.5	Construction and reconstruction	Yes	
§63.6(a)	Applicability	Yes	
§63.6(b)(1)– (4)	Compliance dates for new and reconstructed sources	Yes	
§63.6(b)(5)	Notification	Yes	
§63.6(b)(6)	[Reserved]		
§63.6(b)(7)	Compliance dates for new and reconstructed area	Yes	

	sources that become major sources		
§63.6(c)(1)– (2)	Compliance dates for existing sources	Yes	
§63.6(c)(3)– (4)	[Reserved]		
§36.6(c)(5)	Compliance dates for existing area sources that become major sources	Yes	
§63.6(d)	[Reserved]		
§63.6(e)(1)	Operation and maintenance	Yes	
§63.6(e)(2)	[Reserved]		
§63.6(e)(3)	Startup, shutdown, and malfunction plan	Yes	
§63.6(f)(1)	Applicability of standards except during startup shutdown malfunction (SSM)	Yes	
§63.6(f)(2)	Methods for determining compliance	Yes	
§63.6(f)(3)	Finding of compliance	Yes	
§63.6(g)(1)– (3)	Use of alternate standard	Yes	
§63.6(h)	Opacity and visible emission standards	No	Subpart ZZZZ does not contain opacity or visible emission standards.
§63.6(i)	Compliance extension procedures and criteria	Yes	
§63.6(j)	Presidential compliance exemption	Yes	
§63.7(a)(1)– (2)	Performance test dates	Yes	Subpart ZZZZ contains performance test dates at §§63.6610 and 63.6611.
§63.7(a)(3)	CAA section 114 authority	Yes	
§63.7(b)(1)	Notification of performance test	Yes	
§63.7(b)(2)	Notification of rescheduling	Yes	
§63.7(c)	Quality assurance/test plan	Yes	
§63.7(d)	Testing facilities	Yes	
§63.7(e)(1)	Conditions for conducting performance tests	Yes	
§63.7(e)(2)	Conduct of performance tests and reduction of data	Yes	Subpart ZZZZ specifies test methods at §63.6620.
§63.7(e)(3)	Test run duration	Yes	
§63.7(e)(4)	Administrator may require other testing under section 114 of the CAA	Yes	
§63.7(f)	Alternative test method provisions	Yes	
§63.7(g)	Performance test data	Yes	

	analysis, recordkeeping, and reporting		
§63.7(h)	Waiver of tests	Yes	
§63.8(a)(1)	Applicability of monitoring requirements	Yes	Subpart ZZZZ contains specific requirements for monitoring at §63.6625.
§63.8(a)(2)	Performance specifications	Yes	
§63.8(a)(3)	[Reserved]		
§63.8(a)(4)	Monitoring for control devices	No	
§63.8(b)(1)	Monitoring	Yes	}
§63.8(b)(2)– (3)	Multiple effluents and multiple monitoring systems	Yes	
§63.8(c)(1)	Monitoring system operation and maintenance	Yes	
§63.8(c)(1) (i)	Routine and predictable	Yes	
§63.8(c)(1) (ii)	SSM not in Startup Shutdown Malfunction Plan	Yes	
§63.8(c)(1) (iii)	Compliance with operation and maintenance requirements	Yes	
§63.8(c)(2)- (3)	Monitoring system installation	Yes	
§63.8(c)(4)	Continuous monitoring system (CMS) requirements	Yes	Except that subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS).
§63.8(c)(5)	COMS minimum procedures	No	Subpart ZZZZ does not require COMS.
§63.8(c)(6)– (8)	CMS requirements	Yes	Except that subpart ZZZZ does not require COMS.
§63.8(d)	CMS quality control	Yes	
§63.8(e)	CMS performance evaluation	Yes	Except for §63.8(e)(5) (ii), which applies to COMS.
§63.8(f)(1)– (5)	Alternative monitoring method	Yes	
§63.8(f)(6)	Alternative to relative accuracy test	Yes	
§63.8(g)	Data reduction	Yes	Except that provisions for COMS are not applicable. Averaging periods for demonstrating compliance are specified at §§63.6635 and 63.6640.
§63.9(a)	Applicability and State delegation of notification	Yes	
	requirements		
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§63.9(b)(1)– (5)	Initial notifications	Yes	Except that §63.9(b)(3) is reserved.
§63.9(c)	Request for compliance extension	Yes	
§63.9(d)	Notification of special compliance requirements for new sources	Yes	
§63.9(e)	Notification of performance test	Yes	
§63.9(f)	Notification of visible emission (VE)/opacity test	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.9(g)(1)	Notification of performance evaluation	Yes	
§63.9(g)(2)	Notification of use of COMS data	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.9(g)(3)	Notification that criterion for alternative to RATA is exceeded	Yes	If alternative is in use.
§63.9(h)(1)– (6)	Notification of compliance status	Yes	Except that notifications for sources using a CEMS are due 30 days after completion of performance evaluations. §63.9(h)(4) is reserved.
§63.9(i)	Adjustment of submittal deadlines	Yes	
§63.9(j)	Change in previous information	Yes	
§63.10(a)	Administrative provisions for record keeping/reporting	Yes	
§63.10(b)(1)	Record retention	Yes	
§63.10(b)(2) (i)–(v)	Records related to SSM	Yes	
§63.10(b)(2) (vi)–(xi)	Records	Yes	
§63.10(b)(2) (xii)	Record when under waiver	Yes	
§63.10(b)(2) (xiii)	Records when using alternative to RATA	Yes	For CO standard if using RATA alternative.
§63.10(b)(2) (xiv)	Records of supporting documentation	Yes	
§63.10(b)(3)	Records of applicability determination	Yes	
§63.10(c)	Additional records for sources using CEMS	Yes	Except that §63.10(c) (2)–(4) and (9) are reserved.
§63.10(d)(1)	General reporting requirements	Yes	
	1		

§63.10(d)(2)	Report of performance test results	Yes	
§63.10(d)(3)	Reporting opacity or VE observations	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.10(d)(4)	Progress reports	Yes	
§63.10(d)(5)	Startup, shutdown, and malfunction reports	Yes	
§63.10(e)(1) and (2)(i)	Additional CMS reports	Yes	
§63.10(e)(2) (ii)	COMS-related report	No	Subpart ZZZZ does not require COMS.
§63.10(e)(3)	Excess emission and parameter exceedances reports	Yes	Except that §63.10(e)(3) (i)(C) is reserved.
§63.10(e)(4)	Reporting COMS data	No	Subpart ZZZZ does not require COMS.
§63.10(f)	Waiver for recordkeeping/reporting	Yes	
§63.11	Flares	No	
§63.12	State authority and delegations	Yes	
§63.13	Addresses	Yes	
§63.14	Incorporation by reference	Yes	
§63.15	Availability of information	Yes	

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CERTIFICATE OF SERVICE

I, Cynthia Hook, hereby certify that a copy of this permit has been mailed by first class mail to Kinder Morgan Energy Partners, L.P. - Fayetteville Express Pipeline LLC - Russell Compressor Station, 201 Highway 167, Bald Knob, AR, 72010, on this <u>3044</u> day of <u>Maach</u>, 2010.

Cynthia Hook, AAII, Air Division