FG{ID}
FLEXIBLE GROUP CONDITIONS
Major Source – New Non-Emergency, CI > 500 bhp with Oxidation Catalyst

This template is for new non-remote, non-emergency, CI RICE greater than 500 bhp equipped with an oxidation catalyst, at a major source. The RICE is new if the date of installation on and after December 19, 2002.

If this template is being used for an ROP Reopening or Renewal, and the MACT conditions were established in a PTI, the appropriate footnotes which reference enforceability must be added to each applicable condition in the template.

Blue text is guidance or notes on the use of the template. Delete all blue text prior to issuing the final permit or submitting it with a permit application.

Red text identifies options. Select the option that applies to the source and change the text to black. Delete red text that does not apply and renumber conditions if necessary.

DESCRIPTION

40 CFR Part 63, Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE), located at a major source of HAP emissions, new non-remote, non-emergency, compression ignition (CI) RICE greater than 500 bhp equipped with an oxidation catalyst. A RICE is new if the date of installation is on and after December 19, 2002. {May add specifics for the affected EU(s).}

Emission Unit: {Enter Emission Unit names}

POLLUTION CONTROL EQUIPMENT

Oxidation catalyst

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. CO or Formaldehyde	70% reduction or more of CO -OR - Formaldehyde concentration of 580 ppbvd or less at 15 percent O_2	Hourly, except during periods of startup	Each engine of FG{ID}	SC V.1	**40 CFR 63.6600(b), 40 CFR Part 63, Subpart ZZZZ, Table 2a.3.a OR Table 2a.3.b**

II. MATERIAL LIMIT(S)

1. The permittee shall burn only diesel fuel in each engine in FG{ID} with a maximum sulfur content of 15 ppm (0.0015 percent) by weight and a minimum Cetane index of 40 or a maximum aromatic content of 35 volume percent. **(40 CFR 1090.305)**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. At all times, the permittee must operate and maintain any engine in FG{ID} including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. **(40 CFR 63.6605(b))**

2. For each engine in FG{ID}, the permittee must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup apply. **(40 CFR 63.6625(h))**

3. If using a CPMS, the permittee must prepare a site-specific monitoring plan for each engine in FG{ID} that addresses the continuous parameter monitoring system (CPMS) design, data collection, and the quality assurance and quality control elements as outlined in the following: **(40 CFR 63.6625(b)(1))**

   a. The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations; **(40 CFR 63.6625(b)(1)(i))**

   b. Sampling interface (e.g., thermocouple) location such that the monitoring system will provide representative measurements; **(40 CFR 63.6625(b)(1)(ii))**

   c. Equipment performance evaluations, system accuracy audits, or other audit procedures; **(40 CFR 63.6625(b)(1)(iii))**

   d. Ongoing operation and maintenance procedures in accordance with provisions in 40 CFR 63.8(c)(1)(ii) and (c)(3); **(40 CFR 63.6625(b)(1)(iv))**

   e. Ongoing reporting and recordkeeping procedures in accordance with provisions in 40 CFR 63.10(c), (e)(1), and (e)(2)(i). **(40 CFR 63.6625(b)(1)(v))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. For each engine in FG{ID}, the permittee must meet the following operating limits, except during periods of startup: **(40 CFR 63.6600(b))**

   a. Maintain the 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. **(40 CFR Part 63, Subpart ZZZZ, Table 2b.1.a)**

   b. Maintain the temperature of the exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F. **(40 CFR Part 63, Subpart ZZZZ, Table 2b.1.b)**

OPTIONAL – Using a CEMS to monitor CO

2. For each engine in FG{ID}, the permittee must install, operate, and maintain each CEMS to monitor CO and either O_2 or CO_2 according to the performance specifications of 40 CFR Part 60, Appendix B and the following requirements: **(40 CFR 63.6625(a)(1))**

   a. If meeting a requirement to reduce CO emissions, the CEMS must be installed at both the inlet and outlet of the control device. **OR** If meeting a requirement to limit the concentration of CO, the CEMS must be installed at the outlet of the control device. **(40 CFR 63.6625(a))**

   b. The permittee must conduct an initial performance evaluation and an annual relative accuracy test audit (RATA) of each CEMS according to the requirements in 40 CFR 63.8 as well as daily and periodic data quality checks in accordance with 40 CFR Part 60, Appendix F, Procedure 1. **(40 CFR 63.6625(a)(2))**

   c. As specified in 40 CFR 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. The permittee must have at least two data points with each representing a different 15-minute period, to have a valid hour of data. **(40 CFR 63.6625(a)(3))**

d. The CEMs data must be reduced as specified in 40 CFR 63.8(g)(2) and recorded in ppm or ppb (as appropriate for the applicable limitation) at 15 percent oxygen or the equivalent CO_2 concentration. **(40 CFR 63.6625(a)(4))**

OPTIONAL – Using a CPMS

2. For each engine in FG{ID}, the permittee must install, operate, and maintain each CPMS in continuous operation according to the procedures in the site-specific monitoring plan and according to the following requirements: **(40 CFR 63.6625(b)(2))**

   a. The CPMS must collect data at least once every 15 minutes (see also 40 CFR 63.6635). **(40 CFR 63.6625(b)(3))**

   b. For a CPMS measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 °C (5 °F) or 1 percent of the measurement range, whichever is larger. **(40 CFR 63.6625(b)(4))**

   c. Conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in the site-specific monitoring plan at least annually. **(40 CFR 63.6625(b)(5))**

   d. Conduct a performance evaluation of each CPMS in accordance with the site-specific monitoring plan. **(40 CFR 63.6625(b)(6))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**
Permit staff – Change the above UAR to Rule 201(3) if using in a PTI.

1. The permittee must conduct initial performance testing within 180 days after startup and subsequent performance tests semiannually, according to the requirements specified in Item 1 of Table 4 of 40 CFR Part 63, Subpart ZZZZ. If compliance is demonstrated for two consecutive tests, the permittee may reduce the frequency of subsequent performance tests to annually. The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load. The permittee must conduct three separate test runs for each performance test required, as specified in 40 CFR 63.7(e)(3). Each test run must last at least 1 hour. If determining compliance with the percent reduction requirement, the permittee must use the equations specified in 40 CFR 63.6620(e). The engine percent load during the 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. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1213(3), R 336.2001, R 336.2003, R 336.2004, 40 CFR 63.6610(a) and (d), 40 CFR 63.6615, 40 CFR 63.6620(a), (b), (d), and (e), 40 CFR 63.6640(a), 40 CFR Part 63, Subpart ZZZZ, Table 3.1, Table 4.1, Table 5.1, and Table 6.1)**

2. The permittee shall submit a Notification of Intent to the Administrator to conduct a performance test at least 60 days before the performance test is initially scheduled to begin to allow the Administrator, upon request, to review and approve the site-specific test plan and to have an observer present during the test, as required in 40 CFR 63.7(b)(1). **(40 CFR 63.6645(g))**

3. If the catalyst is changed, the permittee must reestablish the operating parameters measured during the initial performance test. When reestablishing the values of the operating parameters, the permittee must also conduct a performance test to demonstrate meeting the required emission limitation applicable in SC I.1. **(40 CFR 63.6640(b))**

Permit Staff: Remove if PTI, since this is ROP only.

4. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days before testing of the time and place performance tests will be conducted. **(R 336.1213(3))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**
Permit staff – Change the above UAR to Rule 201(3) if using in a PTI.

1. For each engine in FG{ID}, the permittee must keep the records described as follows: **(40 CFR 63.6655(a)**

a. A copy of each notification and report that was submitted to comply with 40 CFR Part 63, Subpart ZZZZ, including all documentation supporting any Initial Notification or Notification of Compliance Status that was submitted according to the requirement in 40 CFR 63.10(b)(2)(xiv). **(40 CFR 63.6655(a)(1))**

b. Records of the occurrence and duration of each malfunction of operation (*i.e.,* process equipment) or the air pollution control and monitoring equipment. **(40 CFR 63.6655(a)(2))**

c. Records of performance tests and performance evaluations as required in 40 CFR 63.10(b)(2)(viii). **(40 CFR 63.6655(a)(3))**

d. Records of all required maintenance performed on the air pollution control and monitoring equipment. **(40 CFR 63.6655(a)(4))**

e. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. **(40 CFR 63.6655(a)(5))**

2. To demonstrate continuous compliance, the permittee must monitor and collect data according to following: **(40 CFR 63.6635(a))**

   a. Except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, the permittee must monitor continuously at all times that the stationary RICE is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. **(40 CFR 63.6635(b))**

   b. The permittee 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. The permittee must, however, use all the valid data collected during all other periods. **(40 CFR 63.6635(c))**

3. For each CEMS **OR** CPMS **{choose one}**, the permittee must keep the records as follows: **(40 CFR 63.6655(b))**

   a. Records described in 40 CFR 63.10(b)(2)(vi) through (xi). **(40 CFR 63.6655(b)(1))**

   b. Previous (i.e., superseded) versions of the performance evaluation plan as required in 40 CFR 63.8(d)(3). **(40 CFR 63.6655(b)(2)**

   c. Requests for alternatives to the relative accuracy test for CEMS **OR** CPMS **{choose one}** as required in 40 CFR 63.8(f)(6)(i), if applicable. **(40 CFR 63.6655(b)(3))**

OPTIONAL – Using a CPMS and reducing CO emissions.

4. For each engine in FG{ID}, the permittee must keep records to demonstrate continuous compliance with the operating limitations in Table 6.1 of 40 CFR Part 63, Subpart ZZZZ as follows: **(40 CFR 63.6640(a), 40 CFR 63.6655(d))**

   a. Collecting the catalyst inlet temperature data according to 40 CFR 63.6625(b); and **(40 CFR Part 63, Subpart ZZZZ, Table 6.1.a.ii)**

   b. Reducing these data to 4-hour rolling averages; and **(40 CFR Part 63, Subpart ZZZZ, Table 6.1.a.iii)**

   c. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and **(40 CFR Part 63, Subpart ZZZZ, Table 6.1.a.iv)**

   d. 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. **(40 CFR Part 63, Subpart ZZZZ, Table 6.1.a.v)**

OPTIONAL – Using a CPMS to demonstrate emissions below the formaldehyde limit.

4. For each engine in FG{ID}, the permittee must keep records to demonstrate continuous compliance with the operating limitations Table 6.7, of 40 CFR Part 63, Subpart ZZZZ as follows: **(40 CFR 63.6640(a), 40 CFR 63.6655(d))**

   a. Collecting the catalyst inlet temperature data according to 40 CFR 63.6625(b); and **(40 CFR Part 63, Subpart ZZZZ, Table 6.7.a.ii)**

b. Reducing these data to 4-hour rolling averages; and **(40 CFR Part 63, Subpart ZZZZ, Table 7.1.a.iii)**

c. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and **(40 CFR Part 63, Subpart ZZZZ, Table 6.7.a.iv)**

d. 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. **(40 CFR Part 63, Subpart ZZZZ, Table 6.7.a.v)**

5. The permittee shall keep fuel supplier certification records or fuel sample test data, for diesel fuel oil used in FG{ID}, demonstrating that the fuel meets the requirement of SC II.1. The certification or test data shall include the name of the oil supplier or laboratory, the sulfur content, and cetane index or aromatic content of the fuel oil. **(R 336.1213(3), 40 CFR 1090.305)**

6. The permittee's records must be in a form suitable and readily available for expeditious review according to 40 CFR 63.10(b)(1). **(40 CFR 63.6660(a))**

7. As specified in 40 CFR 63.10(b)(1), the permittee must keep each record for 5-years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. **(40 CFR 63.6660(b))**

8. The permittee must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1). **(40 CFR 63.6660(c))**

VII. REPORTING

Permit Staff – SC VII.1, 2, and 3 references to Rule 213 are ROP only. Remove before putting into a PTI. Renumber as appropriate.

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be received by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be received by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

4. The permittee shall submit all applicable notifications specified in 40 CFR 63.7(b) and (c), 40 CFR 63.8 (e), (f)(4), and (f)(6), and 40 CFR 63.9(b) through (e), (g), and (h) by the dates specified. **(40 CFR 63.6645(a)(3))**

5. The permittee must submit a 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 40 CFR 63.10(d)(2). **(40 CFR 63.6645(h)(2))**

6. The permittee must submit a semiannual compliance report, as specified in Table 7 of 40 CFR Part 63, Subpart ZZZZ: **(40 CFR 63.6650(a))**

   a. The report must contain the following:

      i. If there are no deviations from any applicable emission limitations or operating limitations that apply, a statement that there were no deviations during the reporting period. If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in 40 CFR 63.8(c)(7), a statement that there were not periods during which the CMS was out-of-control during the reporting period; **(40 CFR Part 63, Subpart ZZZZ, Table 7.1.a)** or

      ii. If there was a deviation from any emission limitation or operating limitation during the reporting period, the information in 40 CFR 63.6650(d). If there were periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in 40 CFR 63.8(c)(7), the information in 40 CFR 63.6650(e); **(40 CFR Part 63, Subpart ZZZZ, Table 7.1.b)** or

      iii. If there was a malfunction during the reporting period, the information in 40 CFR 63.665(c)(4). **(40 CFR Part 63, Subpart ZZZZ, Table 7.1.c)**

b. The compliance report must contain the following information, as specified in 40 CFR 63.6650(c):

   i. Company name and address. **(40 CFR 63.6650(c)(1))**

   ii. Certification of the report by a responsible official. **(40 CFR 63.6650(c)(2))**

   iii. Date of report and beginning and ending dates of the reporting period. **(40 CFR 63.6650(c)(3))**

   iv. If there was a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by the permittee during a malfunction to minimize emissions in accordance with 40 CFR 63.6605(b), including actions taken to correct a malfunction. **(40 CFR 63.6650(c)(4))**

   v. If there are no deviations from any emission or operating limitations that apply, a statement that there were no deviations from the emission or operating limitations during the reporting period. **(40 CFR 63.6650(c)(5))**

   vi. If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in 40 CFR 63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period. **(40 CFR 63.6650(c)(6))**

c. If not using a continuous monitoring system (CMS), for each deviation from an emission or operating limitation that occurs for each engine in FG{ID}, where a CMS is not being used to comply with the emission or operating limitations, the semiannual compliance report must contain the following: **(40 CFR 63.6650(d))**

   i. The total operating time of each engine in FG{ID}, at which the deviation occurred during the reporting period. **(40 CFR 63.6650(d)(1))**

   ii. Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken. **(40 CFR 63.6650(d)(2))**

d. If using a CMS, for each deviation from an emission or operating limitation that occurs for each engine in FG{ID}, where a CMS is used to comply with the emission and operating limitations, the semiannual compliance report must contain the following: **(40 CFR 63.6650(e))**

   i. The date and time that each malfunction started and stopped. **(40 CFR 63.6650(e)(1))**

   ii. The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks. **(40 CFR 63.6650(e)(2))**

   iii. The date, time, and duration that each CMS was out-of-control, including the information in 40 CFR 63.8(c)(8). **(40 CFR 63.6650(e)(3))**

   iv. The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period. **(40 CFR 63.6650(e)(4))**

   v. 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. **(40 CFR 63.6650(e)(5))**

   vi. 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. **(40 CFR 63.6650(e)(6))**

   vii. 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. **(40 CFR 63.6650(e)(7))**

   viii. An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE. **(40 CFR 63.6650(e)(8))**

   ix. A brief description of the stationary RICE. **(40 CFR 63.6650(e)(9))**

   x. A brief description of the CMS. **(40 CFR 63.6650(e)(10))**

   xi. The date of the latest CMS certification or audit. **(40 CFR 63.6650(e)(11))**

xii. A description of any changes in CMS, processes, or controls since the last reporting period. **(40 CFR 63.6650(e)(12))**

7. The permittee shall report all deviations as defined in 40 CFR Part 63, Subpart ZZZZ in the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to Item 1 of Table 7 in 40 CFR Part 63, Subpart ZZZZ along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in 40 CFR Part 63, Subpart ZZZZ, 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. The permittee may submit the first and subsequent Compliance reports according to the dates specified in SC VII.2 and SC VII.3. **(40 CFR 63.6650(b)(5), 40 CFR 63.6650(f))**

8. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**

See Appendix 8 - Permit Staff: Remove if PTI, since this is ROP only.

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. For new, reconstructed and rebuilt (as defined in 40 CFR 94.11(a)) stationary reciprocating engines, any deviations that occur during the first 200 hours of operation from engine start-up are not violations. **(40 CFR 63.6640(d))**

2. The permittee shall comply with all applicable requirements of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subparts A and ZZZZ for Stationary Reciprocating Internal Combustion Engines. **(40 CFR Part 63, Subparts A and ZZZZ)**

Remove these footnotes if no PTIs are associated with this flexible group.

Footnotes:

[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).